CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

CSXT Crude Oil Derailment

Phase I: Wrecking and Staging

Air Monitoring and Sampling Report

Lynchburg, VA

April 30, 2014 – May 4, 2014

CTEH® Project Number: 106190

Project Number: R000129324

Contract Number: ENV0000115704

August, 2014

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Executive Summary

At 1432 EDT[1] on April 30, 2014, CSXT® Railroad requested the Center for Toxicology and Environmental Health® (CTEH®) to provide toxicology and air monitoring support in response to a crude oil train derailment and fire in Lynchburg, VA. The response involved several distinct phases which mirrored the changes from the initial emergency response through product transfer and wrecking operations. Members of CTEH®'s Toxicology Emergency Response Program (TERP®) provided air monitoring support throughout the duration of each phase of the incident. Phase I of the incident is the focus of this report and consisted of the initial emergency response, wrecking and staging of the 16 cars involved in the derailment, transfer operations for the derailed cars, and the rebuilding of the track damaged in the derailment and fire. The recovery operations also required the transfer of product taken from the tank cars into frac tanks located at the Concord, VA W.E.L. Inc. facility.

Phase I air monitoring began on the evening of April 30, 2014, and throughout the duration of Phase I, CTEH® conducted air monitoring to evaluate the potential presence of airborne crude oil constituents in the work area and surrounding community using real-time air monitoring equipment and analytical air sampling methods. The monitored constituents included several specific analytes such as benzene, toluene, n-hexane, xylene, hydrogen sulfide (H_2S), lower explosive limit (LEL), and volatile organic compounds (VOCs). During the initial stages of Phase I, potential combustion products, including particulate matter 2.5 and 10 microns in diameter ($PM_{2.5}$ and PM_{10}) and carbon monoxide (CO) were also monitored, even though the fire had been extinguished prior to CTEH's arrival at the incident site. The work area included both the wrecking and staging area and the frac tank staging area.

The W.E.L. Inc. facility was monitored a minimum of four times daily from May 2, 2014, through May 5, 2014. Analytical stations were staged along the perimeter of the work area near the derailment as well as in the community immediately surrounding the derailment site. Phase I concluded at 0000 on May 5, 2014.

There were no detections of H_2S, LEL, or benzene during real-time air monitoring activities in the community. All VOC detections in the community were 1 ppm or less and intermittent in occurrence. CO and PM_{10} detections in the community did not approach the concentrations of one-hour Protective Action Criteria (PAC). There were no detections of n-hexane, xylene, or toluene during real-time air monitoring activities within the work areas. Intermittent detections of H_2S, benzene, LEL, and VOCs were reported in the work areas; however, these detections were not sustained above site-specific action levels. Analytical analyses found no concentrations of the chemicals of interest at or above the concentrations specified by applicable exposure standards, guidelines, or protective action criteria in the work area or community.

[1] All times are reported in Eastern Daylight Time (EDT).

1.0 Description of the Incident and Response

At approximately 1432 on April 30, 2014, CSXT® Railroad requested that Center for Toxicology and Environmental Health® (CTEH®) provide toxicology and air monitoring support in response to a train derailment and fire involving crude oil tank cars in Lynchburg, VA. Initial reports indicated that 16 tank cars were involved in the derailment. Three of the tank cars were partially submerged in the James River, and one car was on fire. A map of the incident location is provided in Figure 1.0.

A CTEH® Toxicology Emergency Response Program (TERP®) team mobilized from Little Rock, AR and arrived on site at 1925 on April 30, 2014. The fire was out when initial air monitoring in the vicinity of the derailment area began at approximately 1955. Air monitoring in the community area surrounding the derailment commenced at 2125 on April 30, 2014 (see Figure 2.0). Rail car wrecking and staging for product transfer began on the morning of May 1, 2014, and was completed on May 4, 2014. Community air monitoring was discontinued on May 3, 2014, with the exception of fixed real-time stations 18, 19, and the Depot Grille which were monitored through May 8, 2014. Real-time air monitoring was conducted in the work areas during all stages of wrecking and staging operations. Real-time air monitoring was also conducted at the W.E.L., Inc. facility in Concord, VA where product pumped from the derailed tank cars was temporarily stored in frac tanks.

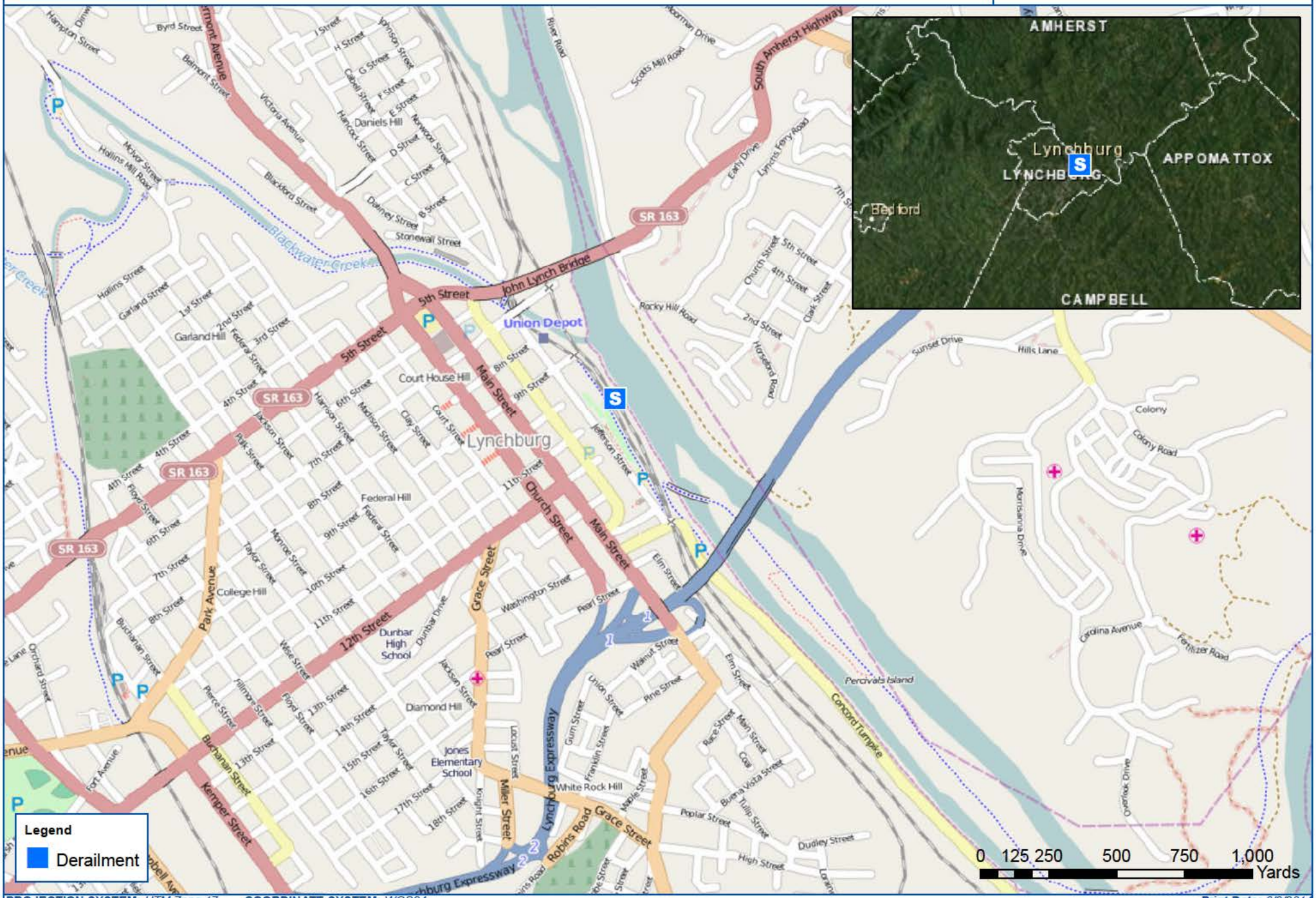
The response involved several distinct phases which mirrored the changes from the initial emergency response through product transfer and wrecking operations. This report covers Phase I of this incident. Phase I air monitoring began on the evening of April 30, 2014, and involved the initial emergency response, the wrecking and staging of the 16 derailed cars involved in the incident, the transfer of product from the partially submerged cars, and the rebuilding of the track damaged in the derailment and fire. The recovery operations also required the transfer of product taken from the derailed tank cars into frac tanks located at the Concord, VA W.E.L. Inc. facility. The W.E.L., Inc. facility was monitored a minimum of 4 times daily from May 2 through May 5, 2014. CTEH® air monitoring activities in the work area and the surrounding community for Phase I concluded at 0000 on May 5, 2014.

CTEH

Figure 1.0.1

Incident Site Location

Project: 106190
Client: CSXT
City: Lynchburg, VA



PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/9/2014*

2.0 Air Monitoring and Sampling Strategy

A preliminary air Sampling and Analysis Plan (SAP) was developed based on the initial information available regarding the incident. The SAP is provided as Appendix A and includes air monitoring and sampling methodology and instrumentation. Real-time air monitoring and analytical air sampling were conducted during initial response efforts and subsequent railcar wrecking-and-staging operations to provide site management with information regarding the potential for chemical exposures in the vicinity of the derailment and in the surrounding community as outlined in the SAP.

Air monitoring refers to the use of direct-reading instruments that report instantaneous measurements of a substance in real-time. Air sampling refers to the collection of discrete quantities of air using containers or chemical-specific media for further analysis in an off-site laboratory. An air monitoring strategy was developed to monitor potential exposures in two broadly defined areas: Work Area and Community. The Work Area included both the wrecking-and-staging area and the frac tank staging area. The Community was designated as the area surrounding the Work Area, including residential and commercial locations where there existed a potential for exposure. A map illustrating the sampling zone locations is provided in Figure 2.0.1.

Free-roaming handheld real-time air monitoring was conducted in a variety of areas based on levels of activity, proximity to the release, and site conditions. In addition, fixed-location handheld real-time locations were established in the community where sampling personnel would regularly visit to provide an indication of chemical concentrations in distinct geographic locations in the community during the course of the incident.

Radio-telemetering RAE Systems® AreaRAE units were deployed in both sampling zones to allow for continuous air monitoring in multiple areas. AreaRAE readings were received and reviewed in a centralized location by CTEH® personnel to allow for rapid recognition, communication, and response to changing conditions. AreaRAE remote-telemetering air monitoring units were stationed at 6 fixed locations in the work area and community: AreaRAE Units 4, 5, and 6 were located in the community on the east side of the James River, adjacent to the derailment, and AreaRAE units 1, 2, and 3 were located at the work area perimeter west and south of the derailment. A map identifying all Area RAE locations is provided in Figure 2.0.2.

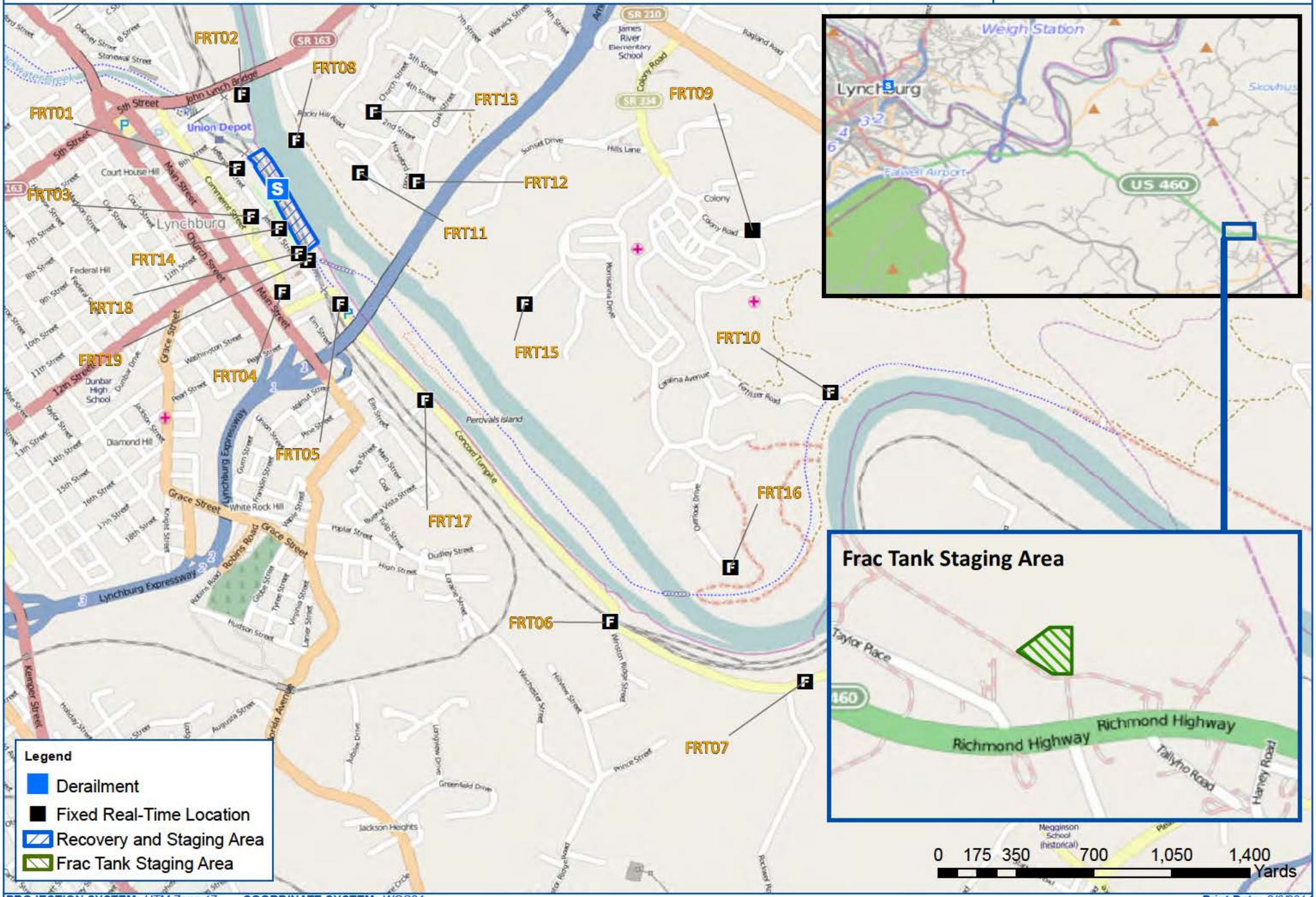
Area air samples were collected in both sampling zones and sent to an off-site laboratory for chemical analysis. This analytical air sampling was used to provide air quality data beyond the scope of real-time instruments. During Phase I, 6 analytical air sampling stations were established around the derailment site. Analytical stations 1, 2, and 3 were located alongside AreaRAE units 1-3 at the work area perimeter. Analytical stations 4, 5, and 6 were located alongside AreaRAE units 4-6 in the community on the east side of the James River. Minicans™ and Radiellos® were staged at each analytical air sampling station to sample for VOCs (method: EPA TO-15+TICS) and H2S (method: WET-SOP 13), respectively. A map identifying the analytical air station locations is provided in Figure 2.0.3.

CTEH

Figure 2.0.1

Sampling Zone Locations

Project: 106190
Client: CSXT
City: Lynchburg, VA



PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *8/6/2014*

Figure 2.0.2
AreaRAE Locations

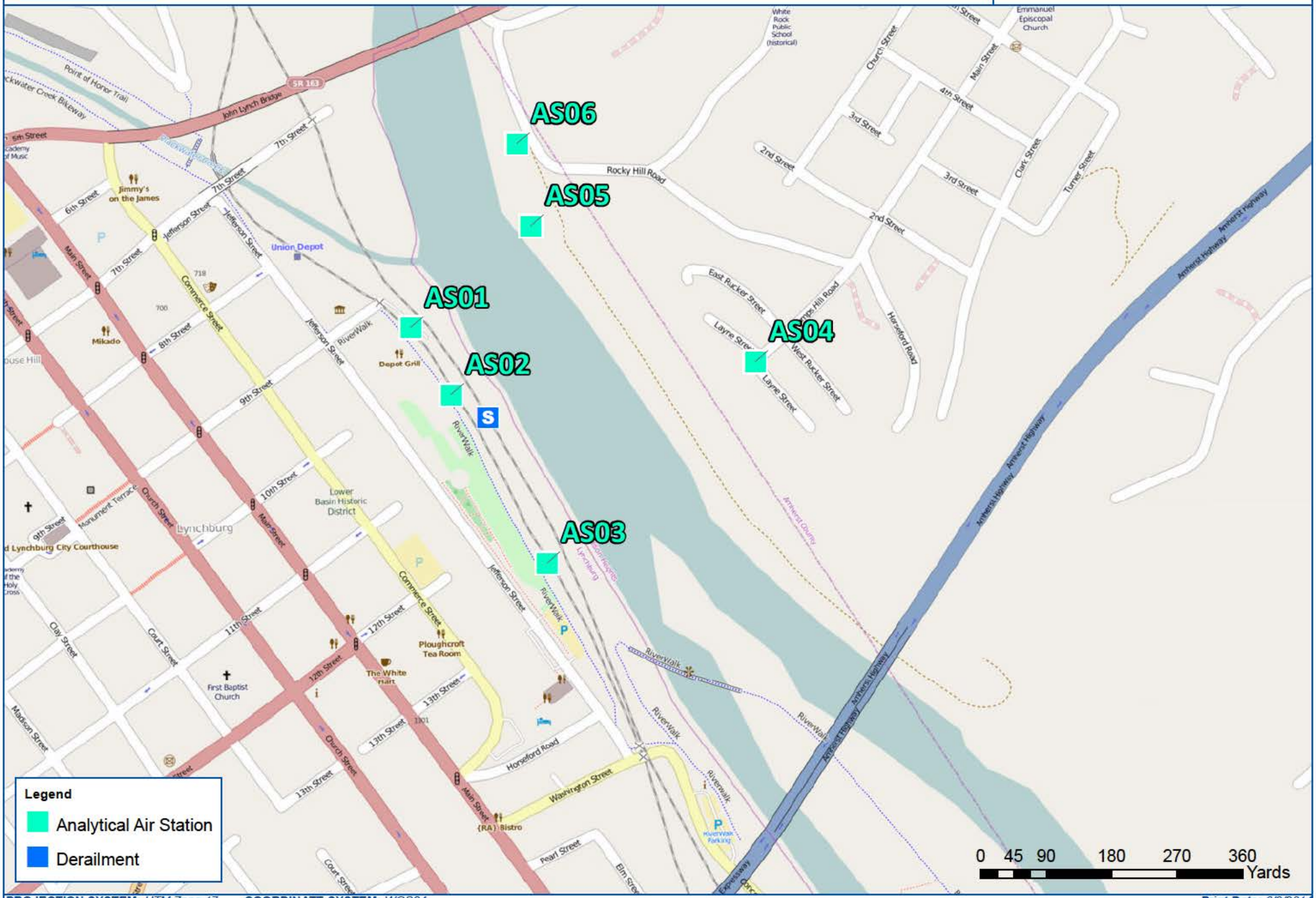
Project: 106190
Client: CSXT
City: Lynchburg, VA

PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/9/2014*

Figure 2.0.3
Analytical Air Station Locations

Project: 106190
Client: CSXT
City: Lynchburg, VA



PROJECTION SYSTEM: *UTM Zone 17* **COORDINATE SYSTEM:** *WGS84* **Print Date:** *6/9/2014*

2.1 Chemicals of Interest

The chemicals of interest for Phase I of this response were those determined to have the greatest potential for human health impacts based on the relative levels in air of volatile organics emitted from fresh crude oil and/or combustion products, together with published information regarding health-based worker and community exposure guidelines. These chemicals included the volatile organic compounds (VOCs) benzene, toluene, ethyl benzene, xylene, and n-hexane. Hydrogen sulfide (H_2S) was also considered a chemical of interest, since some crude oil has an increased potential to release this constituent. Due to the fire, particulate matter with diameters of 2.5 and 10 microns ($PM_{2.5}$ and PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), formaldehyde, and carbon monoxide (CO) were also considered chemicals of interest during the initial stages of the recovery operations. However, since the fire had been extinguished prior to CTEH's arrival at the incident site, particulates were the only combustion product measured. Lower Explosive Limit (LEL) was also measured during Phase I. Additional information regarding these chemicals of interest can be found in the SAP (Appendix A).

2.2 Occupational and Community Exposure Standards/Guidelines for Use During Chemical Release Emergencies

The Occupational Safety and Health Administration (OSHA) and The American Conference of Governmental Industrial Hygienists (ACGIH) have established workplace exposure standards and guidelines, respectively. In general, these standards and guidelines are intended for worker exposure occurring over a working lifetime. In some instances, short-term exposure values have also been established. **Table B.1.1** (Appendix B) summarizes the OSHA worker exposure standards and the ACGIH guidelines for the chemicals of interest. A detailed description of occupational and community exposure standards and guidelines for the chemicals of interest is provided in **Appendix B**.

2.3 Community Exposure Guidelines for Use During Chemical Release Emergencies

The U.S. Department of Energy's Subcommittee on Consequence Assessment and Protective Actions (SCAPA) has established Protective Action Criteria (PACs) for over 3,300 chemicals for planning and response to uncontrolled releases of hazardous chemicals. These criteria, combined with estimates of exposure, provide the information necessary to evaluate chemical release events for the purpose of taking appropriate protective actions. During an emergency response, these criteria may be used to evaluate the severity of the event and to inform decision makers regarding what protective actions should be taken. **Table B.2.1** (Appendix B) provides the PACs for the chemicals of interest during this response.

2.4 CTEH® Site-Specific Action Levels

CTEH® site-specific action levels were employed in all sampling zones to provide information for corrective action to limit exposure. These values do not replace occupational or community exposure standards or

guidelines, but are intended to be a concentration limit that triggers a course of action to reduce or eliminate exposure to workers or members of the public. CTEH® site-specific action levels for the chemicals of interest are provided in the SAP (Appendix A).

3.0 Air Monitoring and Sampling Results

For ease of review, the results from air-monitoring and sampling assessments have been grouped according to their location category: Work Area and Community. Additional information can be found in the following appendices.

- Appendix C – Cumulative Maps of Manually-Logged Real-Time Data Locations by Analyte
- Appendix D – AreaRAE Graphs
- Appendix E – Analytical Data

3.1 Community Results

Table 3.1.1 summarizes the readings taken by CTEH® personnel using handheld real-time air monitoring equipment in and around the community surrounding the Work Area. This summary includes results from both the "free-roaming" and "fixed-location" monitoring discussed in section 2.0. **Table 3.1.2** provides a summary of community AreaRAE data. **Figure 3.1.1** shows the distribution of handheld real-time readings throughout the community.

Table 3.1.1 Community Manually-Logged Real-Time Summary

Analyte	Total Number of Readings	Total Number of Detections	Detected Concentration Range
VOCs	156	0	< 0.1 ppm
Benzene	127	0	< 0.05 ppm
H_2S	78	0	< 1 ppm
CO	1	0	< 1 ppm
$PM_{2.5}$	60	60	0.005 - 0.032 mg/m^3
PM_{10}	67	67	0.005 - 0.051 mg/m^3
Total # of readings	489	127	NA

Table 3.1.2 Community AreaRAE Count Summary

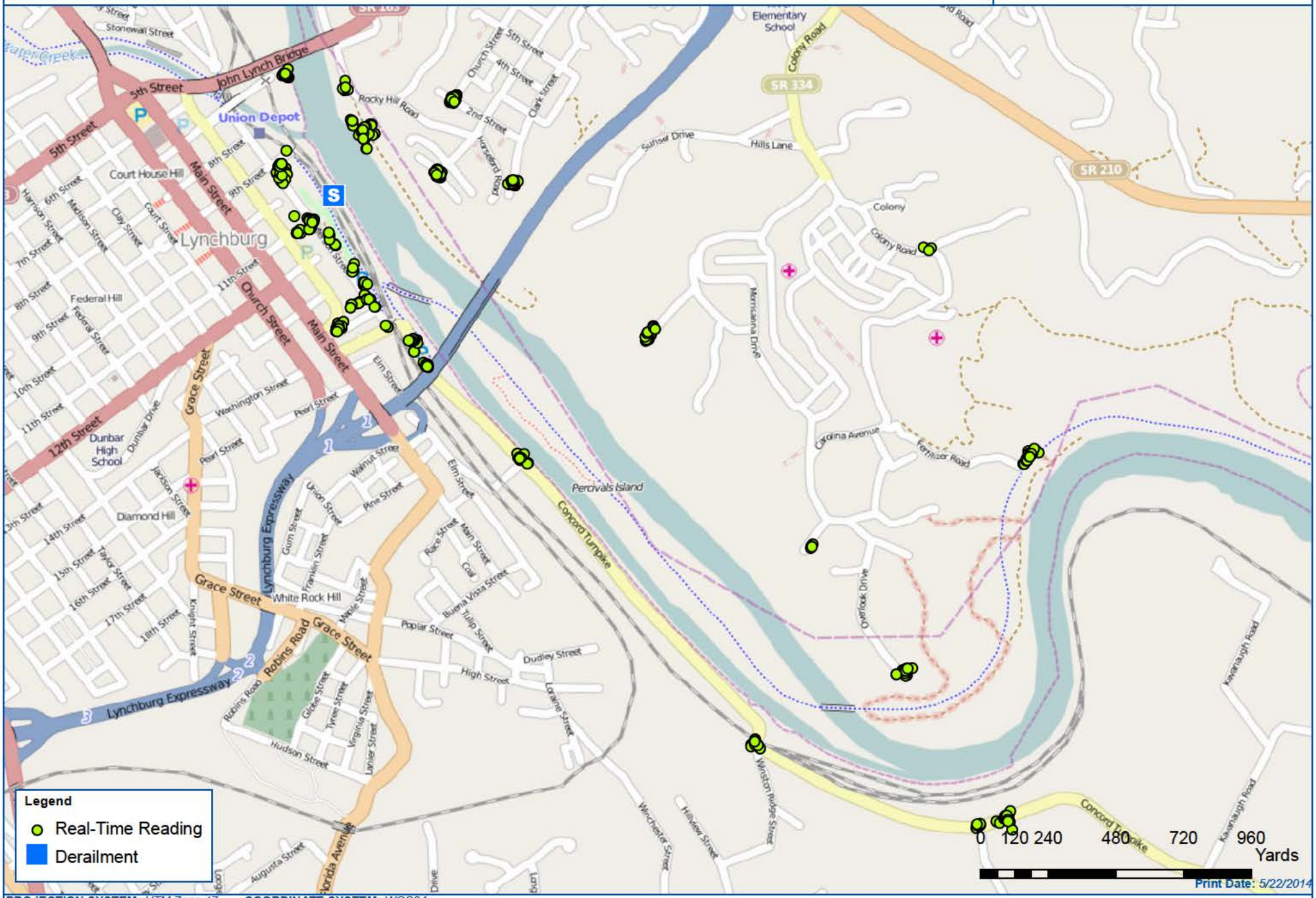
AreaRAE Unit	Analyte	Number of Readings	Number of Detections	Detected Concentration Range
Unit 4	LEL	46,587	0	< 1 %
	H_2S	46,587	0	< 1 ppm
	VOCs	46,587	0	< 0.1 ppm
	CO	46,587	5	3.3 - 3.7 ppm
Unit 5	LEL	32,589	0	< 1 %
	H_2S	32,589	0	< 1 ppm
	VOCs	32,589	1,302	0.1 - 1.0 ppm
	CO	32,589	71	1.0 - 3.5 ppm
Unit 6	LEL	30,933	0	< 1 %
	H_2S	30,933	0	< 1 ppm
	VOCs	30,933	0	< 0.1 ppm
	CO	30,933	0	< 1 ppm
Total # of readings	All	440,436	1,378	NA

Graphical representations of AreaRAE data are provided by unit, analyte, and day in Appendix D

Figure 3.1.1

Community Manually-Logged Real-Time Locations

Project: 106190
Client: CSXT
City: Lynchburg, VA



PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

WET-SOP 13 analyses indicated no detections of H_2S above laboratory detection limits. Analytical air sampling results indicated two detections above the laboratory limit of quantitation for one of the chemicals of interest, toluene, and a common laboratory contaminant, acetone. **Table 3.1.3** provides a summary of compounds detected above laboratory limits of quantitation during analytical air sampling using the EPA 10-15 analytical method. Compounds that were undetected or were detected below the laboratory limit of quantitation are not included in this table. Complete analytical results can be found in **Appendix E**.

Table 3.1.3 Community EPA TO-15 Detection Summary

Analyte	Number of Samples	Number of Detections	Detection Range (ppbv)
Acetone	7	2	28
Toluene	7	2	8.4 - 9.4

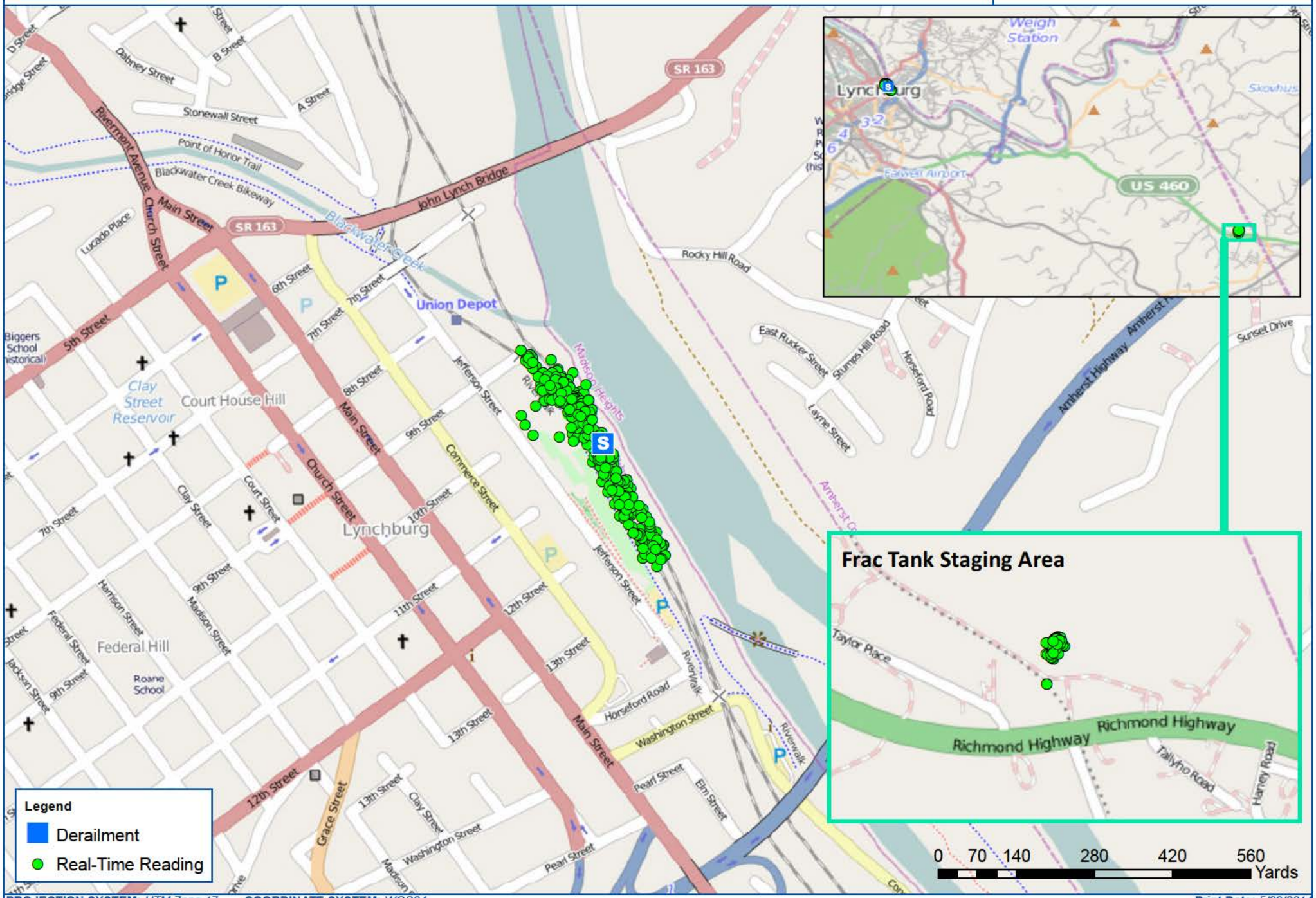
3.2 Work Area Results

Figure 3.2.1 shows the distribution of readings throughout the wrecking-and staging-area. **Table 3.2.1** summarizes the readings taken by CTEH® personnel using handheld real-time air monitoring equipment in the wrecking-and-staging area. **Table 3.2.2** summarizes the handheld real-time air monitoring data collected at the frac tank staging area at the W.E.L., Inc. facility. Work area AreaRAE data are summarized in **Table 3.2.3**. Graphical representations of the AreaRAE data are provided by unit, analyte, and day in **Appendix D**.

CTEH

Figure 3.2.1
Work Area Manually-Logged Real-Time Locations

Project: 106190
Client: CSXT
City: Lynchburg, VA



PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84* Print Date: *5/22/2014*

Table 3.2.1 Work Area: Wrecking and Staging Manually-Logged Fixed-Real-Time Summary

Analyte	Total Number of Readings	Total Number of Detections	Detected Concentration Range
VOCs	291	32	0.1 - 50 ppm
Benzene	39	2	0.05 - 0.25 ppm
H_2S	189	0	< 1 ppm
CO	41	0	< 1 ppm
LEL	247	2	2 - 3 %
n-hexane	1	0	< 1 ppm
$PM_{2.5}$	6	6	0.011 - 0.035 mg/m^3
PM_{10}	25	25	0.010 - 0.095 mg/m^3
Total # of readings	839	67	NA

Table 3.2.2 Work Area: Frac Tank Staging Manually-Logged Fixed-Real-Time Summary

Analyte	Total Number of Readings	Total Number of Detections	Detected Concentration Range
VOCs	43	5	0.2 - 68 ppm
Benzene	22	0	< 0.05 ppm
H_2S	17	0	< 1 ppm
CO	1	0	< 1 ppm
LEL	37	1	2 %
Toluene	1	0	< 0.5 ppm
Xylene	1	0	< 1 ppm
n-hexane	1	0	< 1 ppm
Total readings	123	6	NA

Table 3.2.3 Work Area Perimeter AreaRAE Count Summary

AreaRAE Unit	Analyte	Number of Readings	Number of Detections	Detected Concentration Range
Unit 1	LEL	47,709	1	2.9 %
	H_2S	47,709	1	1.7 ppm
	VOCs	47,709	5,666	0.1 - 43.9 ppm
	CO	47,709	665	1.0 - 6.6 ppm
Unit 2	LEL	48,849	3	1.4 - 3.2 %
	H_2S	48,849	0	< 1 ppm
	VOCs	48,849	1,822	0.1 - 26.9 ppm
	CO	48,849	0	< 1 ppm
Unit 3	LEL	46,198	0	< 1 %
	H_2S	45,621	2	1.4 - 3.0 ppm
	VOCs	46,198	6,363	0.1 - 8.5 ppm
	CO	46,198	13	1.0 - 6.2 ppm
Total # of readings	All	570,447	14,536	NA

Minicans™ and Radiellos® were staged at each analytical air sampling station to sample for VOCs (method: EPA TO-15+TICS) and H_2S (method: WET-SOP 13), respectively. WET-SOP 13 analyses indicated no detections of H_2S above laboratory detection limits. Analytical air sampling results indicated two detections above the laboratory limit of quantitation for two of the chemicals of interest: toluene and hexane. **Table 3.2.4** provides a summary of compounds detected above laboratory limits of quantitation during analytical air sampling using the EPA 10-15 analytical method. Compounds that were undetected or were detected below the laboratory limit of quantitation are not included in this table. Complete analytical results can be found in **Appendix E**.

Table 3.2.4 Work Area EPA TO-15 Detection Summary

Analyte	Number of Samples	Number of Detections	Detection Range (ppbv)
2,2,4-Trimethylpentane	9	1	7.4
Acetone	9	5	26 - 45
Carbon Disulfide	9	1	13
Hexane	9	1	10
Toluene	9	1	6.4

4.0 Discussion

4.1 Community Discussion

Throughout the duration of Phase I, there were no detections of H_2S, benzene, or LEL in the community surrounding the derailment site. Detections of $PM_{2.5}$ and PM_{10} remained below site-specific action levels. Detections of VOC and CO in the community exceeded site-specific action levels which were set at the detection limit for the instruments; however, all detections of VOC and CO in the community were intermittent and below concentrations of the one-hour PAC-1 values for each. As such, no corrective action was deemed necessary.

Analytical air sampling was conducted at three established analytical stations in the community from May 1, 2014, to May 4, 2014. Analytical air samples were collected using both active (Minicans) and passive (Radiello badges) sampling methods for specific organic compounds and H_2S, respectively. Passive air sampling results indicated no measurable detections of H_2S above laboratory detection limits. Active air sampling results reported two chemicals in concentrations above the laboratory limit of quantitation: acetone and toluene. Acetone is not a chemical associated with crude oil, and the presence of acetone in these analytical air samples is likely due to another source, such as its common use as a laboratory solvent. Toluene is a chemical constituent of crude oil and gasoline, which are both commonly used in urban environments; therefore, the presence of toluene at low levels is not unexpected. The detection of toluene may result from background conditions unrelated to the incident; in addition, the maximum detected concentration (9.4 ppb) was below the concentration of the one-hour PAC-1 value. Benzene, ethylbenzene, n-hexane, and xylenes, constituents of crude oil considered as chemicals of interest for this project, were not detected above the laboratory limit of quantitation.

4.2 Work Areas Discussion

There were no detections of toluene, xylene, or n-hexane recorded during real-time air monitoring activities in the wrecking-and-staging area or the frac tank staging area throughout the duration of Phase I. Intermittent detections of H_2S and benzene were reported in both the wrecking-and-staging area and the frac tank staging area. These detections were not sustained above the site-specific action levels set for each respective compound; however protective actions were taken in response to these detections to assess work practices.

Three instantaneous VOC detections that exceeded the site-specific action level of 30 ppm were recorded in the work areas with readings of 43.9, 50, and 68 ppm. These detections were not sustained above the site-specific action level; however, protective action was immediately taken to assess work practices. Two detections occurred during periods with no work activity in the immediate vicinity, and readings returned to levels below instrument detection limits within two minutes. The third occurred during an active transfer operation. Workers in the area were notified of the situation and advised to avoid the area to prevent

prolonged worker exposure to elevated concentrations of VOCs. The highest VOC detection of 68 ppm was still well below the ACGIH TLV-STEL (i.e., 15-minute average) value for gasoline of 500 ppm.

Six instantaneous LEL detections that exceeded the site-specific action level of 1 % were recorded in the work areas. LEL detections ranged from 1.4 to 3.2 % and all were recorded in close proximity to vacuum trucks and transfer hoses used in product transfer operations. Workers were advised to avoid the areas and to remain upwind of potential sources of fumes.

Three instantaneous detections of H_2S were reported in the work areas. Instantaneous H_2S detections ranged from 1.4 to 3.0 ppm and returned below instrument detection limits within one minute of initial detection; therefore, the 15-minute sustained reading action level for H2S was not exceeded.

Analytical sampling was conducted at three established stations in the work area from May 1, 2014, to May 4, 2014. As in the community, analytical air samples were collected using both active (Minicans;) and passive (Radiello badges) sampling methods to sample for specific organic compounds and H_2S, respectively.

One detection above the laboratory limit of quantitation was reported for two of the chemicals of interest: toluene (6.4 ppb) and hexane (10 ppb). Toluene and hexane are common constituents of crude oil and are commonly used in urban environments. 2,2,4-trimethylpentane was tentatively identified in the analytical samples and is also a common constituent of crude oil and gasoline. These detections may result from background conditions unrelated to the incident; however, the concentrations detected did not approach the values establish by any occupational exposure standards.

In addition to VOCs potentially related to crude oil, VOCs unrelated to crude oil were identified: acetone and carbon disulfide. The presence of these compounds in the air near the incident is likely due to other sources (laboratory solvent use, typical urban environmental conditions, etc.).

There were no other detections above the laboratory limit of quantitation for any other chemical of interest, including H_2S, benzene, ethylbenzene, and xylenes.

4.3 Conclusions

The results of real-time and analytical sampling indicate that there were no airborne crude oil constituents present at a combination of concentration and duration that would represent a health concern to workers or the public.

5.0 References

ACGIH. 2014 TLVs and BEIs: Based on the Documentation of the Threshold Limit values for Chemical Substances and Physical Agents and Biological Exposure Indices. Cincinnati, Ohio: American Conference of Governmental Industrial Hygienists; 2014b.

ACGIH. Guide to Occupational Exposure Values 2014. Cincinnati, Ohio: American Conference of Governmental Industrial Hygienists; 2014a.

AIHA. 2014 Emergency Response Planning Guidelines (ERPG) and Workplace Environmental Exposure Level (WEEL) Handbook. Falls Church, VA: American Industrial Hygiene Association; 2014.

Lipsett, M. et al. Wildfire smoke: a guide for public health officials. Sacramento, CA: California Office of Environmental Health Hazard Assessment; 2013 Jun. http://oehha.ca.gov/air/risk_assess/wildfirev8.pdf

National Research Council. Subcommittee on Acute Exposure Guideline Levels. Standing operating procedures for developing acute exposure guideline levels for hazardous chemicals. Washington, DC: National Academy Press; 2001.

OSHA. Air contaminant--permissible exposure limits 29CFR1910.1000.

Schwela, D. H.; Goldammer, J. G.; Morawska, L. H., and Simpson, O., Editors. Health guidelines for vegetation fire events. Geneva: World Health Organization, United Nations Environment Programme and World Meterological Organization; 1999.

USEPA. Acute Exposure Guideline Levels: AEGL Chemicals. Washington, DC: U.S. Environmental Protection Agency; 2011. http://www.epa.gov/oppt/aegl/pubs/chemlist.htm

USEPA. Air Quality Index Reporting: Final Rule. Federal Register. 1999 Aug 4; 64(149):42530-42549.

Appendix A

Sampling and Analysis Plan

Incident:	**Lynchburg, VA Crude Oil Incident**
Location:	**Lynchburg, VA**
Client:	**CSX**
Version History:	**1.0**

CTEH Project-Specific Action Levels

The following chemicals were determined to have the greatest potential for human health impacts based on the relative levels in air of volatile organics emitted from fresh crude oil and/or combustion products, together with published information regarding health-based worker and community exposure guidelines.

Plan/Assignment: **WORK AREA**
Objective: Report air levels before they reach those requiring respiratory protection or other precautionary actions

Analyte	Plan	Action Level	Basis	Action to be Taken
Total VOCs	Work Area	30 ppm	1/10 ACGIH TLV for gasoline – Based on similar concentrating of n-Hexane in automotive gasoline	Report reading to site management, evaluate work practices. If VOC detected, conduct further evaluation.
Benzene	Work Area	0.5 – 2.5 ppm	OSHA PEL Action level – Readings sustained for 15 minutes (STEL is 5 ppm)	Evacuate area or don air purifying respirator; report reading to site management.
Toluene	Work Area	20 ppm	ACGIH® TLV – Reading sustained for 15 minutes	Report reading to site management, evaluate work practices.
Hexane	Work Area	50 ppm	ACGIH® TLV (n-hexane) – Reading sustained for 15 minutes	Report reading to site management, evaluate work practices.
Hydrogen Sulfide	Work Area	1 ppm	ACGIH® TLV – Reading sustained for 15 minutes	Evacuate area, report reading to site management.
Combustion Products*				
Particulate Matter ** ($PM_{2.5}$ or PM_{10})	Work Area	0.150 mg/m^3	WHO guidelines for vegetation fire events – Reading sustained for 15 minutes	Report reading to site management, notify workers of potential for mild aggravation of symptoms.
Particulate Matter ** ($PM_{2.5}$ or PM_{10})	Work Area	0.350 mg/m^3	WHO guidelines for vegetation fire events – Reading sustained for 15 minutes	Recommend respiratory protection for particulate matter (primarily for sensitive individuals).
Carbon Monoxide	Work Area	25 ppm	ACGIH® TLV – Reading sustained for 15 minutes	Report reading to site management, evaluate work practices.
Sulfur Dioxide	Work Area	0.1 ppm	½ ACGIH® STEL – Reading sustained for 15 minutes	Report reading to site management, recommend engineering control if possible.
Sulfur Dioxide	Work Area	0.2 ppm	ACGIH® STEL – Reading sustained for 10 minutes	Evacuate area - Report reading to Site management.
Nitrogen Dioxide	Work Area	0.2 ppm	ACGIH® TLV – Reading sustained for 15 minutes	Report reading to site management, recommend engineering control if possible.
Formaldehyde	Work Area	0.15 ppm	½ ACGIH® Ceiling – Reading sustained for 15 minutes	Report reading to site management, recommend engineering control if possible.
Formaldehyde	Work Area	0.3 ppm	ACGIH® Ceiling – Reading sustained for 1 minute	Evacuate area - Report reading to site management.

*These components will be monitored for if active fire/smoke is visible.
**$PM_{2.5}$ is especially prone to interference from high humidity; in cases of high humidity use PM_{10} impactor which is not as sensitive to humidity

Plan/Assignment: **COMMUNITY**
Objective: Report levels that minimize nuisance levels in the community

Analyte	Plan	Action Level	Basis	Action to be Taken
Total VOCs	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Benzene	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Toluene	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Hexane	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Hydrogen Sulfide	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Combustion Products*				
Particulate Matter ** ($PM_{2.5}$ or PM_{10})	Comm.	0.039 – 0.088 mg/m^3	Wildfire Smoke Guidelines for 1 -3 hr. avg. Moderate AQI	Report reading to site management, evaluate work practices, distribute information about exposure avoidance.
Particulate Matter ** ($PM_{2.5}$ or PM_{10})	Comm.	0.089 – 0.138 mg/m^3	Wildfire Smoke Guidelines for 1 -3 hr. avg. **Unhealthy for Sensitive Groups**	Report reading to site management, if smoke event is projected to be prolonged, notify possible sites for cleaner air shelters.
Carbon Monoxide	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Sulfur dioxide	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Nitrogen Dioxide	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director
Formaldehyde	Comm.	Detection	Instrument detection limit	Report reading to Project Technical Director

*These components will be monitored for if active fire/smoke is visible.
**$PM_{2.5}$ is especially prone to interference from high humidity: in cases of high humidity use PM_{10} impactor which is not as sensitive to humidity

Plan: **All – FLAMMABILITY**
Objective: Report areas where flammability is most likely

Analyte	Instrument Reading	Corrected Value	Correction Factor	Basis	Action to be Taken
LEL	1 %	2.5 %	2.5 for crude oil LEL*	1% LEL	Egress and notify site management
VOCs	NA	NA	NA For crude oil PID	1% LEL as VOC	Egress and notify site management

*Rough estimate based on common crude oil volatiles

Methods

Real-Time Methods					
Chemical	Instrument	Detection Limit*	Tube#/Lamp	Notes	Correction Factor
VOC	MultiRAE	0.1 ppm	PID 10.6 eV lamp	Measuring range: 0 – 5,000	NA
	AreaRAE	0.1 ppm	PID 10.6 eV lamp	Measuring range: 0 – 5,000	NA
Benzene	UltraRAE	0.05 ppm	PID 9.8 eV lamp	Change SEP tube frequently (Ben. Cal Gas)	NA
	MultiRAE	0.05 ppm	PID 10.6 eV lamp	Measuring range: 0 – 2,650	0.53
	AreaRAE	0.05 ppm	PID 10.6 eV lamp	Measuring range: 0 – 2,650	0.53
	Colorimetric	0.05 ppm	Gastec tube #121L	Range: 0.1 to 10 Volume: 500 ml	1
Toluene	MultiRAE	0.05 ppm	PID 10.6 eV lamp	Measuring range: 0 – 2,500	0.5
	AreaRAE	0.05 ppm	PID 10.6 eV lamp	Measuring range: 0 – 2,500	0.5
	Colorimetric	0.5 ppm	Gastec tube #122L	Range: 2 to 50 Volume: 200 ml	1
Hexane	MultiRAE	0.43 ppm	PID 10.6 eV lamp	Measuring range: 0 – 21,500	4.3
	AreaRAE	0.43 ppm	PID 10.6 eV lamp	Measuring range: 0 – 21,500	4.3
	Colorimetric	1 ppm	Gastec tube #102L	Range: 4 to 50 Volume: 500 ml	1/12
Hydrogen Sulfide	MultiRAE	1 ppm	Sensor	Measuring range: 0 – 100 ppm	
	AreaRAE	1 ppm	Sensor	Measuring range: 0 – 100 ppm	
	MultiRAE	0.33 ppm	PID 10.6 eV lamp	Measuring range: 0 – 330 ppm	3.3
	AreaRAE	0.33 ppm	PID 10.6 eV lamp	Measuring range: 0 – 330 ppm	3.3
	MultiRAE Pro	0.1 ppm	Sensor	Measuring range: 0 – 100 ppm	
	Colorimetric	0.1 ppm	Gastec tube #4LL	Range:0.25 to 2.5 Volume: 1,000 ml	1/10
LEL	MultiRAE	2.5 %	Sensor	Measuring range: 0 – 100%	2.5
	AreaRAE	2.5 %	Sensor	Measuring range: 0 – 100%	2.5
Combustion Products					
PM 2.5/10	SidePak AM510	0.001 mg/m^3	670 nm Laser diode	PM2.5 impactor – 50% cut-off at 2.5 micron PM10 impactor – 50% cut-off at 10 micron	NA
Carbon monoxide	MultiRAE	1 ppm	Sensor	Range: 0 – 500 ppm	
	Colorimetric	0.5 ppm	Gastec tube #1LC	Range: 0 – 30 ppm Volume: 100 ml	1
Sulfur dioxide	MultiRAE	0.1 ppm	Sensor	Range: 0 – 20 ppm	
	Colorimetric	0.05 ppm	Gastec tube #5Lb	Range: 0.05 – 30 ppm Volume: 800 ml	1/4
Nitrogen dioxide	MultiRAE	16 ppm	PID 10.6 eV lamp	Measuring range: 0 – 80,000	16
	MultiRAE	0.1 ppm	Sensor	Range: 0 – 20 ppm	
	Colorimetric	0.1 ppm	Gastec tube #9L	Range: 0.5 – 0.1 ppm Volume: 200 ml	1
Formaldehyde	Colorimetric	0.05 ppm	Gastec tube #91L	Range: 0.1 – 5 ppm Volume: 500 ml	1

*For electronic instruments the detection limit and range is listed as the resolution adjusted by the correction factor.

Analytical Methods				
Analyte	Media/Can	Method	Detection Limit	Target compounds
VOCs	Mini - Cans	EPA TO-15 with TICs	Compare to appropriate health based exposure limit	Benzene, Toluene, m,p-Xylene, 4-Ethyltoluene, 1,2,4-trimethylbenzene, 1,2,5-trimethylbenzene, Methyl-cyclopentane, Cyclohexane, Pentane, Hexane, Heptane, Octane, Decane, 2-methyl-butane
BTEX (+Hexane)	3M 3520 Badge	Modified NIOSH 1500/1501	Compare to appropriate health based exposure limit	Benzene, Toluene, Ethylbenzene, Xylene, Hexane.
H_2S	Radiello	WET-SOP 13	Compare to appropriate health based exposure limit	Hydrogen sulfide

General Information on Procedures (Assessment Techniques) Used

Procedure	Description
Guardian Network	A Guardian network may be established with AreaRAEs equipped with electrochemical sensors will be positioned at established locations around the work zone. The AreaRAEs will be telemetering instantaneous data at 15-second intervals to a computer console. MultiRAE Pros may also be used in the network. The data will be visible in real-time at the computer console and will be monitored 24 hours per day by CTEH personnel.
Hand-held Survey	CTEH staff members may utilize handheld instruments (e.g. MultiRAE Plus; ppbRAE, Gastec colorimetric detector tubes, etc.) to measure airborne chemical concentrations. CTEH will use these hand-held instruments primarily to measure the breathing zone. Additionally, measurements can be made at grade level, as well as in elevated workspaces, as indicated by chemical properties or site conditions. CTEH may also use these techniques to verify detections observed by the AreaRAE network.
Fixed Real-Time Monitoring locations	Multiple community locations may be identified and monitored at the same location approximately once per hour using hand-held instruments. This allows use statistical analysis more effectively than with a random approach.
Analytical sampling	Analytical sampling may be used to validate the fixed station and hand-held data monitoring data, or to provide data beyond the scope of the real-time instruments. Analytical samples may be collected as whole air samples in evacuated canisters or on specific collection media, and sent to an off-site laboratory for further chemical analysis.

Sampling Areas

Sampling Area	Description
Work Area	The general area around the incident location where workers are actively or sporadically participating in remediation activities.
Hot Zone	The spill area where all major spill cleanup operations will be performed. Generally requiring a level of personal protection above that required in the general work area.
Community	The general area around the incident location where individuals not participating in remediation activities could potentially be exposed to the spilled chemicals.
Other	During the course of the remediation, some additional areas or specific tasks may require a unique set of action levels or sampling (e.g. decontamination zones, commercial zones, etc.)

Quality Assurance/Quality Control Procedures

Method	Procedure
Real-time	• Real time instruments may be calibrated in excess of the manufacturer's recommendations. ○ At a minimum whenever indicated by site conditions or instrument readings. • Co-located sampling for analytical analysis may be conducted, if necessary, to assess accuracy and precision in the field. • Lot numbers and expiration dates may be recorded with use of Gastec colorimetric tubes.
Analytical	• Chain of custody documents may be completed for each sample. • Level IV data validation may be performed on the first sample group analyzed. • Level II data validation may be performed on 20% of all samples. • Level IV data validation may be performed on 10% of all samples.
Other	

Change from version 1.0 to 1.1
• *In the section titled:*

	Name/Position	Signature	Date Signed
Prepared By:	David Cawthon/Project Toxicologist	[redacted]	5/1/14

Appendix B

Exposure Guidelines and Standards

B. Exposure Guidelines and Standards

Various government agencies and professional organizations have developed exposure guidelines specific for the chemicals of interest in the workplace and for the general public. These are health-protective values developed to protect workers and the general public from overexposures.

B.1 Occupational Exposure Standards and Guidelines for use during Chemical Release Emergencies

The Occupational Safety and Health Administration (OSHA) and The American Conference of Governmental Industrial Hygienists (ACGIH) have established workplace exposure standards and guidelines, respectively. **Table B.1.1** summarizes the worker exposure standards and guidelines for the chemicals of interest.

Table B.1.1 Occupational Exposure Standards and Guidelines*

Analyte	ACGIH (ppm)		OSHA (ppm)	
	TLV-TWA[a]	TLV-STEL[b]	PEL-TWA[c]	PEL-C[d]
Benzene	0.5	2.5	1	5
Carbon Monoxide	25	NE	50	NE
Ethyl benzene	20	NE	100	NE
Hydrogen Sulfide	1	5	NE	20, 50**
n-Hexane	50	NE	500	NE
Nitrogen Dioxide	0.2	NE	NE	5
PM_{10}	3 mg/m^3	NE	5 mg/m^3	NE
Sulfur Dioxide	NE	0.25	5	NE
Toluene	20	NE	200	300, 500**
Total VOC (as gasoline)	300	500	NE	NE
Xylene (mixed isomers)	100	150	100	NE

NE = Not Established

**Not more than a single time period up to 10 minutes.

a. ACGIH TLV-TWA = Threshold Limit Value – Time Weighted Average (TLV-TWA). The TWA concentration for a conventional 8-hour workday and a 40-hour workweek, to which it is believed that nearly all workers may repeatedly be exposed, day after day, without adverse effect (ACGIH, 2014b).

b. ACGIH TLV-STEL = Threshold Limit Value – Short Term Exposure Limit (TLV-STL). A 15 minute TWA exposure that should not be exceeded at any time during a workday, even if the 8-hour TWA is within the TLV-TWA. The TLV-STEL is the concentration to which it is believed that workers can be exposed continuously for a short period of time without suffering from 1) irritation, 2) chronic or irreversible tissue damage, 3) dose-rate dependent toxic effects, or 4) narcosis of sufficient degree to increase the likelihood of

accidental injury, impaired self-rescue, or materially reduced work efficiency. Exposures above the TLV-TWA up to the TLV-STEL should be less than 15 minutes, should not occur more than 4 times per day, and there should be at least 60 minutes between successive exposures in this range (ACGIH, 2014b).

c. OSHA PEL-TWA = Permissible Exposure Limit – Time Weighted Average (PEL-TWA). Permissible concentration in the air of a substance that shall not be exceeded in any 8-hour work shift of a 40-hour work week (OSHA 29 CFR: 1910.1000).
d. OSHA PEL-C = Permissible Exposure Limit – Ceiling (PEL-C). The exposure limit that shall at no time be exceeded. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure, which shall not be exceeded at any time during the working day (OSHA 29 CFR: 1910.1000).

B.2 Community Exposure Guidelines for Use during Chemical Release Emergencies

The U.S. Department of Energy's Subcommittee on Consequence Assessment and Protective Actions (SCAPA) has established Protective Action Criteria (PACs) for over 3,300 chemicals for planning and response to uncontrolled releases of hazardous chemicals. These criteria, combined with estimates of exposure, provide the information necessary to evaluate chemical release events for the purpose of taking appropriate protective actions. During an emergency response, these criteria may be used to evaluate the severity of the event and to inform decisions regarding what protective actions should be taken.

PAC values are based on the following exposure limit values:

- Acute Exposure Guideline Level (AEGL) values published by the U.S. Environmental Protection Agency (EPA)
- Emergency Response Planning Guideline (ERPG) values provided by the American Industrial Hygiene Association (AIHA)
- Temporary Emergency Exposure Limit (TEEL) values developed by SCAPA

For any particular chemical, the following hierarchy is used to establish its PAC:

- Use AEGLs (including final or interim values) if they are available.
- If AEGLs are not available, use ERPGs.
- If neither AEGLs or ERPGs are available, use TEELs.

AEGLs, ERPGs, and TEELs have three common benchmark values for each chemical. Each successive benchmark is associated with an increased severity of potential effect(s) associated with exposure to the specified level. The three benchmarks present estimated threshold levels for:

- Mild, transient health effects.
- Irreversible or other serious health effects that could impair the ability to take protective action.
- Life-threatening health effects.

Table B.2.1 provides the PACs for the chemicals of interest during this response.

Table B.2.1 Protective Action Criteria

Chemical	PAC-1 (ppm)	PAC-2 (ppm)	PAC-3 (ppm)
Benzene	52_A	800_A	$4{,}000_A$
Carbon Monoxide	83_A	83_A	330_A
Ethyl benzene	33_A	1100_A	1800_A
Hydrogen Sulfide	0.51_A	27_A	50_A
n-Hexane	300	3,300	$8{,}600_A$
Nitrogen Dioxide	0.5_A	12_A	20_A
PM_{10}	NE	NE	NE
$PM_{2.5}$	NE	NE	NE
Sulfur Dioxide	0.2_A	0.75_A	30_A
Toluene	200_A	$1{,}200_A$	$4{,}500_A$
Total VOC (as gasoline)	200	1,000	4,000
Xylene (mixed isomers)	130_A	920_A	$2{,}500_A$

PAC values marked with "A" correspond to 60-minute AEGL values.

**Due to insufficient and animal data addressing the level of effects defined by AEGL-1, no AEGL-1 values are recommended for n-hexane. Alternatively, n-hexane PAC-1 is derived from the TEEL values.

a. PAC-1 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, these effects are not disabling and are transient and reversible upon cessation of exposure (DOE/SCAPA, 2012).

b. PAC-2 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, longlasting, adverse health effects or an impaired ability to escape (DOE/SCAPA, 2012).

c. PAC-3 is the airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening adverse health effects or death (DOE/SCAPA, 2012.

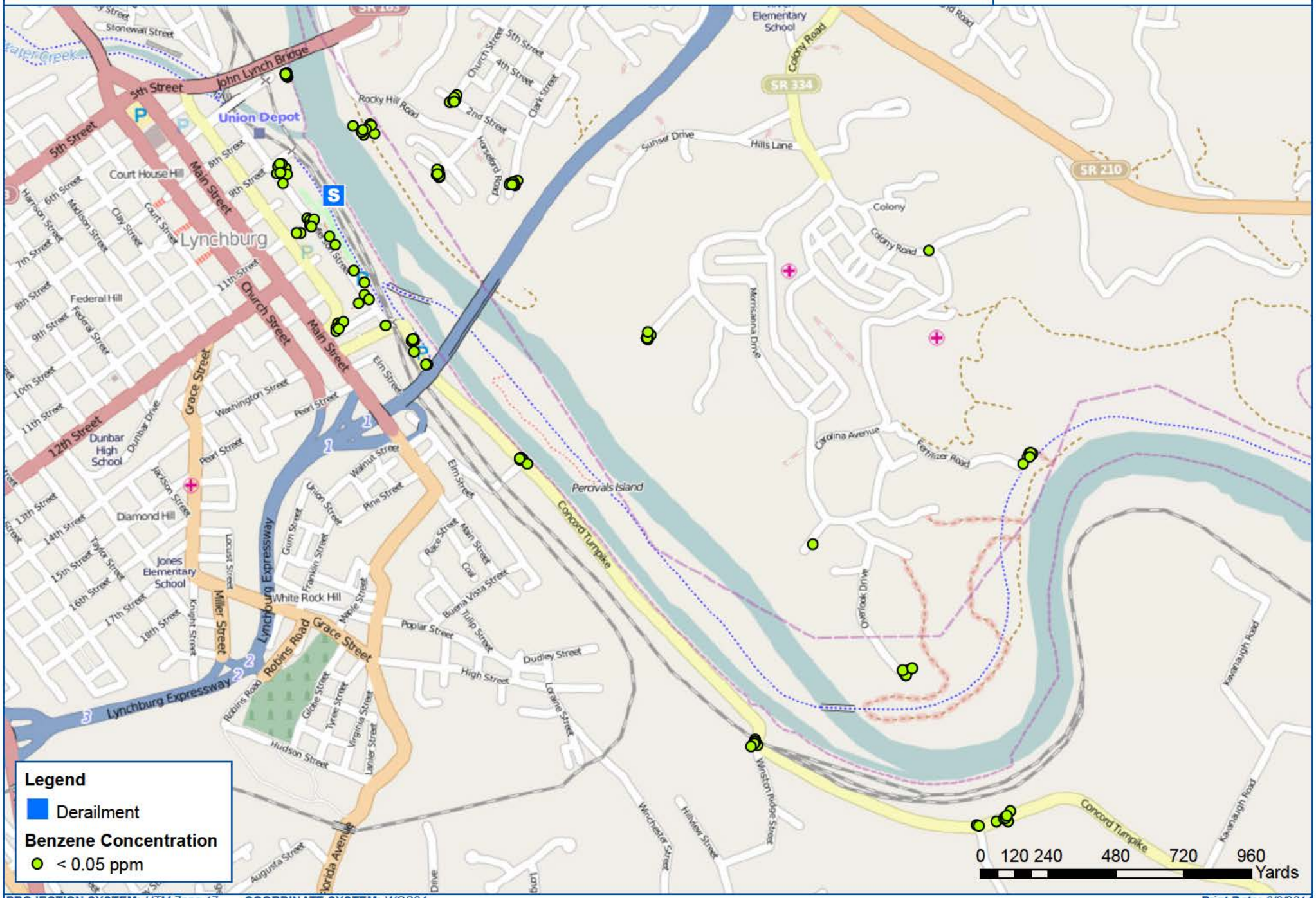
Appendix C

Cumulative Maps of Manually-Logged Real-Time Data Locations by Analyte

Lynchburg, VA Derailment

Community Benzene Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



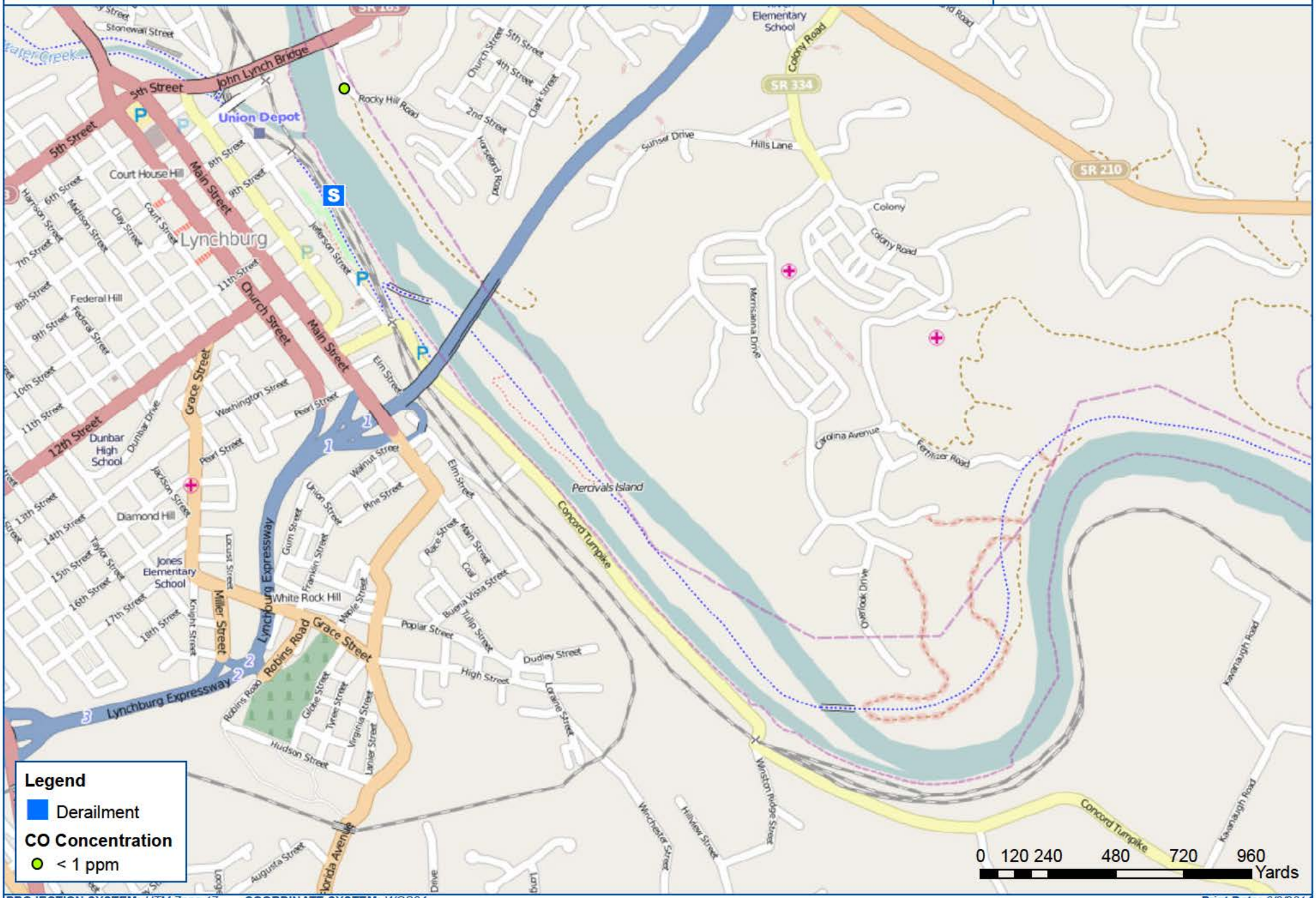
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Community CO Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA

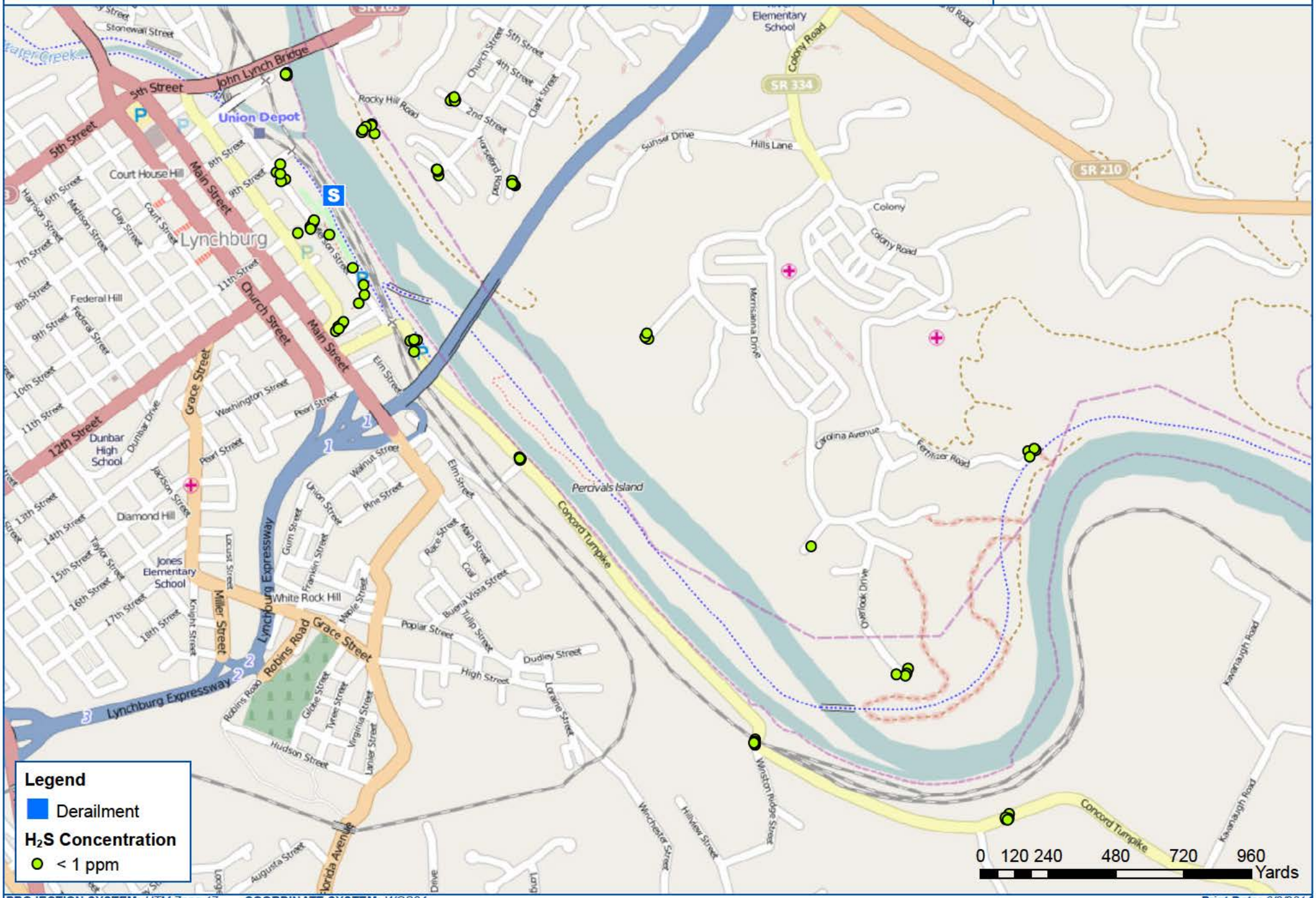


PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84* Print Date: *6/2/2014*

Lynchburg, VA Derailment

Community H_2S Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



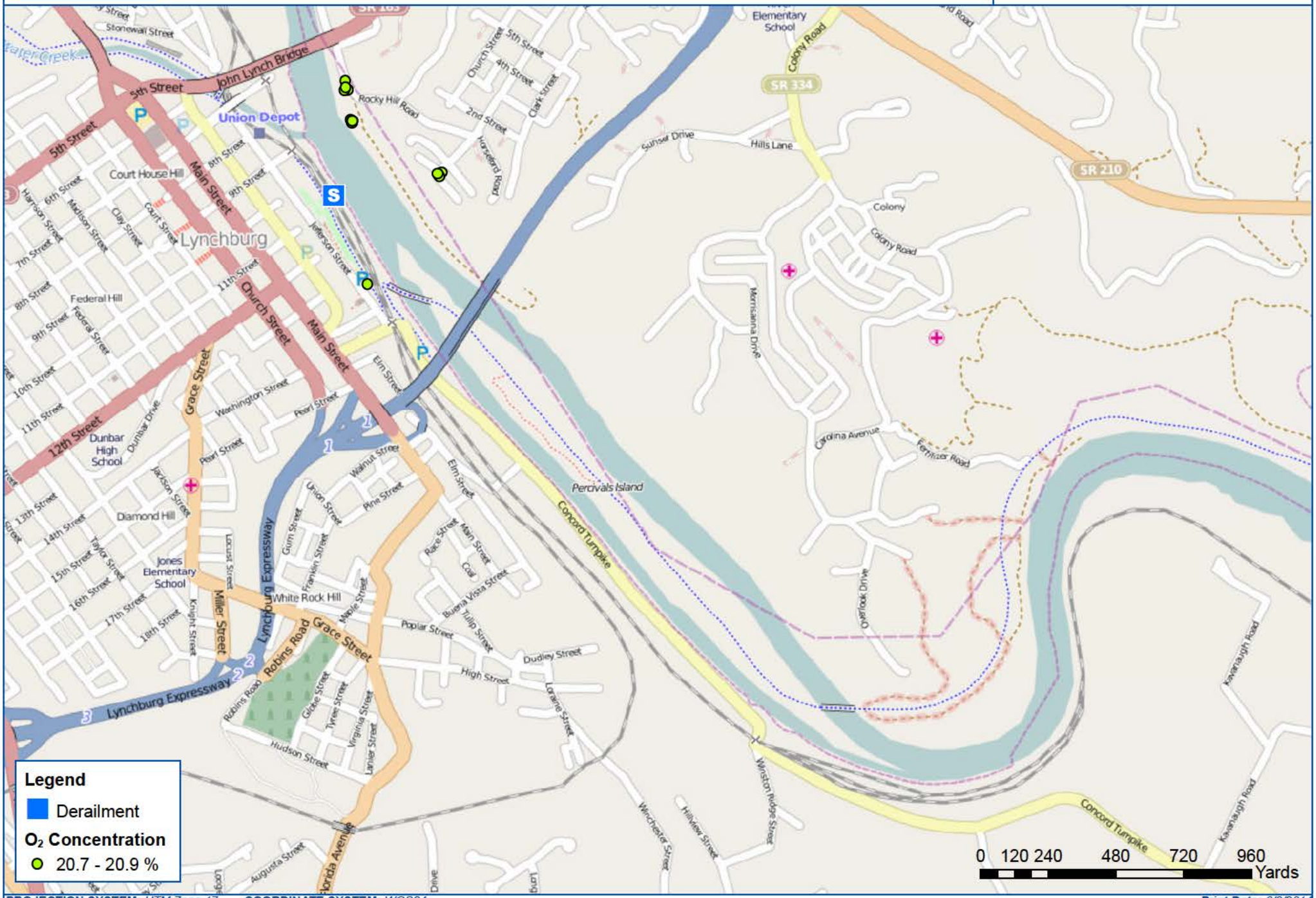
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Community O_2 Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



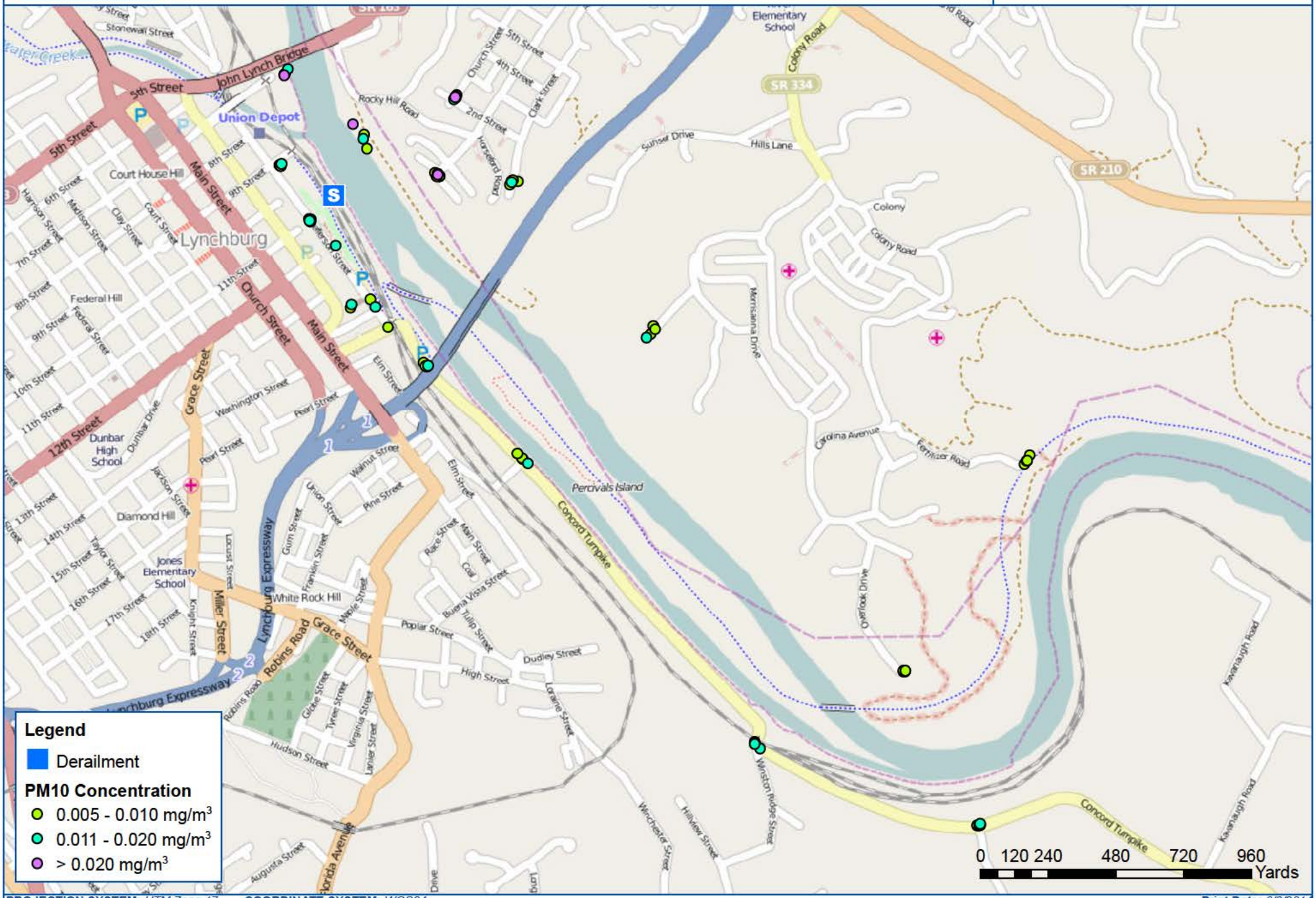
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Community PM10 Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA

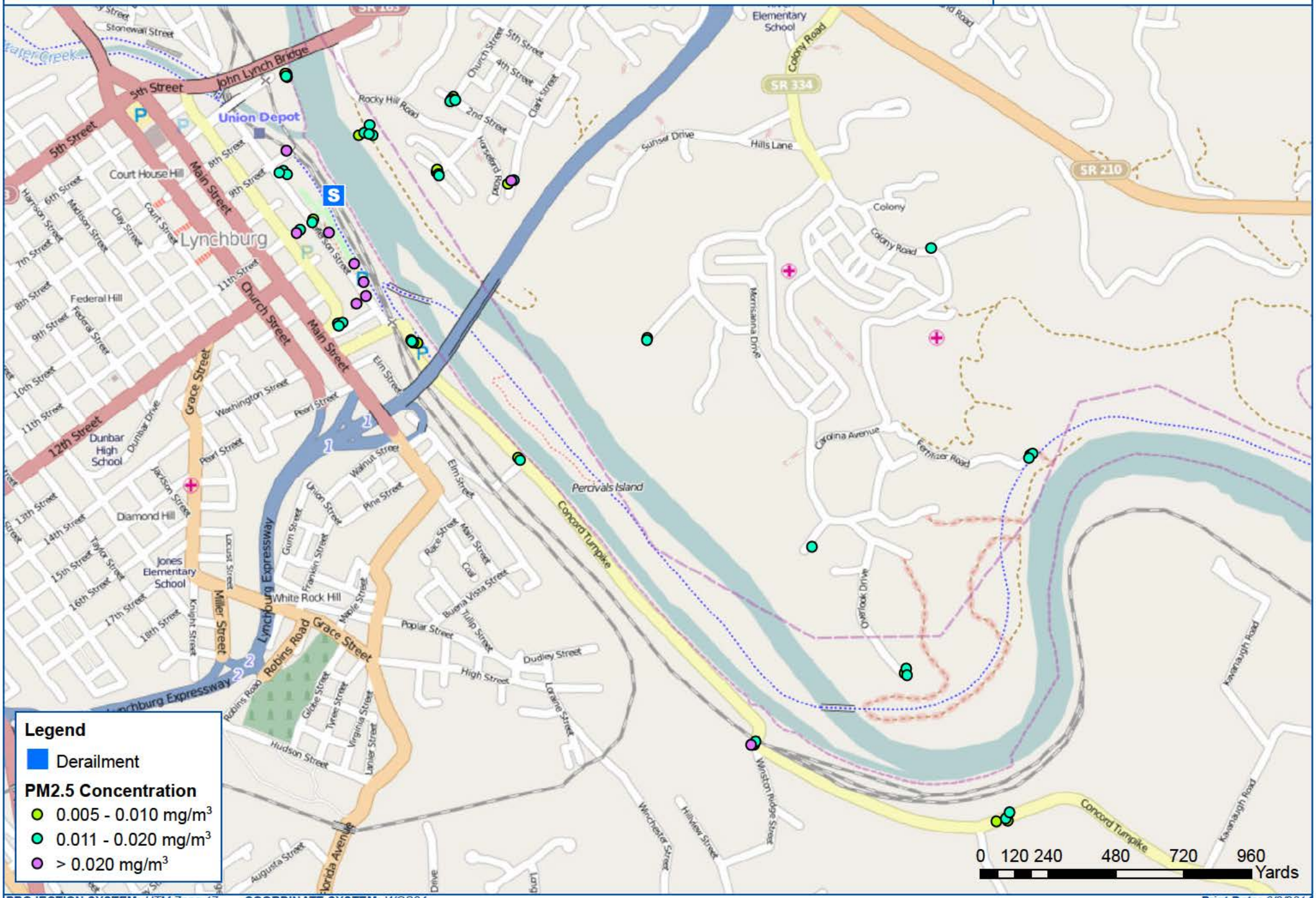


PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84* Print Date: *6/3/2014*

Lynchburg, VA Derailment

Community PM2.5 Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



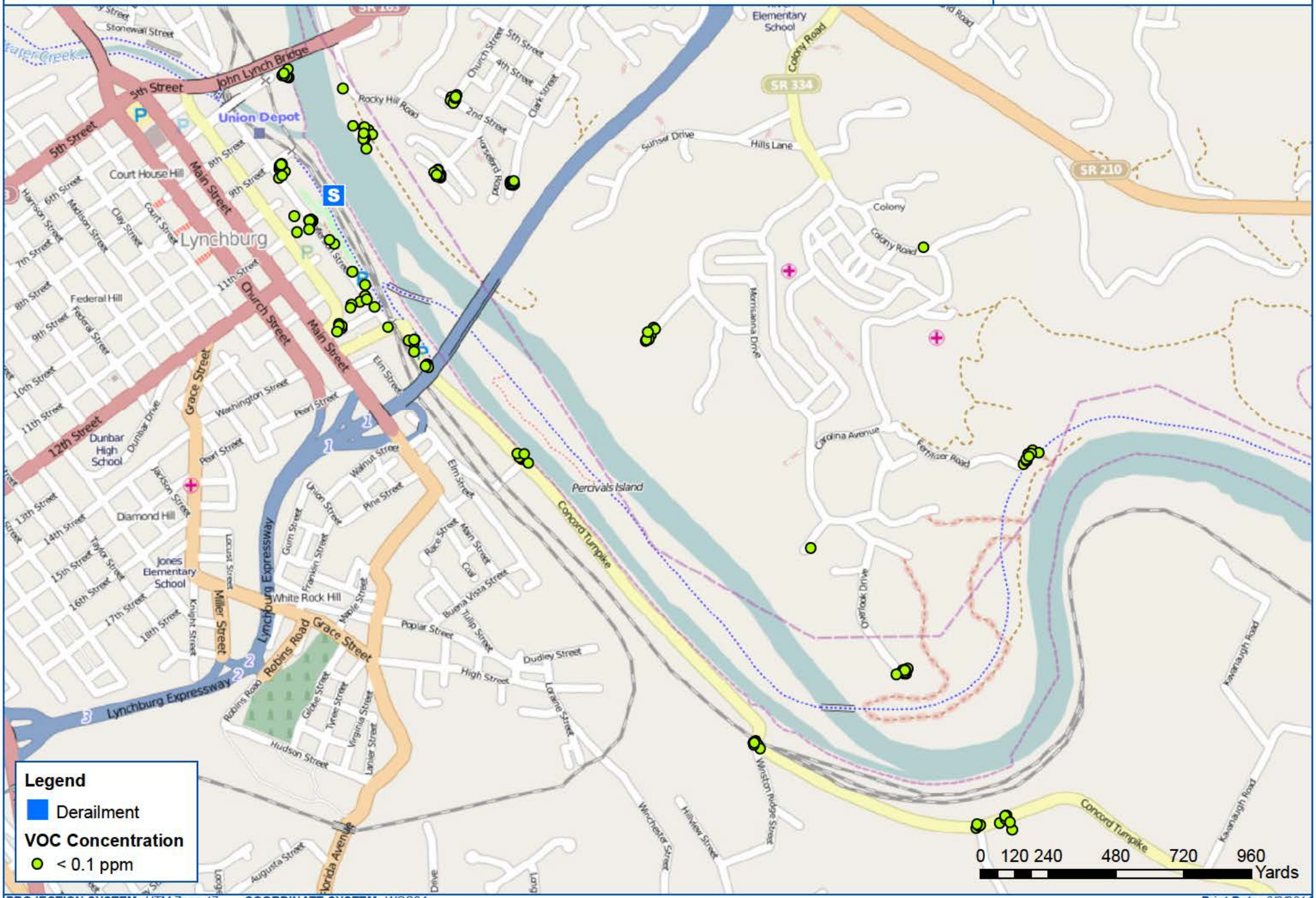
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Community VOC Real-Time Monitoring Locations between April 30, 2014 20:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



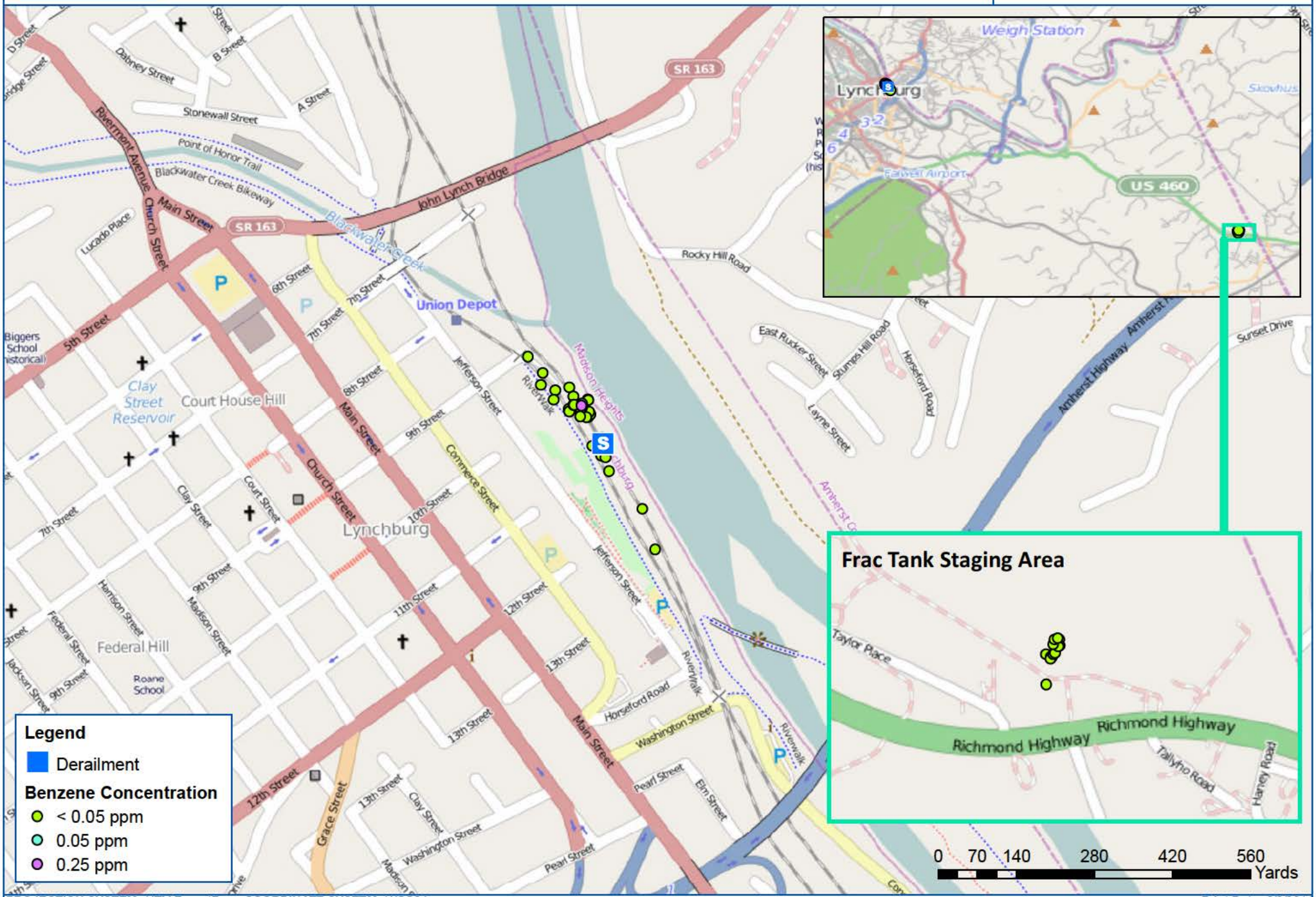
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Work Area Benzene Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



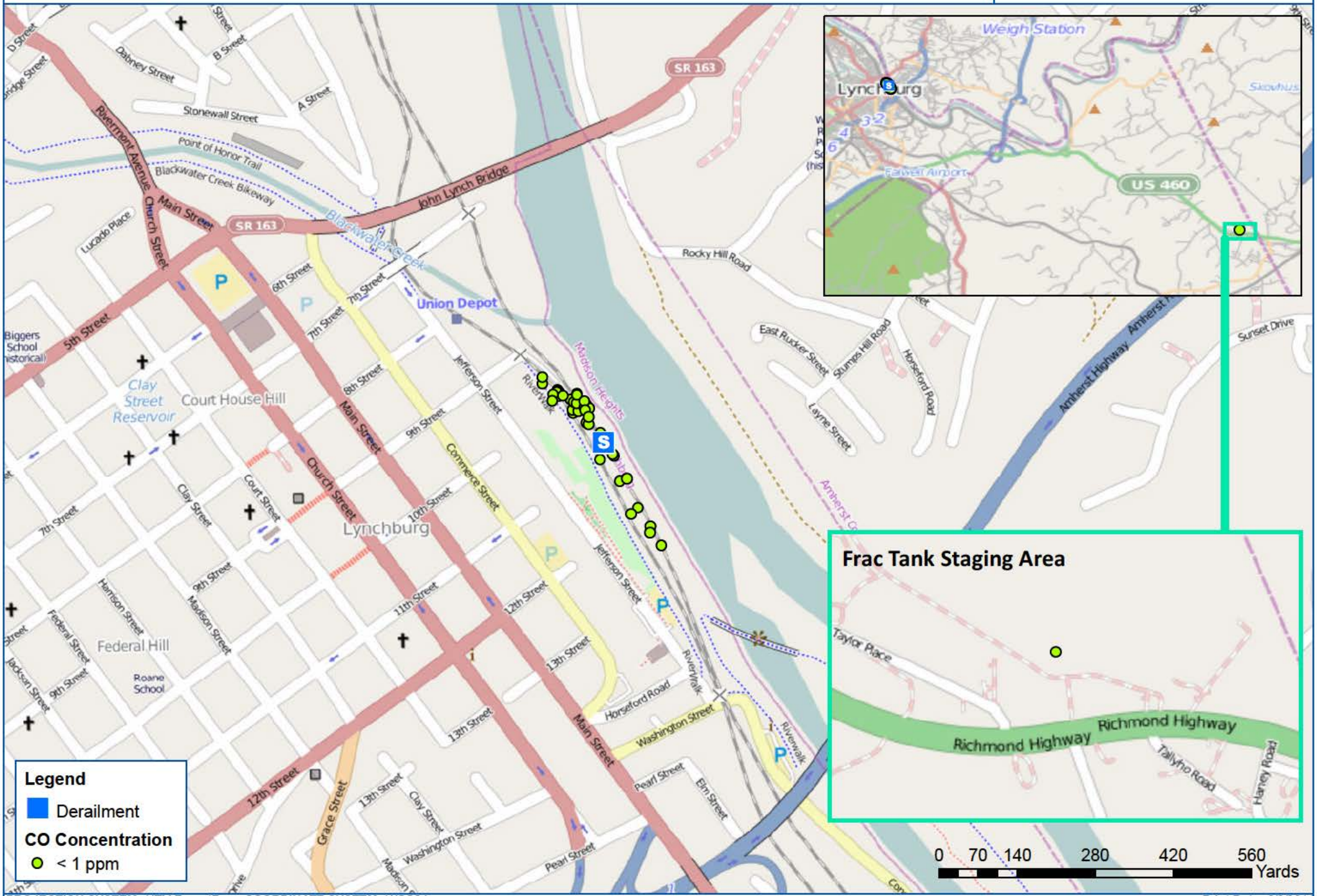
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Work Area CO Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



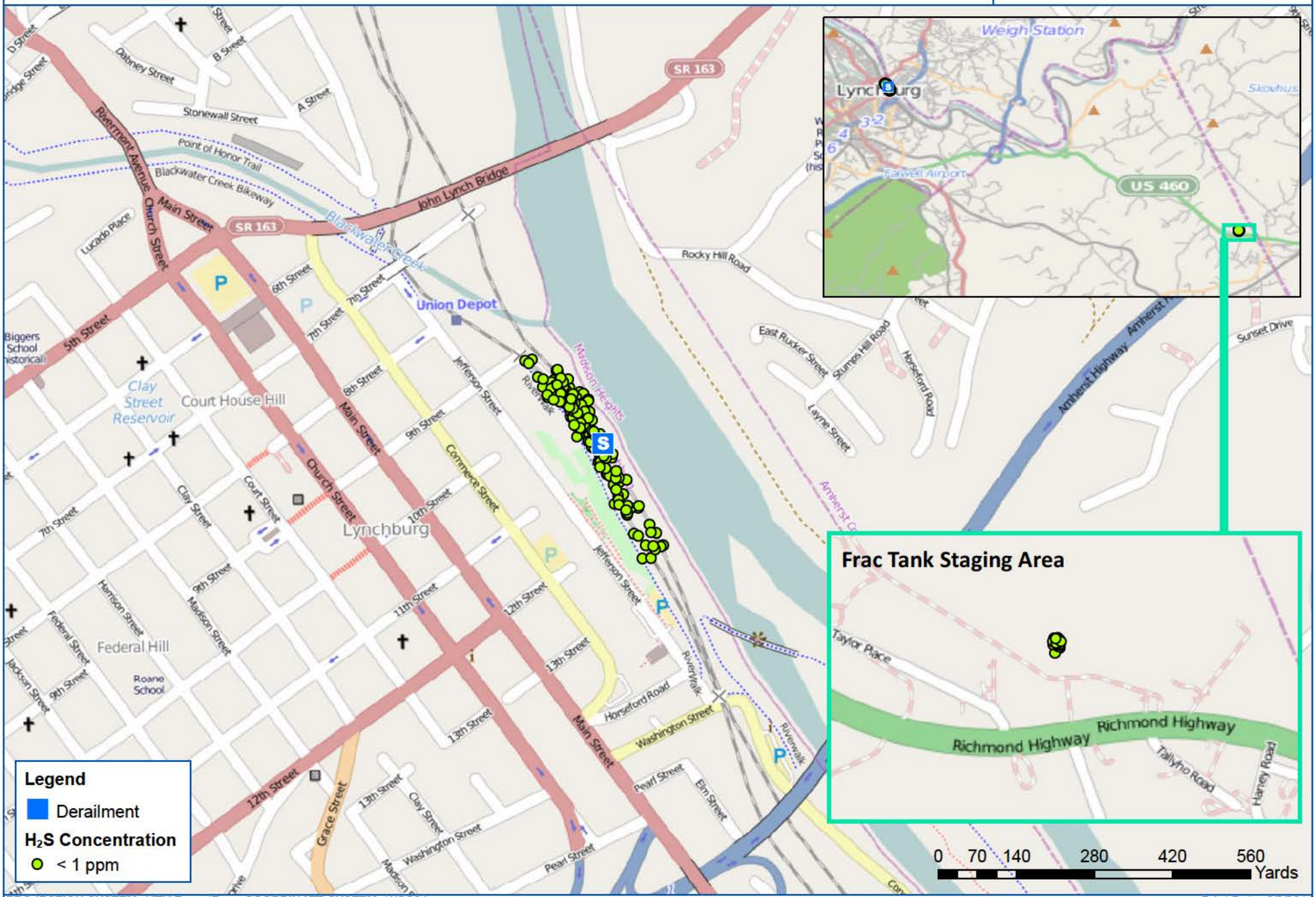
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Work Area H_2S Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



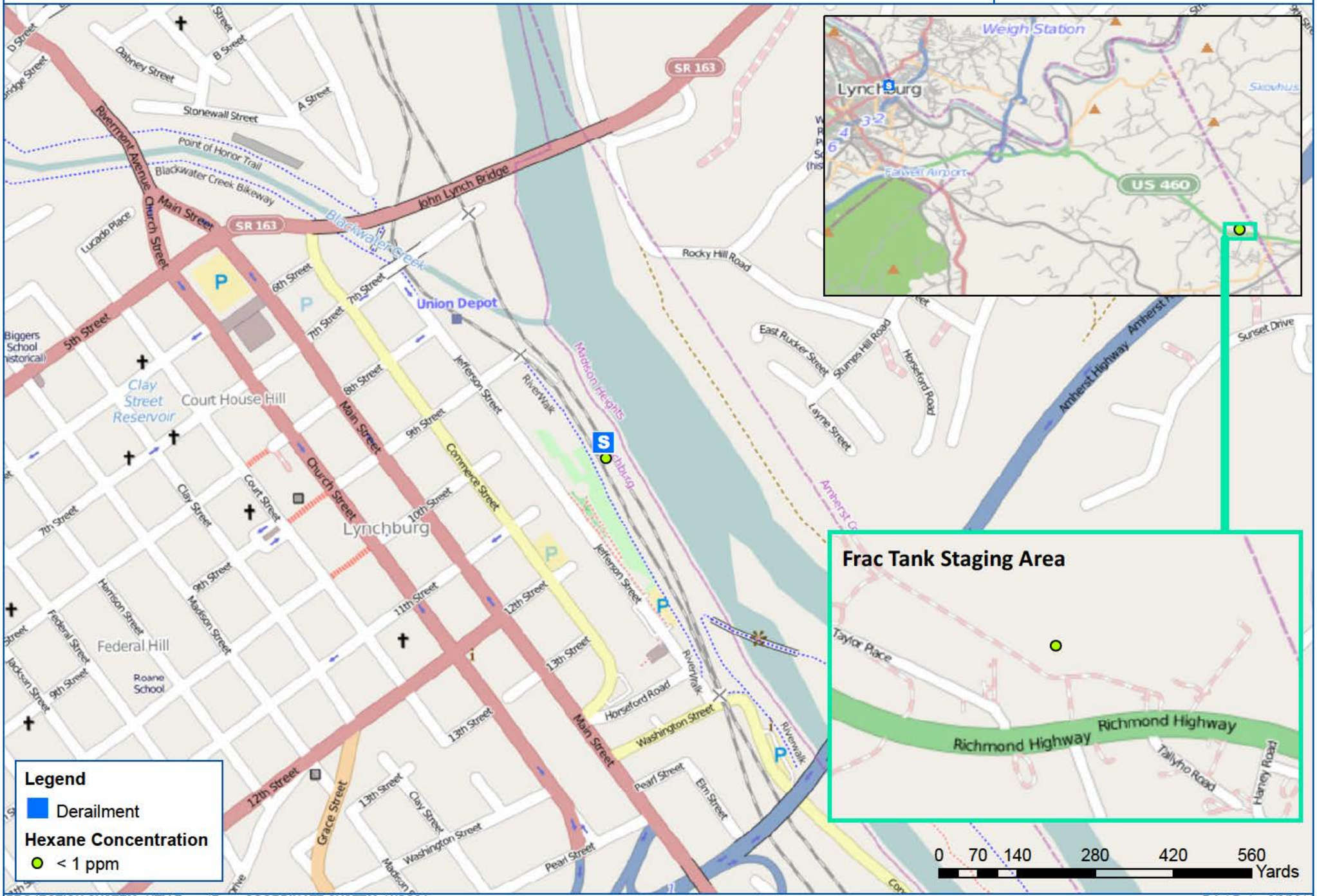
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Work Area Hexane Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



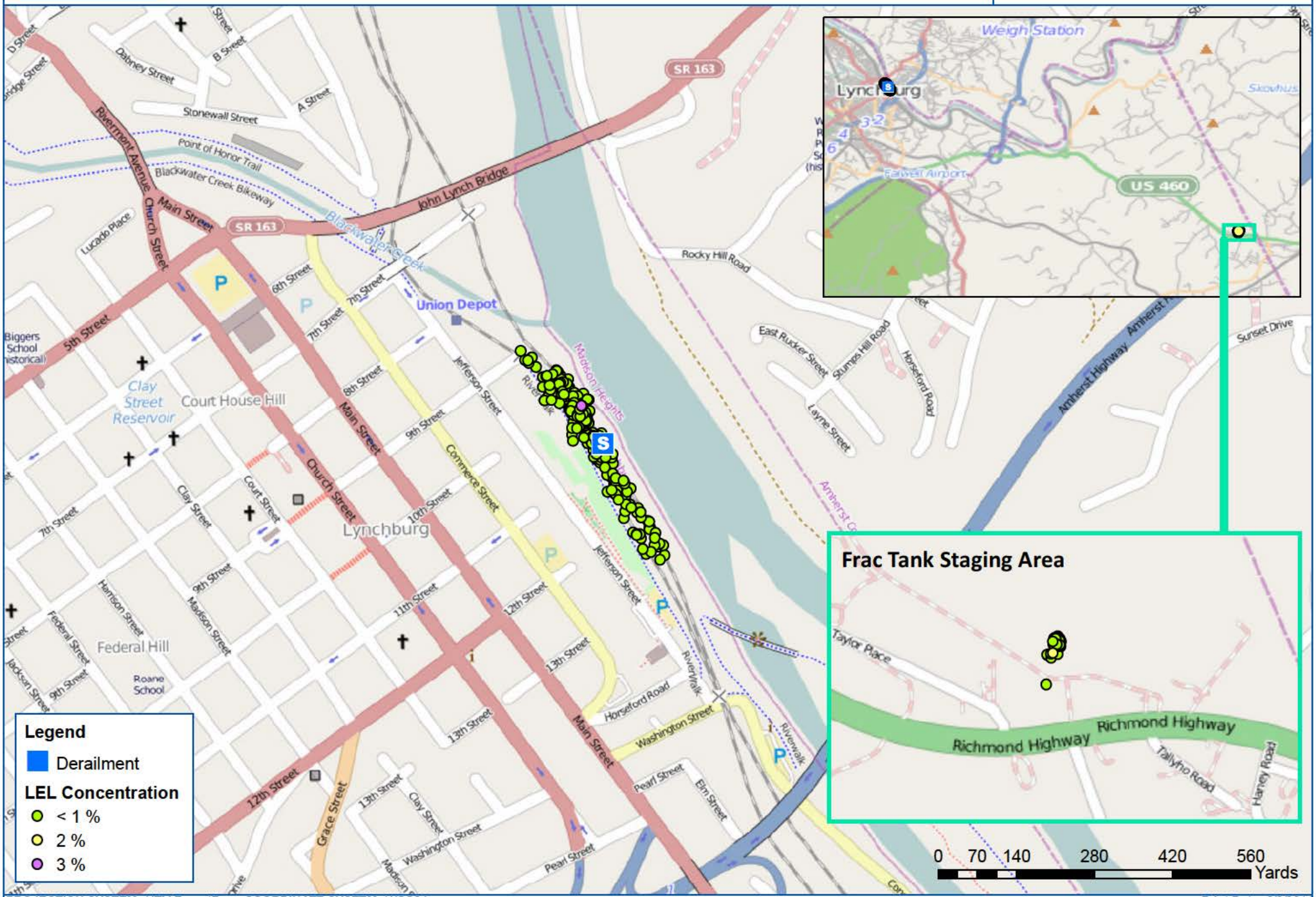
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/3/2014*

Lynchburg, VA Derailment

Work Area LEL Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



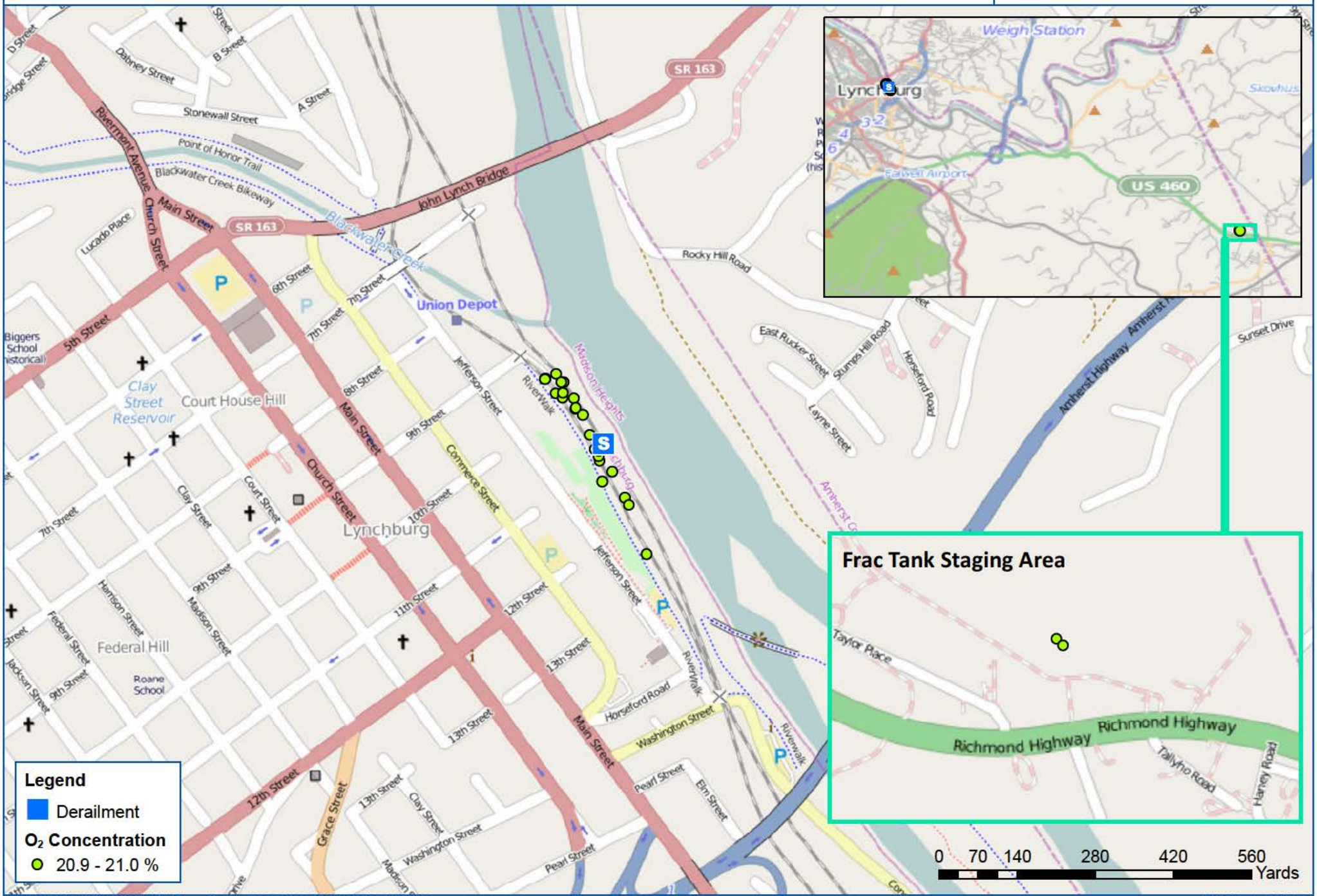
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Work Area O_2 Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



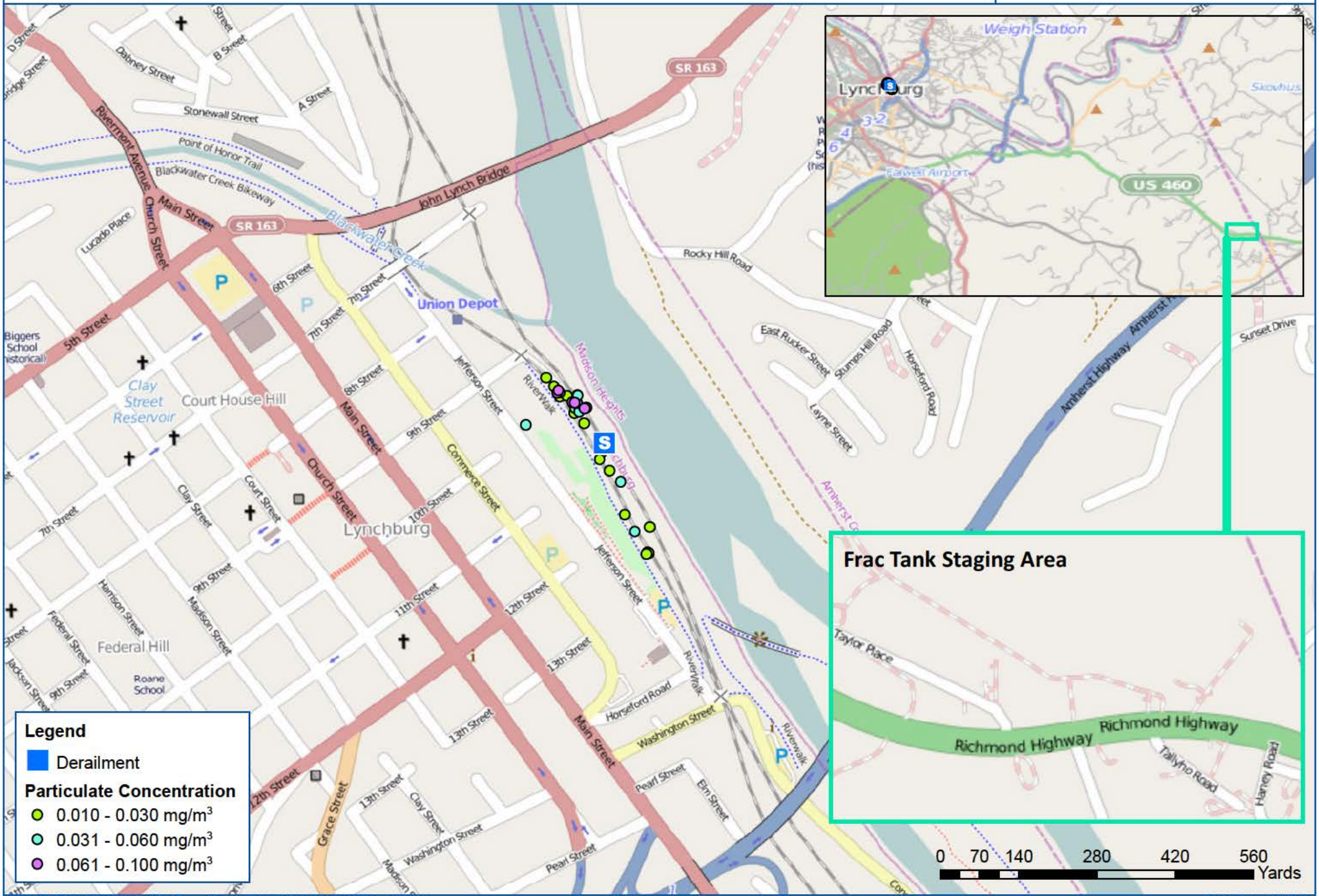
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/2/2014*

Lynchburg, VA Derailment

Work Area Particulate Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



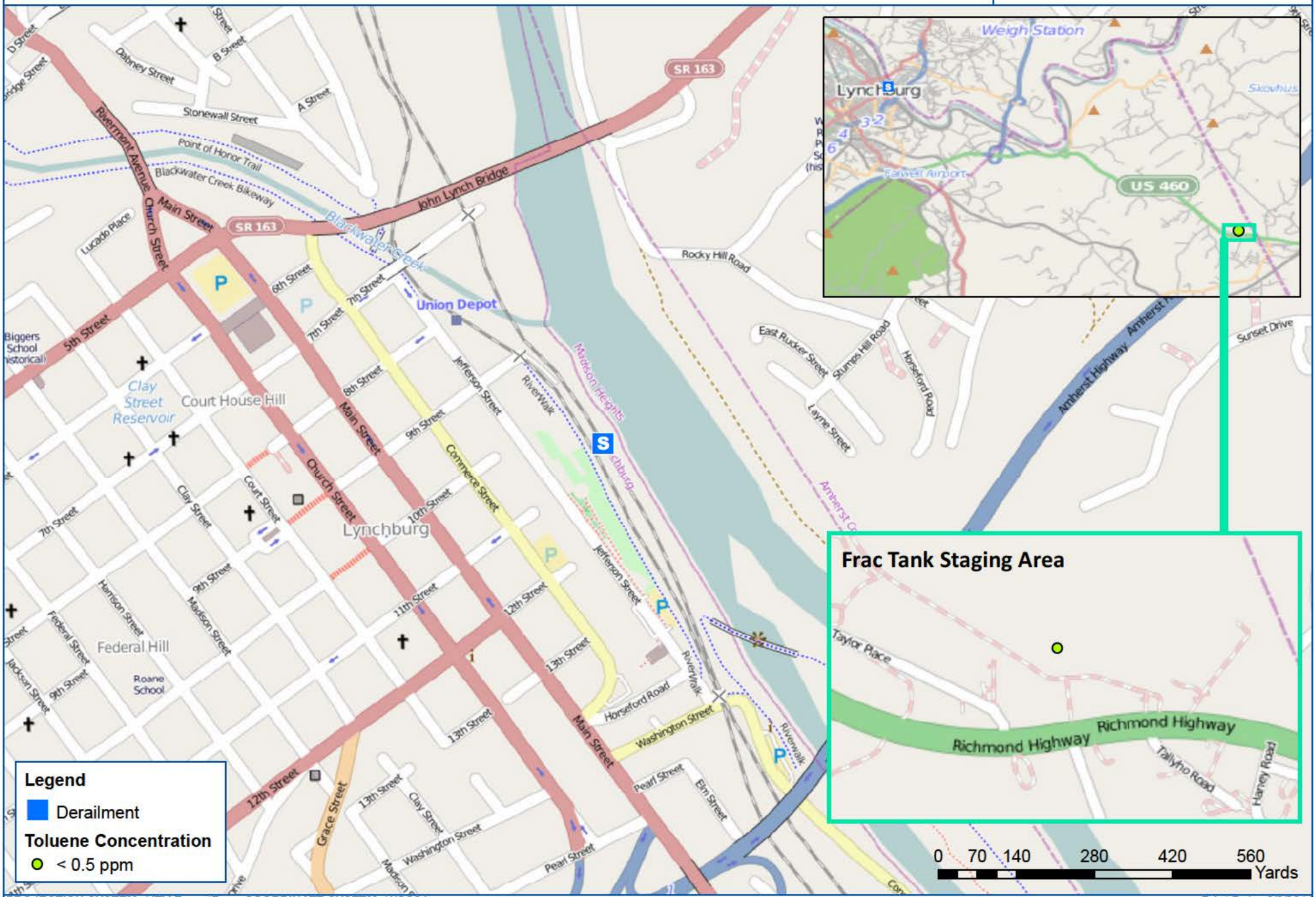
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/3/2014*

Lynchburg, VA Derailment

Work Area Toluene Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



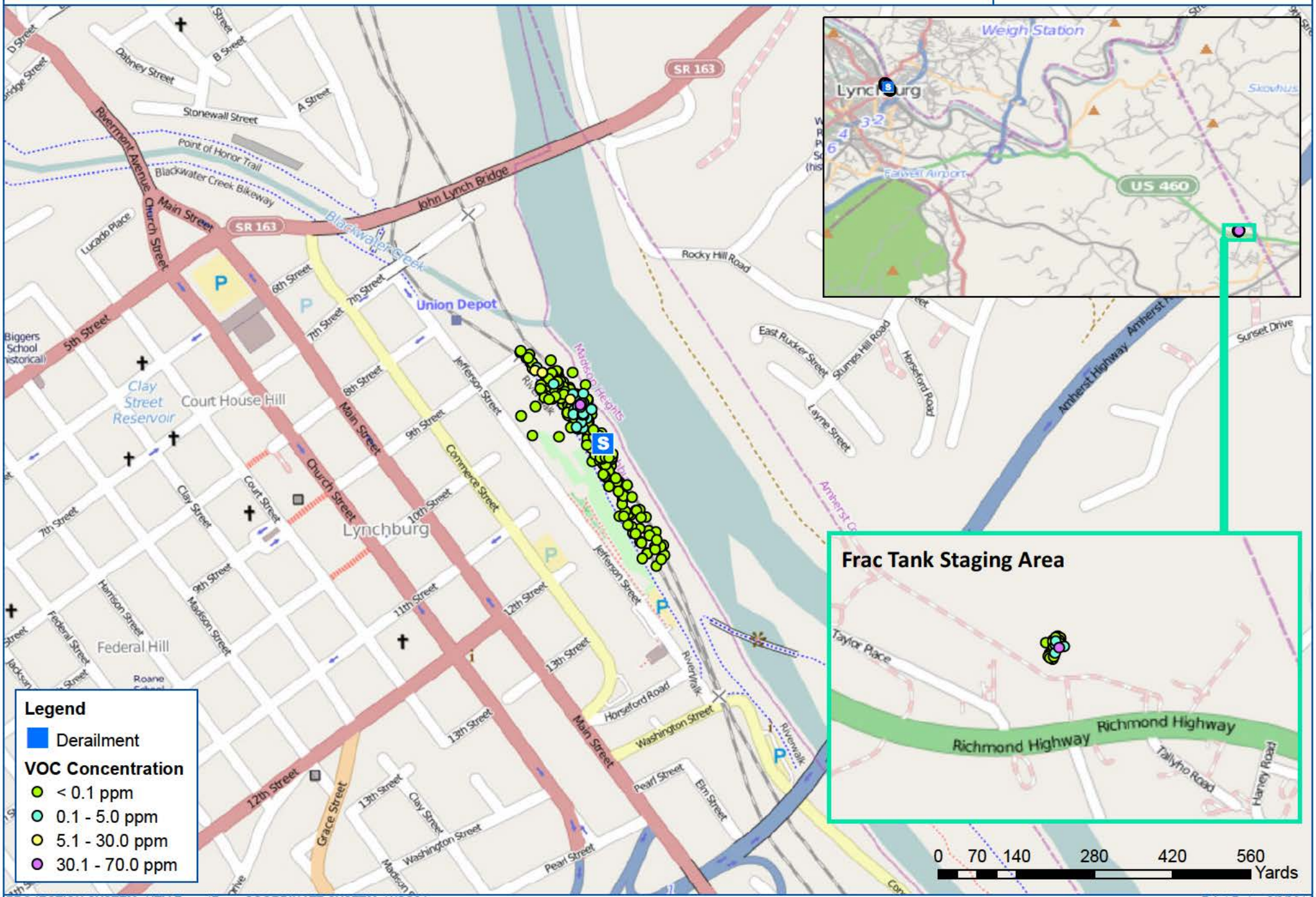
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/3/2014*

Lynchburg, VA Derailment

Work Area VOC Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



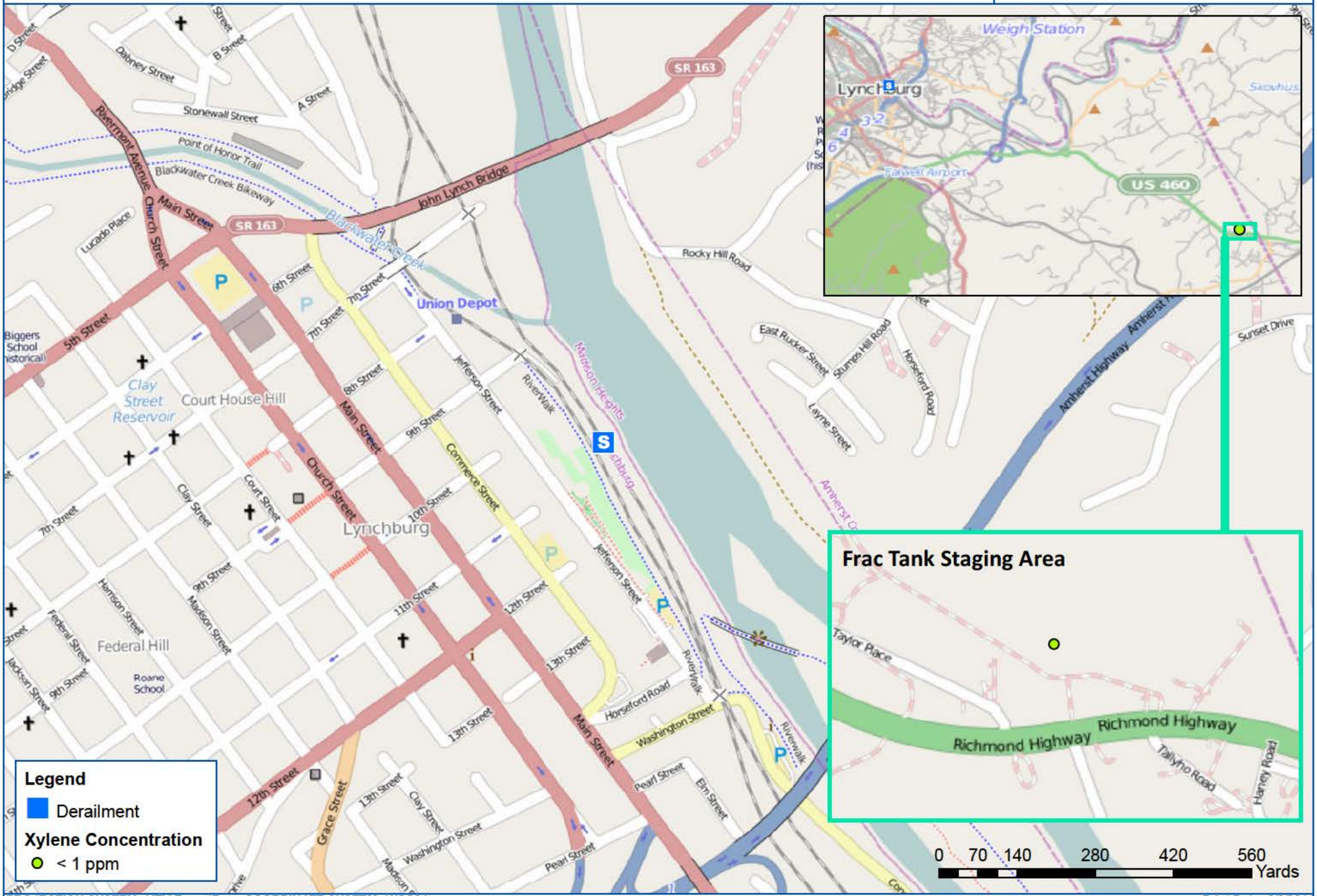
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/3/2014*

Lynchburg, VA Derailment

Work Area Xylene Real-Time Monitoring Locations between April 30, 2014 19:00 and May 5, 2014 00:00

Project: 106190
Client: CSXT
City: Lynchburg, VA



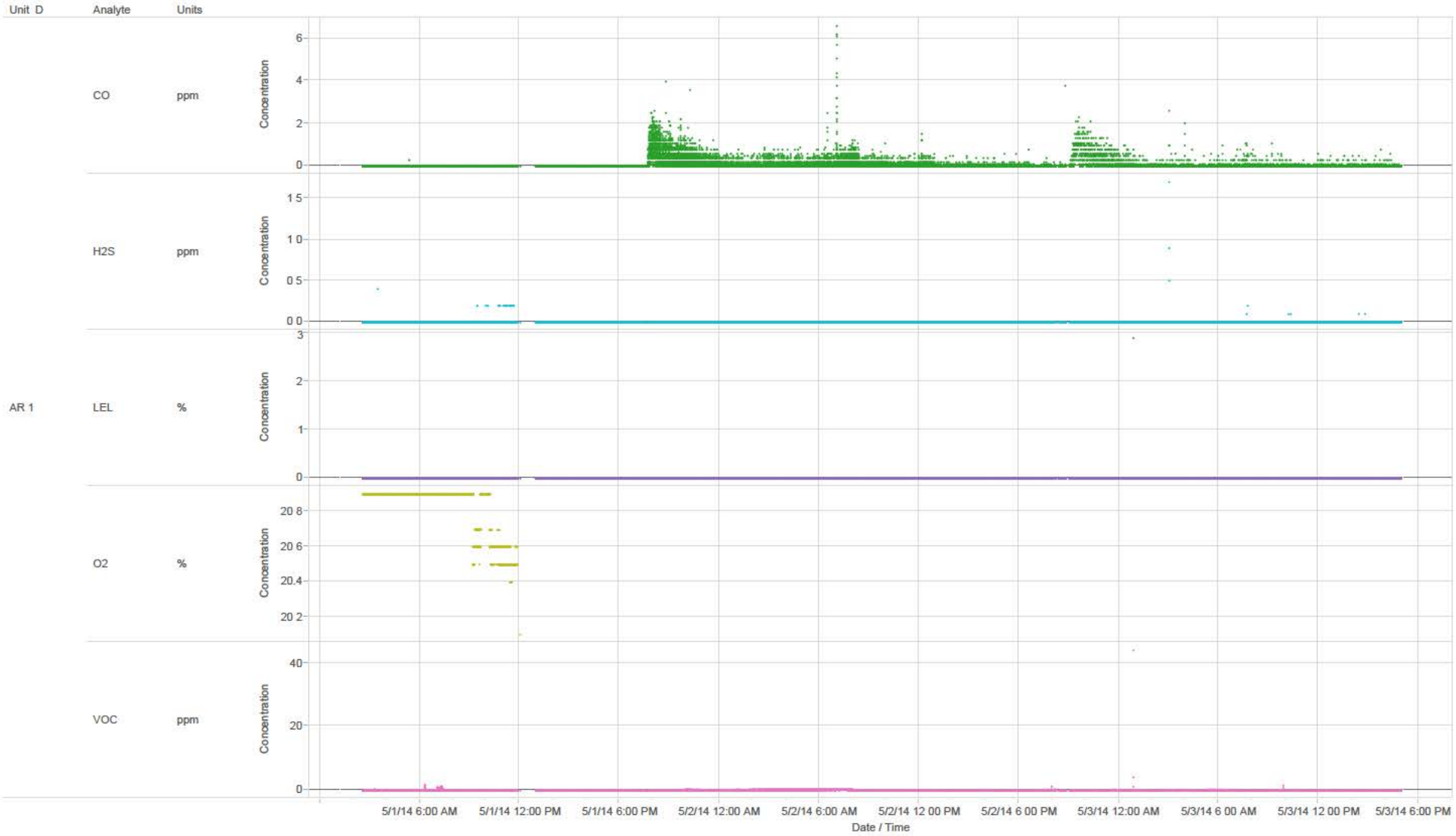
PROJECTION SYSTEM: *UTM Zone 17* COORDINATE SYSTEM: *WGS84*

Print Date: *6/3/2014*

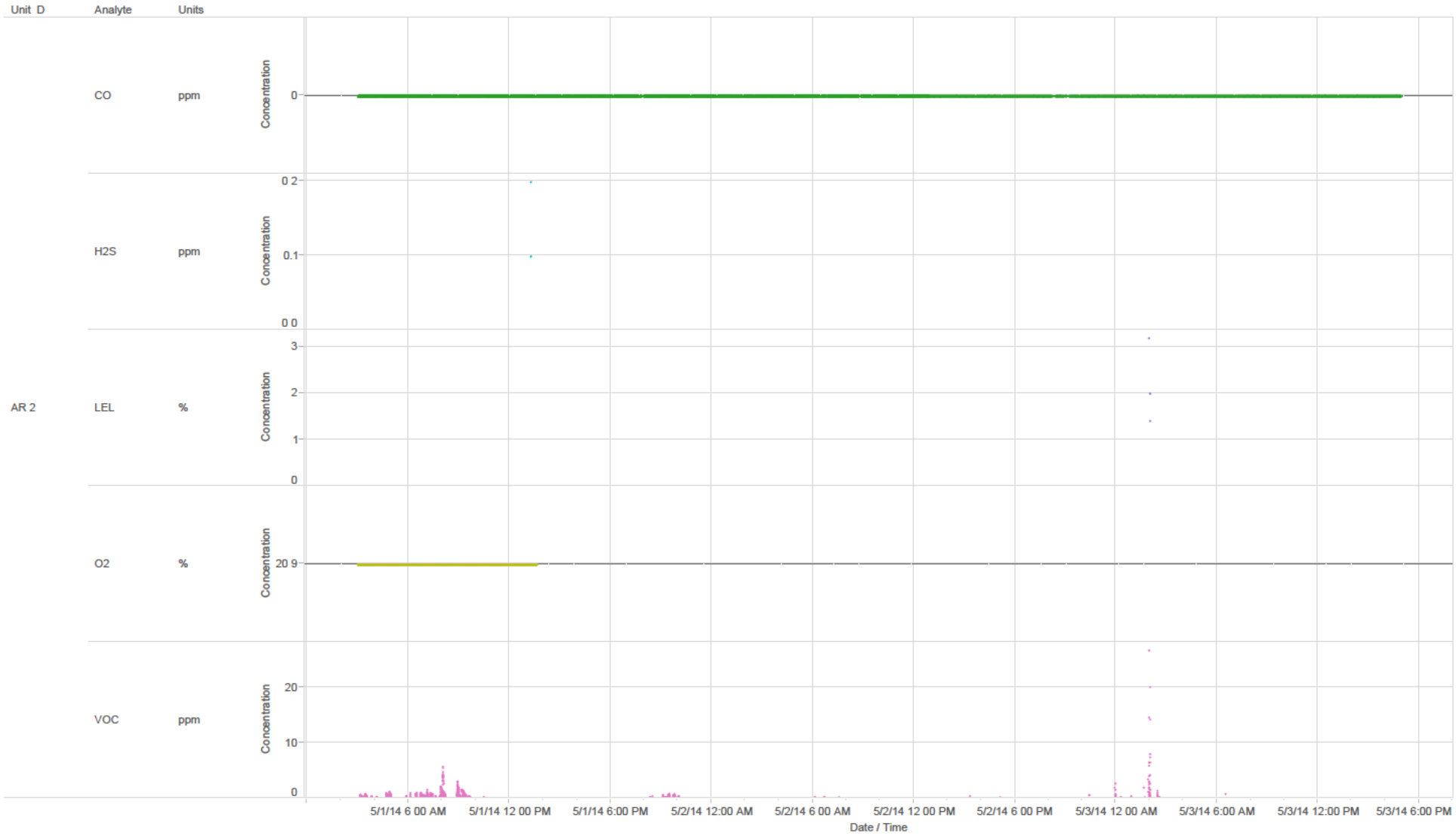
Appendix D

AreaRAE Graphs

Remote-Telemetering Air Monitoring Concentrations
AreaRAE Unit 1
5/1/2014 - 5/3/2014

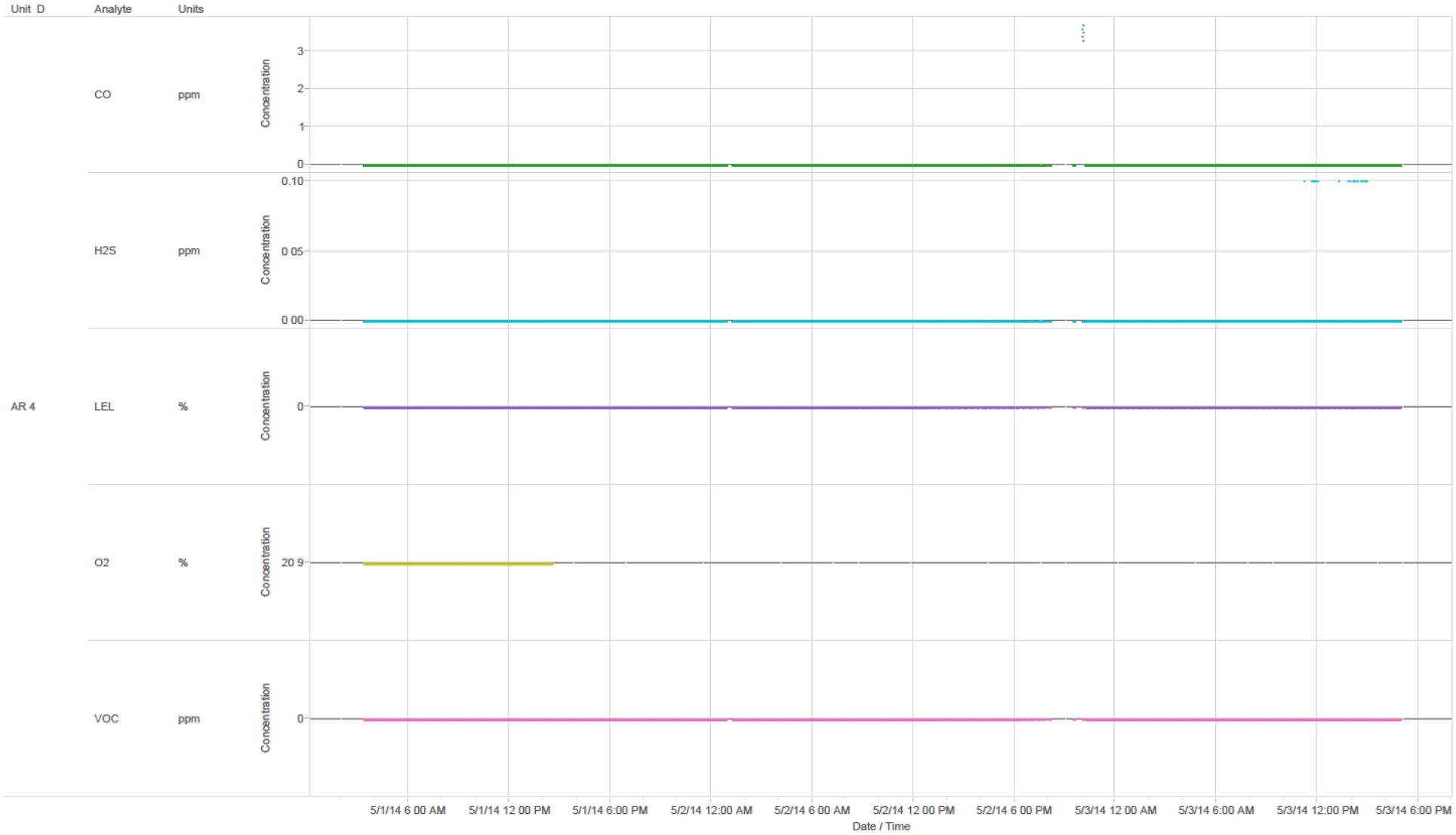


Remote-Telemetering Air Monitoring Concentrations
AreaRAE Unit 2
5/1/2014 - 5/3/2014

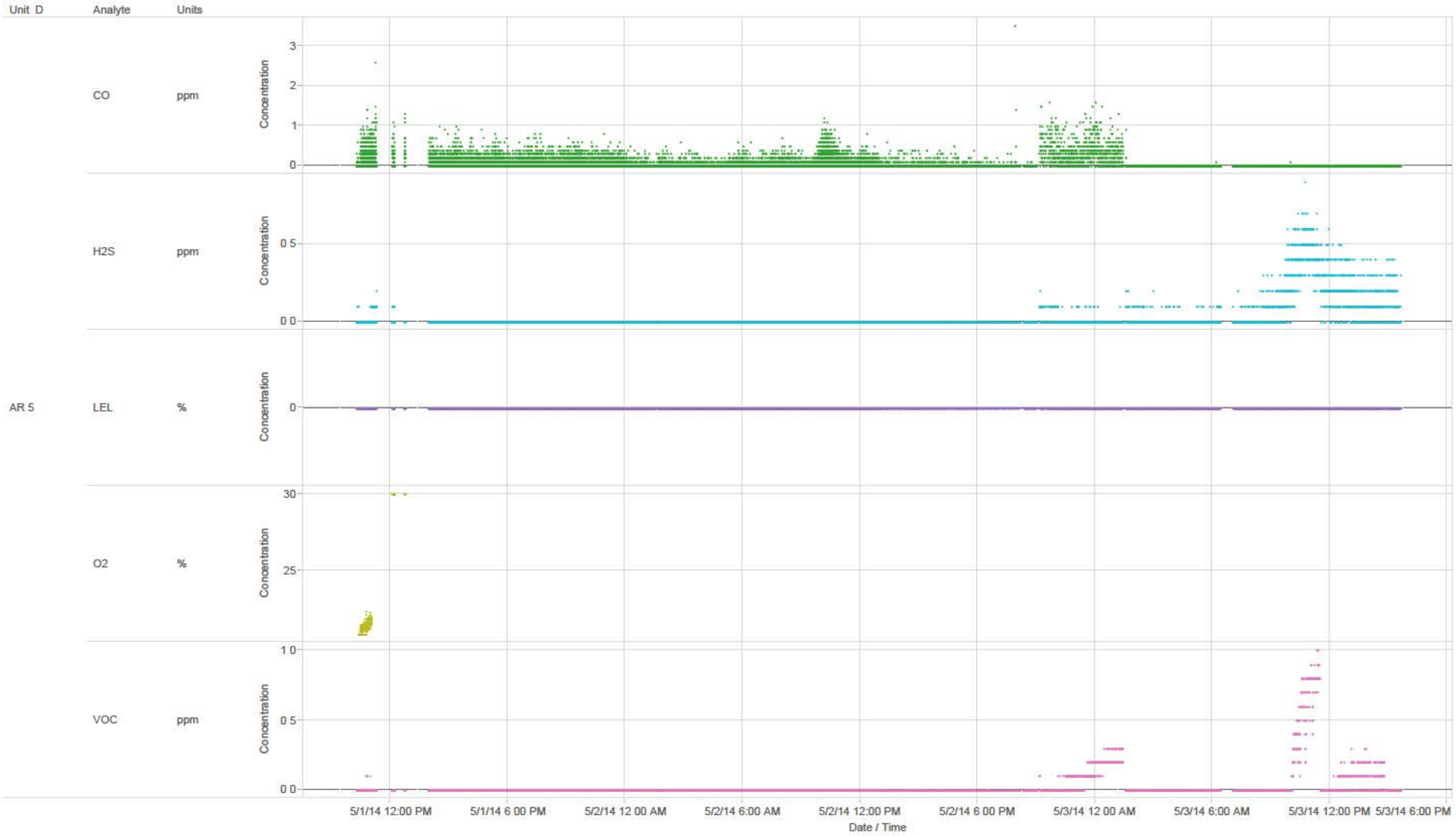


Remote-Telemetering Air Monitoring Concentrations
AreaRAE Unit 3
5/1/2014 - 5/3/2014

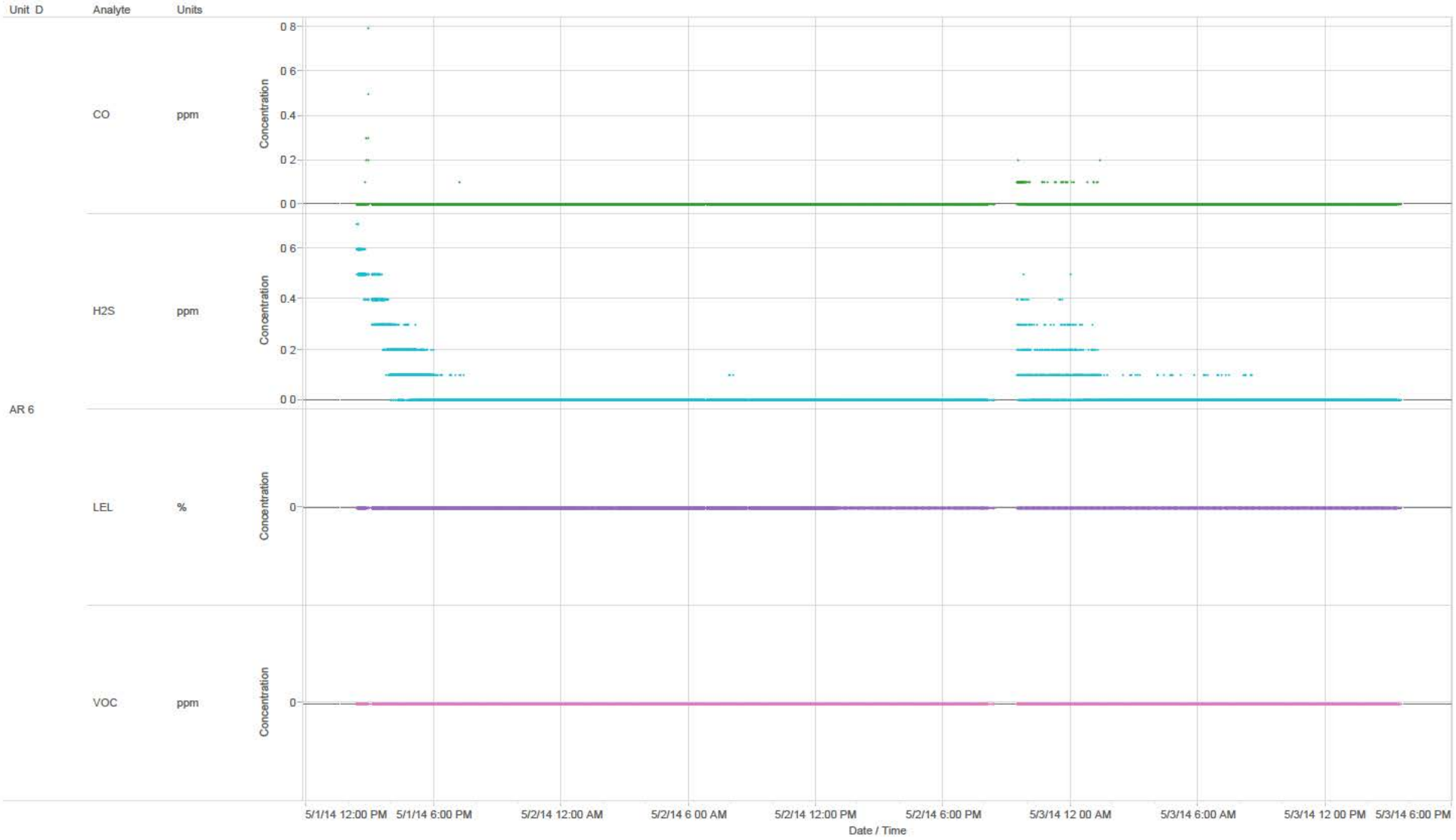
Remote-Telemetering Air Monitoring Concentrations
AreaRAE Unit 4
5/1/2014 - 5/3/2014



Remote-Telemetering Air Monitoring Concentrations
AreaRAE Unit 5
5/1/2014 - 5/3/2014



Remote-Telemetering Air Monitoring Concentrations
AreaRAE Unit 6
5/1/2014 - 5/3/2014



Appendix E

Analytical Data

Mr. JT Wilson
Center for Toxicology & Env. Health LLC
2000 Anders Lane
Kemah, TX 77565

May 12, 2014

LYNCHBURG, VA

DOH ELAP #11626
AIHA-LAP #100324

Account# 15330

Login# L317669

Dear Mr. Wilson:

Enclosed are the analytical results for the samples received by our laboratory on May 05, 2014. All test results meet the quality control requirements of AIHA-LAP and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report, with the exception of IOMs, which will be cleaned and disposed of after seven calendar days.

Current Scopes of Accreditation can be viewed at www.galsonlabs.com in the accreditations section under the "about Galson" tab.

Please contact Caroline Hudson at (888) 432-5227, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Mary G. Unangst
Laboratory Director

Enclosure(s)

GALSON LABORATORIES
6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 08-MAY-14
Report ID : 830893

Account No.: 15330
Login No. : L317669

Hydrogen Sulfide

Sample ID	Lab ID	Time minutes	Total ug	ppm
LYVA0501 H2S001	L317669-6	1455	<1.2	<0.0086
LYVA0501 H2S002	L317669-7	1445	<1.2	<0.0087
LYVA0501 H2S003	L317669-8	1443	<1.2	<0.0087
LYVA0501 H2S004	L317669-9	1420	<1.2	<0.0088
LYVA0501 H2S005	L317669-10	1405	<1.2	<0.0089
LYVA0501 H2S006	L317669-11	1442	<1.2	<0.0087
LYVA0501 H2S007	L317669-12	NA	<1.2	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 1.2 ug
Analytical Method : In-house: WET-SOP-13; Colorimetric
OSHA PEL (TWA) : 20 ppm CEIL
Collection Media : Radiello

Submitted by: PJD
Approved by : JGC
Date : 12-MAY-14 NYS DOH # : 11626
QC by: Tom Burgess

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC001 **Lab ID : L317669-1**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	2.1	J	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	31		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	3.2	J	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENT [redacted] ote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC001 **Lab ID : L317669-1**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	2.1	J	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC001 **Lab ID : L317669-1**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC002 **Lab ID : L317669-2**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	3.1	J	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	35		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	4.4	J	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC002 **Lab ID : L317669-2**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	3.6	J	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	2.3	J	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC002 **Lab ID : L317669-2**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

< -Less Than
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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC003 **Lab ID : L317669-3**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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ppbv-Parts per Billion Volume
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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC003 **Lab ID : L317669-3**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC003 **Lab ID : L317669-3**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

< -Less Than
> -Greater Than
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NS -Not Specified

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC004 **Lab ID : L317669-4**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	28		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	2.5	J	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC004 **Lab ID : L317669-4**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC004 **Lab ID : L317669-4**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC005 **Lab ID : L317669-5**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	28		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	2.1	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	2.5	J	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC005 **Lab ID : L317669-5**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	8.4		1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

< -Less Than
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NA -Not Applicable
NS -Not Specified
MG -Milligrams
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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830642

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC005 **Lab ID : L317669-5**
Date Sampled : 05/01/14 **Date Analyzed : 05/06/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by : Tom Burgess

< -Less Than	MG -Milligrams	M3 -Cubic Meters
> -Greater Than	UG -Micrograms	L -Liters
NA -Not Applicable	ND -Not Detected	ppbv-Parts per Billion Volume
NS -Not Specified	KG -Kilograms	LOQ -Limit of Quantitation

LABORATORY ANALYSIS REPORT

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Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830644

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC001 **Lab ID : L317669-1**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Butane	000106-97-8	4.79	5.1	0.012	J
Pentane	000109-66-0	6.34	6.3	0.019	J
2,4-Dimethyl-1-heptene	019549-87-2	17.65	6.5	0.034	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by: Tom Burgess

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830644

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC002 **Lab ID : L317669-2**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Butane	000106-97-8	4.79	7.8	0.019	J
Pentane	000109-66-0	6.35	9.8	0.029	J
Cyclopentane, 1,2-dimethyl-, trans-	000822-50-4	13.26	5.5	0.022	J
Cyclohexane, methyl-	000108-87-2	14.50	5.5	0.022	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by: Tom Burgess

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830644

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC003 **Lab ID : L317669-3**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
No Volatiles Found			0	0	

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by: Tom Burgess

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830644

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC004 **Lab ID : L317669-4**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Pentane	000109-66-0	6.34	9.4	0.028	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by: Tom Burgess

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14
Date Received : 05-MAY-14
Date Analyzed : 06-MAY-14
Report ID : 830644

Account No.: 15330
Login No. : L317669

Client ID : LYVA0501 MC005 **Lab ID : L317669-5**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Pentane	000109-66-0	6.34	5.7	0.017	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 12-MAY-14 NYS DOH # : 11626
QC by: Tom Burgess

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

LABORATORY FOOTNOTE REPORT

Client Name : CSX Transportation
Site : Lynchburg, VA

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Date Sampled : 01-MAY-14
Date Received: 05-MAY-14
Date Analyzed: 06-MAY-14 - 08-MAY-14

Account No.: 15330
Login No. : L317669

Unless otherwise noted below, all quality control results associated with the samples were within established control limits or did not impact reported results.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

Unless otherwise noted below, reported results have not been blank corrected for any field blank or method blank.

L317669 (Report ID: 830893):
SOPs: WET-SOP-13(3)
The sampling rate is based on 25 deg. C. No adjustments have been made for the actual temperatures that the samplers may have been exposed to in the sampling environment.

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated uncertainty applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process.

Parameter	Accuracy	Mean Recovery
Hydrogen Sulfide	+/-9%	102%

L317669 (Report ID: 830642):
SOPs: in-vocs(26)

L317669 (Report ID: 830644):
Tentatively Identified Compounds (TICS) are estimated values. TICS are calculated using an average response factor of 1 for all compounds.
SOPs: in-vocs(26)

< -Less Than
> -Greater Than
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m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

Galson Laboratories
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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID Type Spike Lot # Instrument Analysis Date		WG283400-3 CCV IH441322-1 SPEC May 08, 2014 15:37								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value 0	Found 0	Recovery (%)	True Value 0	Found 0	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.916	0.883	96.4						

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Galson Laboratories
6601 Kirkville Rd. E. Syracuse, NY 13057

INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283400-4								
Type		ICV								
Spike Lot #		IH441302-1								
Instrument		SPEC								
Analysis Date		May 08, 2014 15:37								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value 0	Found 0	Recovery (%)	True Value 0	Found 0	Recovery (%)
Hydrogen Sulfide	90.0 to 113.	0.344	0.344	100.						

Galson Laboratories
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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283400-5			WG283400-7			WG283400-12		
Type		CCV			CCV			CCV		
Spike Lot #		IH441322-2			IH441322-2			IH441322-2		
Instrument		SPEC			SPEC			SPEC		
Analysis Date		May 08, 2014 15:37			May 08, 2014 15:37			May 08, 2014 15:37		
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.573	0.573	100.	0.573	0.574	100.	0.573	0.575	101.

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INITIAL/CONTINUING BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317669

Lab Sample ID Type Instrument Analysis Date Analysis Time	LOQ (ug)	WG283400-13 CCB SPEC 05/08/14 15:37 Found (ug)	WG283400-6 CCB SPEC 05/08/14 15:37 Found (ug)	WG283400-8 CCB SPEC 05/08/14 15:37 Found (ug)	WG283400-1 ICB SPEC 05/08/14 15:37 Found (ug)				
Hydrogen Sulfide	1.2	<1.2	<1.2	<1.2	<1.2				

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Galson Laboratories
6601 Kirkville Rd. E Syracuse, NY 13057

DETECTION LIMIT STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283400-2								
Type		DLS								
Spike Lot #		IH441322-3								
Instrument		SPEC								
Analysis Date		May 08, 2014 15:37								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value 0	Found 0	Recovery (%)	True Value 0	Found 0	Recovery (%)
Hydrogen Sulfide	70.0 to 130.	0.115	0.108	94.1						

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Galson Laboratories
6601 Kirkville Rd. E. Syracuse, NY 13057

METHOD BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317669

Lab Sample ID Type Instrument Analysis Date Analysis Time	LOQ (ug)	WG283400-9 MBLANK SPEC 05/08/14 15:37 Found (ug)							
Hydrogen Sulfide	1.2	<1.2							

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Galson Laboratories
6601 Kirkville Rd. E Syracuse, NY 13057

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283400-10			WG283400-11				
Type		BS			BSD				
Spike Lot #		21559			21559				
Instrument		SPEC			SPEC				
Analysis Date		May 08, 2014 15:37			May 08, 2014 15:37				
	Limits (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	RPD	RPD Limits
Hydrogen Sulfide	88.6 to 116.	0.573	0.566	98.9	0.573	0.572	99.9	-1.01	-10.0 to 10.0

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GC/MS QA-QC Check Report

Tune File : [redacted]
Tune Time : 05/06/14 09:04
Daily Calibration File : [redacted]
Internal Standard Areas: 241482 1026013 832767

Sample	Client ID	File	Surr%	Acquired on	Internal Standard Responses		
WG283097-5	Continuing Verifier	F0506402	113	05/06/14 09:47	241482	1026013	832767
WG283097-2	Lab Control Spike	F0506403	114	05/06/14 10:29	256278	1058789	878095
WG283097-3	LCS Duplicate	F0506404	114	05/06/14 11:10	274333	1084027	925212
WG283097-4	DLS	F0506405	100	05/06/14 11:52	255327	1081984	842612
WG283097-1	Method Blank	F0506406	113	05/06/14 12:33	262044	1061025	864856
L317669-1	LYVA0501 MC001	F0506411	95	05/06/14 17:20	247271	1119100	833545
L317669-2	LYVA0501 MC002	F0506412	105	05/06/14 18:02	268298	1038505	785811
L317669-3	LYVA0501 MC003	F0506413	108	05/06/14 18:43	257219	1148978	884032
L317669-4	LYVA0501 MC004	F0506414	112	05/06/14 19:25	251498	1066671	834733
L317669-5	LYVA0501 MC005	F0506415	109	05/06/14 20:06	254443	1124350	870315
WG283097-6	Continuing Verifier	F0506416	113	05/06/14 20:49	235220	983727	794529

* = Value outside limits Surrogate Limits = 80 - 120 Internal Standard Limits = +/- 40%

Galson Laboratories
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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283097-5			WG283097-6					
Type		CCV			CCV					
Spike Lot #		IH437422			IH437422					
Instrument		MS F			MS F					
Analysis Date		May 06, 2014 09:47			May 06, 2014 20:49					
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value ()	Found ()	Recovery (%)
1,1,1-Trichloroethane	70.0 to 130.	50.0	47.6	95.2	50.0	48.9	97.7			
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	43.7	87.4	50.0	45.4	90.8			
1,1,2-Trichloroethane	70.0 to 130.	50.0	47.4	94.8	50.0	49.6	99.2			
1,1-Dichloroethane	70.0 to 130.	50.0	48.8	97.6	50.0	46.7	93.4			
1,1-Dichloroethene	70.0 to 130.	50.0	48.8	97.5	50.0	47.4	94.7			
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	44.5	89.0	50.0	45.8	91.6			
1,2-Dibromoethane	70.0 to 130.	50.0	44.6	89.1	50.0	47.7	95.3			
1,2-Dichlorobenzene	70.0 to 130.	50.0	46.7	93.4	50.0	50.6	101.			
1,2-Dichloroethane	70.0 to 130.	50.0	49.8	99.5	50.0	51.8	104.			
1,2-Dichloropropane	70.0 to 130.	50.0	45.5	91.0	50.0	47.0	94.0			
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	43.6	87.1	50.0	45.8	91.6			
1,3-Butadiene	70.0 to 130.	50.0	51.0	102.	50.0	47.1	94.3			
1,3-Dichlorobenzene	70.0 to 130.	50.0	46.2	92.4	50.0	50.1	100.			
1,4-Dichlorobenzene	70.0 to 130.	50.0	47.6	95.3	50.0	51.0	102.			
1,4-Dioxane	70.0 to 130.	50.0	46.5	93.0	50.0	46.8	93.5			
2,2,4-Trimethylpentane	70.0 to 130.	50.0	46.1	92.3	50.0	44.9	89.8			
4-Ethyltoluene	70.0 to 130.	50.0	43.3	86.6	50.0	45.8	91.6			
Acetone	70.0 to 130.	50.0	45.5	91.0	50.0	46.8	93.6			
Allyl Chloride	70.0 to 130.	50.0	48.8	97.5	50.0	45.6	91.2			
Benzene	70.0 to 130.	50.0	46.9	93.7	50.0	47.5	94.9			
Benzyl Chloride	70.0 to 130.	50.0	45.6	91.3	50.0	47.9	95.7			
Bromodichloromethane	70.0 to 130.	50.0	48.5	96.9	50.0	48.2	96.5			
Bromoform	70.0 to 130.	50.0	47.5	95.0	50.0	52.2	104.			
Bromomethane	70.0 to 130.	50.0	51.5	103.	50.0	49.1	98.2			
Carbon Disulfide	70.0 to 130.	50.0	48.9	97.9	50.0	46.7	93.5			
Carbon Tetrachloride	70.0 to 130.	50.0	49.3	98.7	50.0	50.2	100.			
Chlorobenzene	70.0 to 130.	50.0	42.9	85.9	50.0	45.5	91.0			
Chloroethane	70.0 to 130.	50.0	49.7	99.5	50.0	45.7	91.5			
Chloroform	70.0 to 130.	50.0	50.2	100.	50.0	50.1	100.			
Chloromethane	70.0 to 130.	50.0	51.0	102.	50.0	45.2	90.5			
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	49.7	99.3	50.0	46.7	93.4			
cis-1,3-Dichloropropene	70.0 to 130.	50.0	46.8	93.5	50.0	48.4	96.7			
Cyclohexane	70.0 to 130.	50.0	47.2	94.4	50.0	44.3	88.5			
Dibromochloromethane	70.0 to 130.	50.0	46.3	92.6	50.0	50.7	101.			
Ethyl Acetate	70.0 to 130.	50.0	46.5	93.0	50.0	46.0	91.9			
Ethylbenzene	70.0 to 130.	50.0	42.2	84.3	50.0	45.2	90.5			
Freon-11	70.0 to 130.	50.0	52.2	104.	50.0	54.0	108.			
Freon-113	70.0 to 130.	50.0	51.3	103.	50.0	48.6	97.1			

Galson Laboratories
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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Freon-114	70.0 to 130.	50.0	51.7	103.	50.0	49.8	99.6	
Freon-12	70.0 to 130.	50.0	52.0	104.	50.0	50.9	102.	
Heptane	70.0 to 130.	50.0	44.7	89.4	50.0	44.6	89.2	
Hexane	70.0 to 130.	50.0	49.1	98.2	50.0	45.1	90.3	
Isopropyl Alcohol	70.0 to 130.	50.0	48.5	97.0	50.0	45.7	91.5	
Methyl Butyl Ketone	70.0 to 130.	50.0	43.0	85.9	50.0	42.2	84.3	
Methyl Ethyl Ketone	70.0 to 130.	50.0	46.9	93.7	50.0	47.6	95.3	
Methyl Isobutyl Ketone	70.0 to 130.	50.0	41.9	83.9	50.0	42.0	84.1	
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	46.5	93.0	50.0	48.2	96.4	
Methylene Chloride	70.0 to 130.	50.0	48.3	96.6	50.0	45.6	91.2	
o-Xylene	70.0 to 130.	50.0	42.9	85.8	50.0	45.7	91.5	
Propylene	70.0 to 130.	50.0	50.3	101.	50.0	44.6	89.2	
Styrene	70.0 to 130.	50.0	42.7	85.3	50.0	44.8	89.6	
Tetrachloroethylene	70.0 to 130.	50.0	47.1	94.2	50.0	48.7	97.3	
Tetrahydrofuran	70.0 to 130.	50.0	44.8	89.6	50.0	45.2	90.4	
Toluene	70.0 to 130.	50.0	42.8	85.6	50.0	46.0	92.1	
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	49.5	99.1	50.0	47.2	94.3	
trans-1,3-Dichloropropene	70.0 to 130.	50.0	47.7	95.4	50.0	49.2	98.5	
Trichloroethylene	70.0 to 130.	50.0	45.9	91.7	50.0	45.6	91.2	
Vinyl Acetate	70.0 to 130.	50.0	44.0	88.1	50.0	43.9	87.8	
Vinyl Bromide	70.0 to 130.	50.0	51.7	103.	50.0	51.8	104.	
Vinyl Chloride	70.0 to 130.	50.0	51.7	103.	50.0	46.3	92.5	

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ASTD 5ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283097-4								
Type		DLS								
Spike Lot #		IH437283								
Instrument		MS F								
Analysis Date		May 06, 2014 11:52								
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
1,1,1-Trichloroethane	60.0 to 140.	5.00	4.77	95.4						
1,1,2,2-Tetrachloroethane	60.0 to 140.	5.00	4.25	85.0						
1,1,2-Trichloroethane	60.0 to 140.	5.00	4.54	90.8						
1,1-Dichloroethane	60.0 to 140.	5.00	4.86	97.2						
1,1-Dichloroethene	60.0 to 140.	5.00	4.78	95.6						
1,2,4-Trimethylbenzene	60.0 to 140.	5.00	4.35	87.0						
1,2-Dibromoethane	60.0 to 140.	5.00	4.33	86.6						
1,2-Dichlorobenzene	60.0 to 140.	5.00	4.56	91.2						
1,2-Dichloroethane	60.0 to 140.	5.00	4.76	95.2						
1,2-Dichloropropane	60.0 to 140.	5.00	4.47	89.4						
1,3,5-Trimethylbenzene	60.0 to 140.	5.00	4.44	88.8						
1,3-Butadiene	60.0 to 140.	5.00	4.82	96.4						
1,3-Dichlorobenzene	60.0 to 140.	5.00	4.93	98.6						
1,4-Dichlorobenzene	60.0 to 140.	5.00	4.78	95.6						
1,4-Dioxane	60.0 to 140.	5.00	4.35	87.0						
2,2,4-Trimethylpentane	60.0 to 140.	5.00	4.53	90.6						
4-Ethyltoluene	60.0 to 140.	5.00	4.35	87.0						
Acetone	60.0 to 140.	5.00	5.43	109.						
Allyl Chloride	60.0 to 140.	5.00	4.85	97.0						
Benzene	60.0 to 140.	5.00	4.65	93.0						
Benzyl Chloride	60.0 to 140.	5.00	4.16	83.2						
Bromodichloromethane	60.0 to 140.	5.00	4.44	88.8						
Bromoform	60.0 to 140.	5.00	4.23	84.6						
Bromomethane	60.0 to 140.	5.00	4.95	99.0						
Carbon Disulfide	60.0 to 140.	5.00	4.95	99.0						
Carbon Tetrachloride	60.0 to 140.	5.00	4.90	98.0						
Chlorobenzene	60.0 to 140.	5.00	4.57	91.4						
Chloroethane	60.0 to 140.	5.00	4.87	97.4						
Chloroform	60.0 to 140.	5.00	4.90	98.0						
Chloromethane	60.0 to 140.	5.00	4.92	98.4						
cis-1,2-Dichloroethylene	60.0 to 140.	5.00	4.73	94.6						
cis-1,3-Dichloropropene	60.0 to 140.	5.00	4.28	85.6						
Cyclohexane	60.0 to 140.	5.00	4.77	95.4						
Dibromochloromethane	60.0 to 140.	5.00	4.52	90.4						
Ethyl Acetate	60.0 to 140.	5.00	4.75	95.0						
Ethylbenzene	60.0 to 140.	5.00	4.30	86.0						
Freon-11	60.0 to 140.	5.00	5.19	104.						
Freon-113	60.0 to 140.	5.00	5.30	106.						

Galson Laboratories
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ASTD 5ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Freon-114	60.0 to 140.	5.00	5.13	103.		
Freon-12	60.0 to 140.	5.00	5.11	102.		
Heptane	60.0 to 140.	5.00	4.53	90.6		
Hexane	60.0 to 140.	5.00	4.94	98.8		
Isopropyl Alcohol	60.0 to 140.	5.00	4.74	94.8		
Methyl Butyl Ketone	60.0 to 140.	5.00	3.94	78.8		
Methyl Ethyl Ketone	60.0 to 140.	5.00	4.82	96.4		
Methyl Isobutyl Ketone	60.0 to 140.	5.00	4.00	80.0		
Methyl Tert-Butyl Ether	60.0 to 140.	5.00	4.96	99.2		
Methylene Chloride	60.0 to 140.	5.00	5.23	105.		
o-Xylene	60.0 to 140.	5.00	4.38	87.6		
Propylene	60.0 to 140.	5.00	4.91	98.2		
Styrene	60.0 to 140.	5.00	4.00	80.0		
Tetrachloroethylene	60.0 to 140.	5.00	4.93	98.6		
Tetrahydrofuran	60.0 to 140.	5.00	4.50	90.0		
Toluene	60.0 to 140.	5.00	4.40	88.0		
Trans-1,2-Dichloroethene	60.0 to 140.	5.00	4.79	95.8		
trans-1,3-Dichloropropene	60.0 to 140.	5.00	4.27	85.4		
Trichloroethylene	60.0 to 140.	5.00	4.72	94.4		
Vinyl Acetate	60.0 to 140.	5.00	5.22	104.		
Vinyl Bromide	60.0 to 140.	5.00	5.12	102.		
Vinyl Chloride	60.0 to 140.	5.00	4.89	97.8		

Galson Laboratories
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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Lab Sample ID		WG283097-2			WG283097-3				
Type		LCS			LCSD				
Spike Lot #		IH434422			IH434422				
Instrument		MS F			MS F				
Analysis Date		May 06, 2014 10:29			May 06, 2014 11:10				
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	RPD	RPD Limits
1,1,1-Trichloroethane	70.0 to 130.	50.0	48.0	95.9	50.0	45.3	90.6	5.71	-25.0 to 25.0
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	41.8	83.6	50.0	39.0	77.9	7.11	-25.0 to 25.0
1,1,2-Trichloroethane	70.0 to 130.	50.0	48.8	97.6	50.0	45.6	91.3	6.75	-25.0 to 25.0
1,1-Dichloroethane	70.0 to 130.	50.0	48.7	97.4	50.0	42.9	85.9	12.6	-25.0 to 25.0
1,1-Dichloroethene	70.0 to 130.	50.0	49.9	99.9	50.0	46.0	92.1	8.15	-25.0 to 25.0
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	44.4	88.8	50.0	39.8	79.5	11.0	-25.0 to 25.0
1,2-Dibromoethane	70.0 to 130.	50.0	43.7	87.4	50.0	38.9	77.8	11.6	-25.0 to 25.0
1,2-Dichlorobenzene	70.0 to 130.	50.0	44.0	88.0	50.0	41.3	82.6	6.33	-25.0 to 25.0
1,2-Dichloroethane	70.0 to 130.	50.0	47.7	95.3	50.0	42.0	84.1	12.5	-25.0 to 25.0
1,2-Dichloropropane	70.0 to 130.	50.0	46.6	93.2	50.0	41.7	83.4	11.1	-25.0 to 25.0
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	42.2	84.3	50.0	39.4	78.8	6.74	-25.0 to 25.0
1,3-Butadiene	70.0 to 130.	50.0	54.2	108.	50.0	48.2	96.4	11.8	-25.0 to 25.0
1,3-Dichlorobenzene	70.0 to 130.	50.0	45.2	90.4	50.0	42.1	84.3	7.07	-25.0 to 25.0
1,4-Dichlorobenzene	70.0 to 130.	50.0	46.2	92.4	50.0	43.1	86.1	7.10	-25.0 to 25.0
1,4-Dioxane	70.0 to 130.	50.0	40.7	81.5	50.0	36.1	72.2	12.1	-25.0 to 25.0
2,2,4-Trimethylpentane	70.0 to 130.	50.0	47.7	95.4	50.0	43.7	87.5	8.73	-25.0 to 25.0
4-Ethyltoluene	70.0 to 130.	50.0	41.6	83.1	50.0	37.5	74.9	10.4	-25.0 to 25.0
Acetone	70.0 to 130.	50.0	44.1	88.3	50.0	37.8	75.6	15.4	-25.0 to 25.0
Allyl Chloride	70.0 to 130.	50.0	47.0	94.0	50.0	40.9	81.7	14.0	-25.0 to 25.0
Benzene	70.0 to 130.	50.0	47.5	95.0	50.0	43.7	87.5	8.24	-25.0 to 25.0
Benzyl Chloride	70.0 to 130.	50.0	44.9	89.9	50.0	41.9	83.7	7.10	-25.0 to 25.0
Bromodichloromethane	70.0 to 130.	50.0	49.0	97.9	50.0	46.4	92.7	5.41	-25.0 to 25.0
Bromoform	70.0 to 130.	50.0	45.3	90.6	50.0	41.1	82.1	9.86	-25.0 to 25.0
Bromomethane	70.0 to 130.	50.0	55.5	111.	50.0	49.4	98.8	11.7	-25.0 to 25.0
Carbon Disulfide	70.0 to 130.	50.0	52.5	105.	50.0	48.5	96.9	8.04	-25.0 to 25.0
Carbon Tetrachloride	70.0 to 130.	50.0	48.7	97.4	50.0	46.2	92.4	5.29	-25.0 to 25.0
Chlorobenzene	70.0 to 130.	50.0	41.5	82.9	50.0	37.7	75.3	9.63	-25.0 to 25.0
Chloroethane	70.0 to 130.	50.0	52.4	105.	50.0	45.7	91.3	13.8	-25.0 to 25.0
Chloroform	70.0 to 130.	50.0	48.9	97.8	50.0	44.3	88.6	9.93	-25.0 to 25.0
Chloromethane	70.0 to 130.	50.0	53.0	106.	50.0	48.9	97.7	8.11	-25.0 to 25.0
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	49.2	98.3	50.0	43.2	86.3	13.0	-25.0 to 25.0
Cyclohexane	70.0 to 130.	50.0	45.7	91.3	50.0	42.1	84.2	8.11	-25.0 to 25.0
Dibromochloromethane	70.0 to 130.	50.0	45.1	90.1	50.0	41.2	82.4	8.90	-25.0 to 25.0
Ethyl Acetate	70.0 to 130.	50.0	44.8	89.6	50.0	39.6	79.1	12.5	-25.0 to 25.0
Ethylbenzene	70.0 to 130.	50.0	41.9	83.8	50.0	38.9	77.7	7.55	-25.0 to 25.0
Freon-11	70.0 to 130.	50.0	53.1	106.	50.0	48.9	97.8	8.18	-25.0 to 25.0
Freon-113	70.0 to 130.	50.0	49.9	99.8	50.0	42.9	85.8	15.1	-25.0 to 25.0
Freon-114	70.0 to 130.	50.0	48.6	97.3	50.0	43.9	87.9	10.2	-25.0 to 25.0

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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317669

Freon-12	70.0 to 130.	50.0	53.0	106.	50.0	47.9	95.8	10.1	-25.0 to 25.0
Heptane	70.0 to 130.	50.0	44.5	89.0	50.0	43.7	87.3	1.93	-25.0 to 25.0
Hexane	70.0 to 130.	50.0	48.2	96.4	50.0	41.7	83.5	14.3	-25.0 to 25.0
Isopropyl Alcohol	70.0 to 130.	50.0	43.1	86.1	50.0	39.0	77.9	9.97	-25.0 to 25.0
Methyl Butyl Ketone	70.0 to 130.	50.0	40.5	80.9	50.0	37.1	74.2	8.74	-25.0 to 25.0
Methyl Ethyl Ketone	70.0 to 130.	50.0	47.5	95.0	50.0	41.2	82.3	14.3	-25.0 to 25.0
Methyl Isobutyl Ketone	70.0 to 130.	50.0	39.7	79.4	50.0	37.1	74.1	6.80	-25.0 to 25.0
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	47.1	94.2	50.0	41.4	82.8	12.8	-25.0 to 25.0
Methylene Chloride	70.0 to 130.	50.0	47.7	95.3	50.0	41.4	82.8	14.0	-25.0 to 25.0
o-Xylene	70.0 to 130.	50.0	42.0	83.9	50.0	39.4	78.7	6.35	-25.0 to 25.0
Propylene	70.0 to 130.	50.0	56.4	113.	50.0	52.2	104.	7.62	-25.0 to 25.0
Styrene	70.0 to 130.	50.0	43.1	86.3	50.0	39.1	78.2	9.83	-25.0 to 25.0
Tetrachloroethylene	70.0 to 130.	50.0	46.9	93.9	50.0	43.5	87.0	7.54	-25.0 to 25.0
Tetrahydrofuran	70.0 to 130.	50.0	45.8	91.5	50.0	40.3	80.6	12.7	-25.0 to 25.0
Toluene	70.0 to 130.	50.0	42.3	84.5	50.0	37.8	75.7	11.0	-25.0 to 25.0
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	48.8	97.6	50.0	41.9	83.9	15.2	-25.0 to 25.0
trans-1,3-Dichloropropene	70.0 to 130.	50.0	48.4	96.8	50.0	43.8	87.6	9.89	-25.0 to 25.0
Trichloroethylene	70.0 to 130.	50.0	49.7	99.4	50.0	47.7	95.4	4.15	-25.0 to 25.0
Vinyl Acetate	70.0 to 130.	50.0	40.5	80.9	50.0	35.8	71.6	12.2	-25.0 to 25.0
Vinyl Bromide	70.0 to 130.	50.0	53.4	107.	50.0	49.5	99.0	7.58	-25.0 to 25.0
Vinyl Chloride	70.0 to 130.	50.0	51.9	104.	50.0	47.1	94.1	9.84	-25.0 to 25.0

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METHOD BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317669

Lab Sample ID		WG283097-1							
Type		BLANK							
Instrument		MS F							
Analysis Date		05/06/14							
Analysis Time		12:33							
	LOQ (ppbv)	Found (ppbv)							
1,1,1-Trichloroethane	5.0	<5.0							
1,1,2,2-Tetrachloroethane	5.0	<5.0							
1,1,2-Trichloroethane	5.0	<5.0							
1,1-Dichloroethane	5.0	<5.0							
1,1-Dichloroethene	5.0	<5.0							
1,2,4-Trimethylbenzene	5.0	<5.0							
1,2-Dibromoethane	5.0	<5.0							
1,2-Dichlorobenzene	5.0	<5.0							
1,2-Dichloroethane	5.0	<5.0							
1,2-Dichloropropane	5.0	<5.0							
1,3,5-Trimethylbenzene	5.0	<5.0							
1,3-Butadiene	5.0	<5.0							
1,3-Dichlorobenzene	5.0	<5.0							
1,4-Dichlorobenzene	5.0	<5.0							
1,4-Dioxane	20.	<20.							
2,2,4-Trimethylpentane	5.0	<5.0							
4-Ethyltoluene	5.0	<5.0							
Acetone	25.	<25.							
Allyl Chloride	5.0	<5.0							
Benzene	5.0	<5.0							
Benzyl Chloride	5.0	<5.0							
Bromodichloromethane	5.0	<5.0							
Bromoform	5.0	<5.0							
Bromomethane	5.0	<5.0							
Carbon Disulfide	10.	<10.							
Carbon Tetrachloride	5.0	<5.0							
Chlorobenzene	5.0	<5.0							
Chloroethane	5.0	<5.0							
Chloroform	5.0	<5.0							
Chloromethane	5.0	<5.0							
cis-1,2-Dichloroethylene	5.0	<5.0							
cis-1,3-Dichloropropene	5.0	<5.0							
Cyclohexane	5.0	<5.0							
Dibromochloromethane	5.0	<5.0							
Ethyl Acetate	5.0	<5.0							
Ethylbenzene	5.0	<5.0							
Freon-11	5.0	<5.0							
Freon-113	5.0	<5.0							

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METHOD BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317669

Freon-114	5.0	<5.0							
Freon-12	5.0	<5.0							
Heptane	5.0	<5.0							
Hexane	5.0	<5.0							
Isopropyl Alcohol	25.	<25.							
m & p-xylene	10.	<10.							
Methyl Butyl Ketone	20.	<20.							
Methyl Ethyl Ketone	5.0	<5.0							
Methyl Isobutyl Ketone	20.	<20.							
Methyl Tert-Butyl Ether	5.0	<5.0							
Methylene Chloride	5.0	<5.0							
o-Xylene	5.0	<5.0							
Propylene	5.0	<5.0							
Styrene	5.0	<5.0							
Tetrachloroethylene	5.0	<5.0							
Tetrahydrofuran	5.0	<5.0							
Toluene	5.0	<5.0							
Trans-1,2-Dichloroethene	5.0	<5.0							
trans-1,3-Dichloropropene	5.0	<5.0							
Trichloroethylene	5.0	<5.0							
Vinyl Acetate	5.0	<5.0							
Vinyl Bromide	5.0	<5.0							
Vinyl Chloride	5.0	<5.0							

300319

5120 North Shore Drive
North Little Rock, AR 72118
Phone: (501) 801-8500
Fax: (501) 801-8501
Website: www.cteh.com

Center for Toxicology and Environmental Health L.L.C.
SAMPLE CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

	Send Report To:	Send Invoice To:
Name		Accounts Payable
Company	CTEH	CTEH
Address	2000 Anders Lane Kemah, Texas 77565	5120 North Shore Drive North Little Rock, AR 72118
Phone	(281)535-2834	(501)801-8500
Fax	(281)535-0232	(501)801-8501
e-mail	labresults@cteh.co[redacted]m	raccounting@cteh.com

CTEH Project #: 10619Ø

Turnaround Requested:
Same Day __Next Day (24 hour) ✓ Normal
__Other (Specify) _____

Complete Data Packet Requested ☑Yes ☐No

73

Lab Contact Information:
Galson Laboratories
6601 Kirkville Road
E. Syracuse, NY 13057

Client Sample Identification	Other Sample Identification	Sample Size	Units (Check one) X L __cm²	Sample Date	Sample Time (for non-air samples)	Initials	EPAØ-15+TICS	H2S WET SOP13	not used 5/2/14	Matrix A = air B = bulk S = soil SW = wipe T = tape W = water
LYVAØ5Ø1 MCØØ1	WC251	1	L	5/1/14	—	JJ	X			A
LYVAØ5Ø1 MCØØ2	WA767	1	L	5/1/14	—	JJ	X			A
LYVAØ5Ø1 MCØØ3	WA438	1	L	5/1/14	—	JJ	X			A
LYVAØ5Ø1 MCØØ4	WC215	1	L	5/1/14	—	JJ	X			A
LYVAØ5Ø1 MCØØ5	WC270	1	L	5/1/14	—	JJ	X			A
LYVAØ5Ø1 MCØØ6	WC124	1	L	5/1/14	—	JJ	X			A
LYVAØ5Ø1 H_2S ØØ1	—	1455	min	5/1/14	—	JJ		X	5/2/14	A Radiello
LYVAØ5Ø1 H2SØØ2	—	1445	min	5/1/14	—	JJ		X		A
LYVAØ5Ø1 H2SØØ3	—	1443	min	5/1/14	—	JJ		X		A
LYVAØ5Ø1 H2SØØ4	—	1420	min	5/1/14	—	JJ		X		A
LYVAØ5Ø1 H2SØØ5	—	1405	min	5/1/14	—	JJ		X		A

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	COMMENTS
	5/2/14			Rec'd intact & all accounted for? Yes or No SL Rec'd w/custody seals intact? Yes or No NA Rec'd in light sensitive packaging? Yes or No NA Rec'd with ice pack? Yes or No SL Rec'd temperature compliant? Yes or No SL
		Michelle Krause [redacted]	5/5/14 1053	

Req. Recvd WR404

* Not Recvd

5120 North Shore Drive
North Little Rock, AR 72118
Phone: (501) 801-8500
Fax: (501) 801-8501
Website: www.cteh.com

Center for Toxicology and Environmental Health L.L.C.

SAMPLE CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

73

	Send Report To:	Send Invoice To:
Name		Accounts Payable
Company	CTEH	CTEH
Address	2000 Anders Lane Kemah, Texas 77565	5120 North Shore Drive North Little Rock, AR 72118
Phone	(281)535-2834	(501)801-8500
Fax	(281)535-0232	(501)801-8501
e-mail	labresults@cteh.com [redacted]	lraccounting@cteh.com

CTEH Project #: 10619

Turnaround Requested:
Same Day __Next Day (24 hour) ✓ Normal
__Other (Specify) _____

Complete Data Packet Requested ☒Yes ☐No

Lab Contact Information:
Galson Laboratories
6601 Kirkville Road
E. Syracuse, NY 13057

Client Sample Identification	Other Sample Identification	Sample Size	Units (Check one) X L / __cm²	Sample Date	Sample Time (for non-air samples)	Initials	EPA TO15+TICs	H2S WET SOP13	Matrix (A = air, B = bulk, S = soil, SW = wipe, T = tape, W = water)
LYVA050IH2S006	- Rec'd 240516 CTK	1442	min	5/1/14	-	JJ		X	A Rachelle
LYVA050IH2S007	Blank	-	~~min~~	5/1/14	-	JJ		X	A ✓

Not used 5/2/14

not used 5/2/14

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	COMMENTS
	5/2/14			Rec'd intact & all accounted for? Yes or No SC Rec'd w/custody seals intact? Yes or No NA Rec'd in light sensitive packaging? Yes or No NA Rec'd with ice pack? Yes or No SC Rec'd temperature compliant? Yes or No SC
		Michelle Krause [redacted]	5/5/14 1053	

GALSON LABORATORIES

Mr. JT Wilson
Center for Toxicology & Env. Health LLC
2000 Anders Lane
Kemah, TX 77565

May 13, 2014

Lynchburg, VA

DOH ELAP #11626
AIHA-LAP #100324

Account# 15330

Login# L317820

Dear Mr. Wilson:

Enclosed are the analytical results for the samples received by our laboratory on May 06, 2014. All test results meet the quality control requirements of AIHA-LAP and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report, with the exception of IOMs, which will be cleaned and disposed of after seven calendar days.

Current Scopes of Accreditation can be viewed at www.galsonlabs.com in the accreditations section under the "about Galson" tab.

Please contact Caroline Hudson at (888) 432-5227, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Mary G. Unangst
Laboratory Director

Enclosure(s)

LABORATORY ANALYSIS REPORT

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 02-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831063

Account No.: 15330
Login No. : L317820

Hydrogen Sulfide

Sample ID	Lab ID	Time minutes	Total ug	ppm
LYVA0502H2S001	L317820-7	1455	<1.2	<0.0086
LYVA0502H2S002	L317820-8	1450	<1.2	<0.0086
LYVA0502H2S003	L317820-9	1450	<1.2	<0.0086
LYVA0502H2S004	L317820-10	1460	<1.2	<0.0086
LYVA0502H2S005	L317820-11	1460	<1.2	<0.0086
LYVA0502H2S007	L317820-12	NA	<1.2	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 1.2 ug
Analytical Method : In-house: WET-SOP-13; Colorimetric
OSHA PEL (TWA) : 20 ppm CEIL
Collection Media : Radiello

Submitted by: PJD
Approved by : JGC
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

GALSON LABORATORIES

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC001 **Lab ID : L317820-1**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	2.0	J	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	27		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified
MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC001 **Lab ID : L317820-1**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified
MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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East Syracuse, NY 13057
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FAX: (315) 437-0571
www.galsonlabs.com

LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC001 **Lab ID : L317820-1**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified

MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms

M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

GALSON LABORATORIES

6601 Kirkville Road
East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC002 **Lab ID : L317820-2**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	59		1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	45		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	2.4	J	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	10		1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified

MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms

M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC002 **Lab ID : L317820-2**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	2.8	J	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC002 **Lab ID : L317820-2**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA Submitted by: BHB
Collection Media : Mini Can Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than MG -Milligrams M3 -Cubic Meters
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NA -Not Applicable ND -Not Detected ppbv-Parts per Billion Volume
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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

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Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC003 **Lab ID : L317820-3**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	2.7	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC003 **Lab ID : L317820-3**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
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Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC003 **Lab ID : L317820-3**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
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Client : CSX Transportation
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Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC004 **Lab ID : L317820-4**
Date Sampled : 05/02/14 **Date Analyzed : 05/12/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	4.1	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC004 **Lab ID : L317820-4**
Date Sampled : 05/02/14 **Date Analyzed : 05/12/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	3.0	J	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
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Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC004 **Lab ID : L317820-4**
Date Sampled : 05/02/14 **Date Analyzed : 05/12/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA Submitted by: BHB
Collection Media : Mini Can Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than MG -Milligrams M3 -Cubic Meters
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Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC005 **Lab ID : L317820-5**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC005 **Lab ID : L317820-5**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified
MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0502MC005 **Lab ID : L317820-5**
Date Sampled : 05/02/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than	MG -Milligrams	M3 -Cubic Meters
> -Greater Than	UG -Micrograms	L -Liters
NA -Not Applicable	ND -Not Detected	ppbv-Parts per Billion Volume
NS -Not Specified	KG -Kilograms	LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0501MC006 **Lab ID : L317820-6**
Date Sampled : 05/01/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	9.3	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0501MC006 **Lab ID : L317820-6**
Date Sampled : 05/01/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831453

Client ID : LYVA0501MC006 **Lab ID : L317820-6**
Date Sampled : 05/01/14 **Date Analyzed : 05/10/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA Submitted by: BHB
Collection Media : Mini Can Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than MG -Milligrams M3 -Cubic Meters
> -Greater Than UG -Micrograms L -Liters
NA -Not Applicable ND -Not Detected ppbv-Parts per Billion Volume
NS -Not Specified KG -Kilograms LOQ -Limit of Quantitation

LABORATORY ANALYSIS REPORT

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Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831457

Client ID : LYVA0502MC001 **Lab ID : L317820-1**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
No Volatiles Found			0	0	

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831457

Client ID : LYVA0502MC002 **Lab ID : L317820-2**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Isobutane	000075-28-5	4.55	58	0.14	J
Butane	000106-97-8	4.83	150	0.36	J
Pentane	000109-66-0	6.39	64	0.19	J
Pentane, 2-methyl-	000107-83-5	8.40	16	0.056	J
Pentane, 3-methyl-	000096-14-0	8.91	8.0	0.028	J
Cyclopentane, methyl-	000096-37-7	10.67	9.6	0.033	J

Analytical Method : mod. OSHA PV2120/mod. EPA Submitted by: BHB
Collection Media : Mini Can Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831457

Client ID : LYVA0502MC003 **Lab ID : L317820-3**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
No Volatiles Found			0	0	

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831457

Client ID : LYVA0502MC004 **Lab ID : L317820-4**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
No Volatiles Found			0	0	

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831457

Client ID : LYVA0502MC005 **Lab ID : L317820-5**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
No Volatiles Found			0	0	

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received : 06-MAY-14 Login No. : L317820
Date Analyzed : 10-MAY-14 - 12-MAY-14
Report ID : 831457

Client ID : LYVA0501MC006 **Lab ID : L317820-6**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Acetonitrile	000075-05-8	5.57	9.9	0.017	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

LABORATORY FOOTNOTE REPORT

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Client Name : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 01-MAY-14 - 02-MAY-14 Account No.: 15330
Date Received: 06-MAY-14 Login No. : L317820
Date Analyzed: 09-MAY-14 - 12-MAY-14

Unless otherwise noted below, all quality control results associated with the samples were within established control limits or did not impact reported results.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

Unless otherwise noted below, reported results have not been blank corrected for any field blank or method blank.

L317820 (Report ID: 831063):
SOPs: WET-SOP-13(4)
The sampling rate is based on 25 deg. C. No adjustments have been made for the actual temperatures that the samplers may have been exposed to in the sampling environment.

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated uncertainty applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process.

Parameter	Accuracy	Mean Recovery
Hydrogen Sulfide	+/-9%	102%

L317820 (Report ID: 831453):
SOPs: in-vocs(26)
The following applies to samples L317820-1 and -2:
The standard run at the detection limit (DLS) was outside the control limits of 60.0 to 140% at 141% recovery for Acetone. Reported Acetone results may be biased high.
The following applies to samples L317820-1,-2,-3,-5, and -6:
A bracketing continuing calibration verification standard (CCV) was outside the control limits of 70.0 to 130% at 68.2% recovery for 1,2,4-Trimethylbenzene. Reported results may be biased low.
A bracketing continuing calibration verification standard (CCV) was outside the control limits of 70.0 to 130% at 69.9% recovery for 1,3,5-Trimethylbenzene. Reported results may be biased low.
U = undetected, J = estimated

L317820-2 (Report ID: 831453):
Propylene result may be biased high due to co-elution with Propane.
Acetone result may be biased high due to co-elution with 2-Methylbutane.

L317820 (Report ID: 831457):
Tentatively Identified Compounds (TICS) are estimated values. TICS are calculated using an average response factor of 1 for all compounds.
SOPs: in-vocs(26)

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters NS -Not Specified
NA -Not Applicable ND -Not Detected ppm -Parts per Million

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-3								
Type		CCV								
Spike Lot #		IH441322-1								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.916	0.895	97.7						

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-4								
Type		ICV								
Spike Lot #		IH441302-1								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	90.0 to 113.	0.344	0.338	98.3						

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-5			WG283493-7			WG283493-12		
Type		CCV			CCV			CCV		
Spike Lot #		IH441322-2			IH441322-2			IH441322-2		
Instrument		SPEC			SPEC			SPEC		
Analysis Date		May 09, 2014 11:56			May 09, 2014 11:56			May 09, 2014 11:56		
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.573	0.582	102.	0.573	0.548	95.7	0.573	0.550	96.1

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-17								
Type		CCV								
Spike Lot #		IH441322-2								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.573	0.554	96.7						

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INITIAL/CONTINUING BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317820

Lab Sample ID **Type** **Instrument** **Analysis Date** **Analysis Time**		WG283493-13 CCB SPEC 05/09/14 11:56	WG283493-18 CCB SPEC 05/09/14 11:56	WG283493-6 CCB SPEC 05/09/14 11:56	WG283493-8 CCB SPEC 05/09/14 11:56	WG283493-1 ICB SPEC 05/09/14 11:56			
	LOQ (ug)	Found (ug)	Found (ug)	Found (ug)	Found (ug)	Found (ug)			
Hydrogen Sulfide	1.2	<1.2	<1.2	<1.2	<1.2	<1.2			

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DETECTION LIMIT STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-2								
Type		DLS								
Spike Lot #		IH441322-3								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	70.0 to 130.	0.115	0.105	92.1						

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6601 Kirkville Rd. E. Syracuse,NY 13057

METHOD BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317820

Lab Sample ID **Type** **Instrument** **Analysis Date** **Analysis Time**		WG283493-14 MBLANK SPEC 05/09/14 11:56	WG283493-9 MBLANK SPEC 05/09/14 11:56						
	LOQ (ug)	Found (ug)	Found (ug)						
Hydrogen Sulfide	1.2	<1.2	<1.2						

Galson Laboratories
6601 Kirkville Rd. E. Syracuse,NY 13057

BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-10			WG283493-11				
Type		BS			BSD				
Spike Lot #		21559			21559				
Instrument		SPEC			SPEC				
Analysis Date		May 09, 2014 11:56			May 09, 2014 11:56				
	Limits (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	RPD	RPD Limits
Hydrogen Sulfide	88.6 to 116.	0.573	0.569	99.3	0.573	0.562	98.1	1.22	-10.0 to 10.0

Galson Laboratories
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BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283493-15			WG283493-16				
Type		BS			BSD				
Spike Lot #		21559			21559				
Instrument		SPEC			SPEC				
Analysis Date		May 09, 2014 11:56			May 09, 2014 11:56				
	Limits (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	RPD	RPD Limits
Hydrogen Sulfide	88.6 to 116.	0.573	0.555	96.9	0.573	0.548	95.7	1.25	-10.0 to 10.0

GC/MS QA-QC Check Report

Tune File : [redacted]
Tune Time : 05/09/14 09:22
Daily Calibration File : [redacted]
Internal Standard Areas: 201953 788461 501079

Sample	Client ID	File	Surr%	Acquired on	Internal Standard Responses		
WG283487-5	Continuing Verifier	F0509404	90	05/09/14 11:32	201953	788461	501079
WG283487-2	Lab Control Spike	F0509405	96	05/09/14 12:14	221940	837798	592033
WG283487-3	LCS Duplicate	F0509406	99	05/09/14 12:55	230918	903901	660759
WG283487-4	DLS	F0509407	100	05/09/14 13:48	222302	821613	576116
WG283487-1	Method Blank	F0509408	99	05/09/14 14:31	227061	880213	633802
WG283487-7	Continuing Verifier	F0509421	113	05/09/14 23:29	208710	865196	699095
L317820-1	LYVA0502MC001	F0509422	106	05/10/14 00:11	200212	779240	590282
L317820-2	LYVA0502MC002	F0509423	100	05/10/14 00:52	203172	824753	595707
L317820-3	LYVA0502MC003	F0509424	112	05/10/14 01:34	210266	824596	657042
L317820-5	LYVA0502MC005	F0509426	110	05/10/14 02:57	212490	836125	674304
L317820-6	LYVA0501MC006	F0509427	108	05/10/14 03:38	208268	837467	651761
WG283487-8	Continuing Verifier	F0509428	107	05/10/14 04:22	187465	801949	609425

* = Value outside limits Surrogate Limits = 80 - 120 Internal Standard Limits = +/- 40%

GC/MS QA-QC Check Report

Tune File : [redacted]
Tune Time : 05/12/14 09:13
Daily Calibration File : [redacted]
Internal Standard Areas: 225277 932713 788759

Sample	Client ID	File	Surr%	Acquired on	Internal Standard Responses		
WG283608-5	Continuing Verifier	F0512402	115	05/12/14 09:56	225277	932713	788759
WG283608-2	Lab Control Spike	F0512403	114	05/12/14 10:37	242564	968515	820382
WG283608-3	LCS Duplicate	F0512404	116	05/12/14 11:19	239040	982086	785599
WG283608-4	DLS	F0512405	106	05/12/14 12:00	219667	843561	668794
WG283608-1	Method Blank	F0512406	109	05/12/14 12:41	223275	853896	657474
WG283608-6	Continuing Verifier	F0512410	114	05/12/14 15:28	210435	908979	729064
L317820-4	LYVA0502MC004	F0512412	113	05/12/14 17:05	221165	891955	720482
WG283608-8	Continuing Verifier	F0512419	118	05/12/14 21:55	212188	868016	727369

* = Value outside limits Surrogate Limits = 80 - 120 Internal Standard Limits = +/- 40%

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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283487-5			WG283487-7			WG283487-8		
Type		CCV			CCV			CCV		
Spike Lot #		IH441243			IH441243			IH441243		
Instrument		MS F			MS F			MS F		
Analysis Date		May 09, 2014 11:32			May 09, 2014 23:29			May 10, 2014 04:22		
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)
1,1,1-Trichloroethane	70.0 to 130.	50.0	51.9	104.	50.0	44.8	89.5	50.0	49.2	98.3
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	58.1	116.	50.0	37.5	75.0	50.0	46.9	93.8
1,1,2-Trichloroethane	70.0 to 130.	50.0	52.6	105.	50.0	40.7	81.4	50.0	48.7	97.3
1,1-Dichloroethane	70.0 to 130.	50.0	48.9	97.8	50.0	43.0	85.9	50.0	50.4	101.
1,1-Dichloroethene	70.0 to 130.	50.0	48.3	96.6	50.0	44.1	88.1	50.0	50.1	100.
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	54.6	109.	50.0	34.1	68.2	50.0	41.6	83.2
1,2-Dibromoethane	70.0 to 130.	50.0	61.5	123.	50.0	37.8	75.5	50.0	48.2	96.4
1,2-Dichlorobenzene	70.0 to 130.	50.0	55.0	110.	50.0	35.3	70.6	50.0	45.2	90.4
1,2-Dichloroethane	70.0 to 130.	50.0	52.4	105.	50.0	46.2	92.3	50.0	55.3	111.
1,2-Dichloropropane	70.0 to 130.	50.0	50.8	102.	50.0	39.8	79.7	50.0	47.0	94.1
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	53.3	107.	50.0	34.9	69.9	50.0	44.2	88.4
1,3-Butadiene	70.0 to 130.	50.0	47.6	95.2	50.0	42.5	85.1	50.0	47.6	95.1
1,3-Dichlorobenzene	70.0 to 130.	50.0	57.2	114.	50.0	36.6	73.3	50.0	46.0	92.0
1,4-Dichlorobenzene	70.0 to 130.	50.0	57.3	115.	50.0	35.8	71.5	50.0	45.1	90.2
1,4-Dioxane	70.0 to 130.	50.0	52.0	104.	50.0	41.1	82.2	50.0	48.6	97.2
2,2,4-Trimethylpentane	70.0 to 130.	50.0	52.0	104.	50.0	42.0	83.9	50.0	47.1	94.2
4-Ethyltoluene	70.0 to 130.	50.0	56.3	113.	50.0	36.1	72.3	50.0	45.5	91.0
Acetone	70.0 to 130.	50.0	50.3	101.	50.0	43.0	85.9	50.0	53.2	106.
Allyl Chloride	70.0 to 130.	50.0	49.4	98.8	50.0	42.5	84.9	50.0	50.3	101.
Benzene	70.0 to 130.	50.0	50.9	102.	50.0	41.2	82.3	50.0	47.2	94.4
Benzyl Chloride	70.0 to 130.	50.0	59.4	119.	50.0	37.2	74.3	50.0	46.7	93.4
Bromodichloromethane	70.0 to 130.	50.0	52.3	105.	50.0	42.8	85.7	50.0	49.3	98.5
Bromoform	70.0 to 130.	50.0	61.6	123.	50.0	39.5	79.1	50.0	48.8	97.7
Bromomethane	70.0 to 130.	50.0	48.4	96.9	50.0	43.4	86.9	50.0	48.6	97.1
Carbon Disulfide	70.0 to 130.	50.0	47.2	94.4	50.0	42.2	84.4	50.0	46.6	93.2
Carbon Tetrachloride	70.0 to 130.	50.0	51.9	104.	50.0	44.7	89.3	50.0	49.9	99.8
Chlorobenzene	70.0 to 130.	50.0	59.3	119.	50.0	36.5	73.0	50.0	46.2	92.4
Chloroethane	70.0 to 130.	50.0	46.6	93.3	50.0	42.8	85.7	50.0	48.5	96.9
Chloroform	70.0 to 130.	50.0	49.8	99.6	50.0	44.6	89.1	50.0	51.4	103.
Chloromethane	70.0 to 130.	50.0	47.4	94.8	50.0	42.6	85.3	50.0	46.2	92.3
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	49.4	98.8	50.0	43.5	87.1	50.0	50.2	100.
cis-1,3-Dichloropropene	70.0 to 130.	50.0	51.7	103.	50.0	40.3	80.6	50.0	48.4	96.7
Cyclohexane	70.0 to 130.	50.0	49.3	98.6	50.0	39.7	79.4	50.0	44.9	89.8
Dibromochloromethane	70.0 to 130.	50.0	61.9	124.	50.0	39.9	79.9	50.0	50.2	100.
Ethyl Acetate	70.0 to 130.	50.0	49.3	98.6	50.0	40.1	80.2	50.0	50.0	100.
Ethylbenzene	70.0 to 130.	50.0	57.9	116.	50.0	35.4	70.8	50.0	45.8	91.7
Freon-11	70.0 to 130.	50.0	52.0	104.	50.0	48.1	96.2	50.0	54.3	109.
Freon-113	70.0 to 130.	50.0	48.1	96.2	50.0	43.3	86.5	50.0	49.8	99.5

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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Freon-114	70.0 to 130.	50.0	48.8	97.6	50.0	44.0	88.0	50.0	49.6	99.2
Freon-12	70.0 to 130.	50.0	48.8	97.6	50.0	47.1	94.3	50.0	52.4	105.
Heptane	70.0 to 130.	50.0	52.1	104.	50.0	41.7	83.5	50.0	46.3	92.6
Hexane	70.0 to 130.	50.0	47.0	93.9	50.0	40.4	80.8	50.0	48.2	96.3
Isopropyl Alcohol	70.0 to 130.	50.0	50.1	100.	50.0	40.3	80.6	50.0	50.9	102.
Methyl Butyl Ketone	70.0 to 130.	50.0	60.8	122.	50.0	38.1	76.1	50.0	47.5	94.9
Methyl Ethyl Ketone	70.0 to 130.	50.0	49.5	99.0	50.0	41.5	83.1	50.0	51.1	102.
Methyl Isobutyl Ketone	70.0 to 130.	50.0	60.0	120.	50.0	37.6	75.3	50.0	46.0	92.0
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	47.2	94.4	50.0	40.4	80.8	50.0	52.1	104.
Methylene Chloride	70.0 to 130.	50.0	47.9	95.9	50.0	42.2	84.4	50.0	48.8	97.7
o-Xylene	70.0 to 130.	50.0	58.1	116.	50.0	36.7	73.5	50.0	46.4	92.9
Propylene	70.0 to 130.	50.0	47.9	95.8	50.0	42.4	84.7	50.0	47.1	94.2
Styrene	70.0 to 130.	50.0	57.9	116.	50.0	36.1	72.3	50.0	47.0	94.1
Tetrachloroethylene	70.0 to 130.	50.0	61.3	123.	50.0	39.3	78.6	50.0	46.0	92.1
Tetrahydrofuran	70.0 to 130.	50.0	47.3	94.6	50.0	39.8	79.6	50.0	49.0	98.0
Toluene	70.0 to 130.	50.0	60.1	120.	50.0	36.1	72.1	50.0	45.3	90.6
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	48.3	96.5	50.0	43.3	86.6	50.0	49.7	99.4
trans-1,3-Dichloropropene	70.0 to 130.	50.0	53.0	106.	50.0	41.0	82.1	50.0	48.6	97.1
Trichloroethylene	70.0 to 130.	50.0	49.6	99.2	50.0	40.0	79.9	50.0	45.0	90.0
Vinyl Acetate	70.0 to 130.	50.0	45.8	91.7	50.0	39.0	78.0	50.0	48.5	96.9
Vinyl Bromide	70.0 to 130.	50.0	49.2	98.5	50.0	45.1	90.3	50.0	50.6	101.
Vinyl Chloride	70.0 to 130.	50.0	48.0	96.0	50.0	43.3	86.6	50.0	47.3	94.6

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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283608-5			WG283608-6			WG283608-8		
Type		CCV			CCV			CCV		
Spike Lot #		IH441243			IH441243			IH441243		
Instrument		MS F			MS F			MS F		
Analysis Date		May 12, 2014 09:56			May 12, 2014 15:28			May 12, 2014 21:55		
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)
1,1,1-Trichloroethane	70.0 to 130.	50.0	49.0	98.0	50.0	47.9	95.8	50.0	49.0	98.0
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	49.3	98.6	50.0	48.7	97.3	50.0	46.8	93.6
1,1,2-Trichloroethane	70.0 to 130.	50.0	54.3	109.	50.0	50.8	102.	50.0	51.4	103.
1,1-Dichloroethane	70.0 to 130.	50.0	48.7	97.4	50.0	48.4	96.8	50.0	46.0	92.1
1,1-Dichloroethene	70.0 to 130.	50.0	48.3	96.5	50.0	47.1	94.2	50.0	46.3	92.5
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	47.1	94.3	50.0	46.4	92.9	50.0	46.2	92.3
1,2-Dibromoethane	70.0 to 130.	50.0	47.4	94.9	50.0	49.1	98.2	50.0	45.7	91.4
1,2-Dichlorobenzene	70.0 to 130.	50.0	48.5	97.0	50.0	49.0	98.0	50.0	47.7	95.4
1,2-Dichloroethane	70.0 to 130.	50.0	53.0	106.	50.0	54.9	110.	50.0	51.9	104.
1,2-Dichloropropane	70.0 to 130.	50.0	52.6	105.	50.0	48.9	97.9	50.0	48.1	96.2
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	48.2	96.5	50.0	47.4	94.8	50.0	46.7	93.3
1,3-Butadiene	70.0 to 130.	50.0	47.1	94.2	50.0	45.0	90.1	50.0	42.8	85.6
1,3-Dichlorobenzene	70.0 to 130.	50.0	49.0	97.9	50.0	50.0	100.	50.0	47.8	95.6
1,4-Dichlorobenzene	70.0 to 130.	50.0	50.3	101.	50.0	48.6	97.1	50.0	48.3	96.7
1,4-Dioxane	70.0 to 130.	50.0	53.4	107.	50.0	49.5	99.0	50.0	51.3	103.
2,2,4-Trimethylpentane	70.0 to 130.	50.0	48.4	96.7	50.0	45.7	91.4	50.0	46.5	92.9
4-Ethyltoluene	70.0 to 130.	50.0	49.3	98.6	50.0	48.5	97.1	50.0	48.3	96.7
Acetone	70.0 to 130.	50.0	60.6	121.	50.0	60.4	121.	50.0	60.5	121.
Allyl Chloride	70.0 to 130.	50.0	49.2	98.3	50.0	47.9	95.9	50.0	45.6	91.3
Benzene	70.0 to 130.	50.0	48.8	97.6	50.0	45.9	91.8	50.0	45.8	91.6
Benzyl Chloride	70.0 to 130.	50.0	51.3	103.	50.0	50.8	102.	50.0	49.1	98.1
Bromodichloromethane	70.0 to 130.	50.0	50.3	101.	50.0	47.9	95.8	50.0	49.0	97.9
Bromoform	70.0 to 130.	50.0	49.4	98.7	50.0	50.3	101.	50.0	48.0	95.9
Bromomethane	70.0 to 130.	50.0	46.9	93.8	50.0	45.5	91.1	50.0	44.0	88.1
Carbon Disulfide	70.0 to 130.	50.0	46.5	93.0	50.0	44.8	89.6	50.0	44.6	89.2
Carbon Tetrachloride	70.0 to 130.	50.0	50.2	100.	50.0	48.3	96.6	50.0	49.9	99.8
Chlorobenzene	70.0 to 130.	50.0	45.2	90.4	50.0	46.8	93.6	50.0	44.3	88.7
Chloroethane	70.0 to 130.	50.0	47.3	94.7	50.0	43.6	87.1	50.0	43.3	86.5
Chloroform	70.0 to 130.	50.0	50.7	101.	50.0	51.4	103.	50.0	48.5	97.0
Chloromethane	70.0 to 130.	50.0	44.0	87.9	50.0	41.9	83.9	50.0	40.6	81.1
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	48.8	97.7	50.0	49.4	98.8	50.0	46.5	93.0
cis-1,3-Dichloropropene	70.0 to 130.	50.0	50.8	102.	50.0	48.8	97.6	50.0	48.1	96.2
Cyclohexane	70.0 to 130.	50.0	46.9	93.9	50.0	43.8	87.5	50.0	45.1	90.1
Dibromochloromethane	70.0 to 130.	50.0	47.6	95.2	50.0	47.7	95.3	50.0	45.6	91.1
Ethyl Acetate	70.0 to 130.	50.0	60.3	121.	50.0	57.9	116.	50.0	55.1	110.
Ethylbenzene	70.0 to 130.	50.0	50.5	101.	50.0	49.9	99.9	50.0	48.3	96.6
Freon-11	70.0 to 130.	50.0	50.2	100.	50.0	52.1	104.	50.0	51.2	102.
Freon-113	70.0 to 130.	50.0	49.8	99.5	50.0	48.0	95.9	50.0	46.2	92.4

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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Freon-114	70.0 to 130.	50.0	47.4	94.9	50.0	46.3	92.5	50.0	44.9	89.7
Freon-12	70.0 to 130.	50.0	45.5	90.9	50.0	45.9	91.9	50.0	45.0	89.9
Heptane	70.0 to 130.	50.0	46.8	93.5	50.0	46.8	93.5	50.0	47.1	94.3
Hexane	70.0 to 130.	50.0	48.6	97.2	50.0	46.8	93.7	50.0	44.9	89.9
Isopropyl Alcohol	70.0 to 130.	50.0	50.4	101.	50.0	49.1	98.2	50.0	49.8	99.5
Methyl Butyl Ketone	70.0 to 130.	50.0	46.6	93.2	50.0	46.2	92.4	50.0	45.4	90.8
Methyl Ethyl Ketone	70.0 to 130.	50.0	58.1	116.	50.0	57.7	115.	50.0	54.7	109.
Methyl Isobutyl Ketone	70.0 to 130.	50.0	47.7	95.3	50.0	47.1	94.2	50.0	45.7	91.4
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	58.1	116.	50.0	56.0	112.	50.0	53.7	107.
Methylene Chloride	70.0 to 130.	50.0	47.5	95.0	50.0	46.2	92.4	50.0	44.6	89.1
o-Xylene	70.0 to 130.	50.0	51.2	102.	50.0	49.9	99.8	50.0	48.3	96.7
Propylene	70.0 to 130.	50.0	43.1	86.2	50.0	41.1	82.2	50.0	39.6	79.2
Styrene	70.0 to 130.	50.0	49.4	98.9	50.0	50.0	100.	50.0	47.5	95.0
Tetrachloroethylene	70.0 to 130.	50.0	44.4	88.8	50.0	44.8	89.6	50.0	43.6	87.2
Tetrahydrofuran	70.0 to 130.	50.0	56.7	113.	50.0	55.8	112.	50.0	53.1	106.
Toluene	70.0 to 130.	50.0	47.9	95.8	50.0	48.3	96.6	50.0	45.6	91.2
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	49.4	98.8	50.0	48.1	96.1	50.0	45.8	91.7
trans-1,3-Dichloropropene	70.0 to 130.	50.0	54.7	109.	50.0	52.3	105.	50.0	53.0	106.
Trichloroethylene	70.0 to 130.	50.0	47.1	94.2	50.0	44.2	88.3	50.0	45.1	90.2
Vinyl Acetate	70.0 to 130.	50.0	59.0	118.	50.0	56.9	114.	50.0	54.3	109.
Vinyl Bromide	70.0 to 130.	50.0	48.1	96.2	50.0	47.4	94.8	50.0	45.6	91.1
Vinyl Chloride	70.0 to 130.	50.0	43.9	87.8	50.0	42.4	84.8	50.0	41.4	82.8

Galson Laboratories
6601 Kirkville Rd. E. Syracuse,NY 13057

ASTD 5ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283487-4			WG283608-4					
Type		DLS			DLS					
Spike Lot #		IH437283			IH437283					
Instrument		MS F			MS F					
Analysis Date		May 09, 2014 13:48			May 12, 2014 12:00					
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value ()	Found ()	Recovery (%)
1,1,1-Trichloroethane	60.0 to 140.	5.00	5.41	108.	5.00	5.62	112.			
1,1,2,2-Tetrachloroethane	60.0 to 140.	5.00	5.60	112.	5.00	5.24	105.			
1,1,2-Trichloroethane	60.0 to 140.	5.00	4.88	97.6	5.00	5.31	106.			
1,1-Dichloroethane	60.0 to 140.	5.00	4.88	97.6	5.00	5.43	109.			
1,1-Dichloroethene	60.0 to 140.	5.00	5.13	103.	5.00	5.58	112.			
1,2,4-Trimethylbenzene	60.0 to 140.	5.00	5.88	118.	5.00	5.15	103.			
1,2-Dibromoethane	60.0 to 140.	5.00	5.03	101.	5.00	4.92	98.4			
1,2-Dichlorobenzene	60.0 to 140.	5.00	5.50	110.	5.00	5.20	104.			
1,2-Dichloroethane	60.0 to 140.	5.00	4.58	91.6	5.00	5.33	107.			
1,2-Dichloropropane	60.0 to 140.	5.00	4.80	96.0	5.00	5.27	105.			
1,3,5-Trimethylbenzene	60.0 to 140.	5.00	6.06	121.	5.00	5.37	107.			
1,3-Butadiene	60.0 to 140.	5.00	4.94	98.8	5.00	5.39	108.			
1,3-Dichlorobenzene	60.0 to 140.	5.00	5.72	114.	5.00	5.56	111.			
1,4-Dichlorobenzene	60.0 to 140.	5.00	5.57	111.	5.00	5.36	107.			
1,4-Dioxane	60.0 to 140.	5.00	6.04	121.	5.00	5.24	105.			
2,2,4-Trimethylpentane	60.0 to 140.	5.00	5.17	103.	5.00	5.50	110.			
4-Ethyltoluene	60.0 to 140.	5.00	5.81	116.	5.00	5.18	104.			
Acetone	60.0 to 140.	5.00	7.07	141.	5.00	6.77	135.			
Allyl Chloride	60.0 to 140.	5.00	5.48	110.	5.00	5.56	111.			
Benzene	60.0 to 140.	5.00	4.85	97.0	5.00	5.20	104.			
Benzyl Chloride	60.0 to 140.	5.00	4.79	95.8	5.00	4.91	98.2			
Bromodichloromethane	60.0 to 140.	5.00	5.16	103.	5.00	5.49	110.			
Bromoform	60.0 to 140.	5.00	4.87	97.4	5.00	4.98	99.6			
Bromomethane	60.0 to 140.	5.00	4.99	99.8	5.00	5.46	109.			
Carbon Disulfide	60.0 to 140.	5.00	6.04	121.	5.00	6.11	122.			
Carbon Tetrachloride	60.0 to 140.	5.00	5.45	109.	5.00	5.87	117.			
Chlorobenzene	60.0 to 140.	5.00	5.14	103.	5.00	5.03	101.			
Chloroethane	60.0 to 140.	5.00	4.99	99.8	5.00	5.20	104.			
Chloroform	60.0 to 140.	5.00	4.97	99.4	5.00	5.46	109.			
Chloromethane	60.0 to 140.	5.00	5.00	100.	5.00	5.50	110.			
cis-1,2-Dichloroethylene	60.0 to 140.	5.00	4.90	98.0	5.00	5.47	109.			
cis-1,3-Dichloropropene	60.0 to 140.	5.00	4.51	90.2	5.00	5.16	103.			
Cyclohexane	60.0 to 140.	5.00	5.46	109.	5.00	5.80	116.			
Dibromochloromethane	60.0 to 140.	5.00	5.07	101.	5.00	5.03	101.			
Ethyl Acetate	60.0 to 140.	5.00	5.30	106.	5.00	5.58	112.			
Ethylbenzene	60.0 to 140.	5.00	5.30	106.	5.00	5.00	100.			
Freon-11	60.0 to 140.	5.00	5.32	106.	5.00	5.88	118.			
Freon-113	60.0 to 140.	5.00	5.13	103.	5.00	5.58	112.			

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ASTD 5ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Freon-114	60.0 to 140.	5.00	5.08	102.	5.00	5.59	112.	
Freon-12	60.0 to 140.	5.00	5.14	103.	5.00	5.69	114.	
Heptane	60.0 to 140.	5.00	5.34	107.	5.00	5.54	111.	
Hexane	60.0 to 140.	5.00	5.02	100.	5.00	5.43	109.	
Isopropyl Alcohol	60.0 to 140.	5.00	6.16	123.	5.00	5.58	112.	
Methyl Butyl Ketone	60.0 to 140.	5.00	6.11	122.	5.00	4.82	96.4	
Methyl Ethyl Ketone	60.0 to 140.	5.00	6.00	120.	5.00	5.68	114.	
Methyl Isobutyl Ketone	60.0 to 140.	5.00	6.26	125.	5.00	5.02	100.	
Methyl Tert-Butyl Ether	60.0 to 140.	5.00	5.29	106.	5.00	5.57	111.	
Methylene Chloride	60.0 to 140.	5.00	5.52	110.	5.00	5.74	115.	
o-Xylene	60.0 to 140.	5.00	5.74	115.	5.00	5.32	106.	
Propylene	60.0 to 140.	5.00	5.01	100.	5.00	5.55	111.	
Styrene	60.0 to 140.	5.00	5.26	105.	5.00	4.71	94.2	
Tetrachloroethylene	60.0 to 140.	5.00	5.62	112.	5.00	5.55	111.	
Tetrahydrofuran	60.0 to 140.	5.00	6.07	121.	5.00	5.23	105.	
Toluene	60.0 to 140.	5.00	5.27	105.	5.00	4.84	96.8	
Trans-1,2-Dichloroethene	60.0 to 140.	5.00	5.08	102.	5.00	5.54	111.	
trans-1,3-Dichloropropene	60.0 to 140.	5.00	4.67	93.4	5.00	4.94	98.8	
Trichloroethylene	60.0 to 140.	5.00	5.18	104.	5.00	5.67	113.	
Vinyl Acetate	60.0 to 140.	5.00	5.65	113.	5.00	6.18	124.	
Vinyl Bromide	60.0 to 140.	5.00	5.06	101.	5.00	5.59	112.	
Vinyl Chloride	60.0 to 140.	5.00	4.98	99.6	5.00	5.36	107.	

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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283487-2			WG283487-3				
Type		LCS			LCSD				
Spike Lot #		IH434422			IH434422				
Instrument		MS F			MS F				
Analysis Date		May 09, 2014 12:14			May 09, 2014 12:55				
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	RPD	RPD Limits
1,1,1-Trichloroethane	70.0 to 130.	50.0	51.9	104.	50.0	49.0	98.0	5.81	-25.0 to 25.0
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	56.4	113.	50.0	50.3	101.	11.4	-25.0 to 25.0
1,1,2-Trichloroethane	70.0 to 130.	50.0	51.7	103.	50.0	48.6	97.1	6.20	-25.0 to 25.0
1,1-Dichloroethane	70.0 to 130.	50.0	48.8	97.6	50.0	48.2	96.4	1.24	-25.0 to 25.0
1,1-Dichloroethene	70.0 to 130.	50.0	48.4	96.8	50.0	50.3	101.	-3.93	-25.0 to 25.0
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	57.7	115.	50.0	50.0	100.	14.4	-25.0 to 25.0
1,2-Dibromoethane	70.0 to 130.	50.0	52.1	104.	50.0	46.9	93.8	10.4	-25.0 to 25.0
1,2-Dichlorobenzene	70.0 to 130.	50.0	53.6	107.	50.0	46.3	92.7	14.5	-25.0 to 25.0
1,2-Dichloroethane	70.0 to 130.	50.0	47.4	94.8	50.0	45.4	90.9	4.22	-25.0 to 25.0
1,2-Dichloropropane	70.0 to 130.	50.0	48.2	96.4	50.0	45.6	91.3	5.52	-25.0 to 25.0
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	55.6	111.	50.0	49.7	99.5	11.1	-25.0 to 25.0
1,3-Butadiene	70.0 to 130.	50.0	50.6	101.	50.0	52.5	105.	-3.63	-25.0 to 25.0
1,3-Dichlorobenzene	70.0 to 130.	50.0	55.0	110.	50.0	47.6	95.1	14.5	-25.0 to 25.0
1,4-Dichlorobenzene	70.0 to 130.	50.0	54.6	109.	50.0	48.1	96.2	12.7	-25.0 to 25.0
1,4-Dioxane	70.0 to 130.	50.0	46.0	92.0	50.0	41.8	83.7	9.52	-25.0 to 25.0
2,2,4-Trimethylpentane	70.0 to 130.	50.0	53.6	107.	50.0	49.0	97.9	8.95	-25.0 to 25.0
4-Ethyltoluene	70.0 to 130.	50.0	55.1	110.	50.0	49.5	98.9	10.9	-25.0 to 25.0
Acetone	70.0 to 130.	50.0	48.9	97.8	50.0	47.7	95.4	2.51	-25.0 to 25.0
Allyl Chloride	70.0 to 130.	50.0	48.1	96.2	50.0	47.8	95.5	0.668	-25.0 to 25.0
Benzene	70.0 to 130.	50.0	49.0	97.9	50.0	45.6	91.2	7.08	-25.0 to 25.0
Benzyl Chloride	70.0 to 130.	50.0	59.2	118.	50.0	50.1	100.	16.7	-25.0 to 25.0
Bromodichloromethane	70.0 to 130.	50.0	52.0	104.	50.0	49.4	98.7	5.21	-25.0 to 25.0
Bromoform	70.0 to 130.	50.0	52.9	106.	50.0	46.3	92.7	13.3	-25.0 to 25.0
Bromomethane	70.0 to 130.	50.0	50.5	101.	50.0	51.4	103.	-1.79	-25.0 to 25.0
Carbon Disulfide	70.0 to 130.	50.0	49.3	98.5	50.0	51.4	103.	-4.23	-25.0 to 25.0
Carbon Tetrachloride	70.0 to 130.	50.0	52.1	104.	50.0	48.6	97.1	6.96	-25.0 to 25.0
Chlorobenzene	70.0 to 130.	50.0	50.2	100.	50.0	45.2	90.5	10.3	-25.0 to 25.0
Chloroethane	70.0 to 130.	50.0	47.1	94.2	50.0	48.4	96.8	-2.74	-25.0 to 25.0
Chloroform	70.0 to 130.	50.0	49.1	98.2	50.0	48.2	96.5	1.81	-25.0 to 25.0
Chloromethane	70.0 to 130.	50.0	52.5	105.	50.0	53.0	106.	-0.987	-25.0 to 25.0
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	48.9	97.8	50.0	47.7	95.3	2.61	-25.0 to 25.0
Cyclohexane	70.0 to 130.	50.0	49.9	99.7	50.0	46.9	93.9	6.03	-25.0 to 25.0
Dibromochloromethane	70.0 to 130.	50.0	52.9	106.	50.0	47.2	94.3	11.4	-25.0 to 25.0
Ethyl Acetate	70.0 to 130.	50.0	49.1	98.2	50.0	47.5	95.0	3.31	-25.0 to 25.0
Ethylbenzene	70.0 to 130.	50.0	54.0	108.	50.0	48.1	96.3	11.5	-25.0 to 25.0
Freon-11	70.0 to 130.	50.0	49.1	98.2	50.0	50.7	101.	-3.27	-25.0 to 25.0
Freon-113	70.0 to 130.	50.0	46.9	93.9	50.0	47.9	95.7	-1.94	-25.0 to 25.0
Freon-114	70.0 to 130.	50.0	44.2	88.3	50.0	45.3	90.7	-2.61	-25.0 to 25.0

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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
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Freon-12	70.0 to 130.	50.0	52.6	105.	50.0	51.7	103.	1.86	-25.0 to 25.0
Heptane	70.0 to 130.	50.0	51.7	103.	50.0	49.3	98.5	4.72	-25.0 to 25.0
Hexane	70.0 to 130.	50.0	46.9	93.9	50.0	46.7	93.4	0.470	-25.0 to 25.0
Isopropyl Alcohol	70.0 to 130.	50.0	45.8	91.6	50.0	44.0	88.1	3.92	-25.0 to 25.0
Methyl Butyl Ketone	70.0 to 130.	50.0	55.8	112.	50.0	48.7	97.3	13.6	-25.0 to 25.0
Methyl Ethyl Ketone	70.0 to 130.	50.0	50.0	100.	50.0	49.5	99.0	1.01	-25.0 to 25.0
Methyl Isobutyl Ketone	70.0 to 130.	50.0	54.6	109.	50.0	50.7	101.	7.33	-25.0 to 25.0
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	48.6	97.2	50.0	47.1	94.2	3.13	-25.0 to 25.0
Methylene Chloride	70.0 to 130.	50.0	47.6	95.2	50.0	47.3	94.6	0.632	-25.0 to 25.0
o-Xylene	70.0 to 130.	50.0	56.3	113.	50.0	51.2	102.	9.43	-25.0 to 25.0
Propylene	70.0 to 130.	50.0	58.4	117.	50.0	57.4	115.	1.81	-25.0 to 25.0
Styrene	70.0 to 130.	50.0	55.1	110.	50.0	49.9	99.7	9.97	-25.0 to 25.0
Tetrachloroethylene	70.0 to 130.	50.0	55.6	111.	50.0	49.3	98.6	11.9	-25.0 to 25.0
Tetrahydrofuran	70.0 to 130.	50.0	48.3	96.5	50.0	47.6	95.2	1.40	-25.0 to 25.0
Toluene	70.0 to 130.	50.0	50.6	101.	50.0	46.7	93.4	8.10	-25.0 to 25.0
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	48.1	96.1	50.0	48.2	96.4	-0.353	-25.0 to 25.0
trans-1,3-Dichloropropene	70.0 to 130.	50.0	51.9	104.	50.0	49.2	98.3	5.48	-25.0 to 25.0
Trichloroethylene	70.0 to 130.	50.0	51.8	104.	50.0	48.4	96.7	6.87	-25.0 to 25.0
Vinyl Acetate	70.0 to 130.	50.0	44.3	88.6	50.0	43.8	87.5	1.23	-25.0 to 25.0
Vinyl Bromide	70.0 to 130.	50.0	49.6	99.2	50.0	50.5	101.	-1.84	-25.0 to 25.0
Vinyl Chloride	70.0 to 130.	50.0	50.4	101.	50.0	50.7	101.	-0.435	-25.0 to 25.0

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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID		WG283608-2			WG283608-3				
Type		LCS			LCSD				
Spike Lot #		IH434422			IH434422				
Instrument		MS F			MS F				
Analysis Date		May 12, 2014 10:37			May 12, 2014 11:19				
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	RPD	RPD Limits
1,1,1-Trichloroethane	70.0 to 130.	50.0	47.0	94.1	50.0	48.4	96.9	-2.95	-25.0 to 25.0
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	39.3	78.5	50.0	45.1	90.2	-13.8	-25.0 to 25.0
1,1,2-Trichloroethane	70.0 to 130.	50.0	44.6	89.2	50.0	48.8	97.6	-8.99	-25.0 to 25.0
1,1-Dichloroethane	70.0 to 130.	50.0	45.2	90.4	50.0	49.1	98.1	-8.17	-25.0 to 25.0
1,1-Dichloroethene	70.0 to 130.	50.0	46.7	93.3	50.0	49.6	99.1	-5.99	-25.0 to 25.0
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	39.8	79.7	50.0	45.9	91.7	-14.0	-25.0 to 25.0
1,2-Dibromoethane	70.0 to 130.	50.0	38.2	76.3	50.0	44.2	88.4	-14.6	-25.0 to 25.0
1,2-Dichlorobenzene	70.0 to 130.	50.0	40.8	81.7	50.0	45.2	90.5	-10.2	-25.0 to 25.0
1,2-Dichloroethane	70.0 to 130.	50.0	46.0	92.0	50.0	50.4	101.	-9.07	-25.0 to 25.0
1,2-Dichloropropane	70.0 to 130.	50.0	43.8	87.5	50.0	47.4	94.7	-7.92	-25.0 to 25.0
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	39.1	78.2	50.0	45.0	90.1	-14.1	-25.0 to 25.0
1,3-Butadiene	70.0 to 130.	50.0	54.7	109.	50.0	52.8	106.	3.37	-25.0 to 25.0
1,3-Dichlorobenzene	70.0 to 130.	50.0	41.5	83.0	50.0	47.1	94.1	-12.5	-25.0 to 25.0
1,4-Dichlorobenzene	70.0 to 130.	50.0	40.5	80.9	50.0	46.4	92.8	-13.7	-25.0 to 25.0
1,4-Dioxane	70.0 to 130.	50.0	36.4	72.8	50.0	40.2	80.4	-9.93	-25.0 to 25.0
2,2,4-Trimethylpentane	70.0 to 130.	50.0	45.6	91.2	50.0	48.7	97.5	-6.68	-25.0 to 25.0
4-Ethyltoluene	70.0 to 130.	50.0	37.6	75.1	50.0	43.4	86.7	-14.3	-25.0 to 25.0
Acetone	70.0 to 130.	50.0	39.5	79.1	50.0	45.4	90.7	-13.7	-25.0 to 25.0
Allyl Chloride	70.0 to 130.	50.0	44.5	89.1	50.0	47.7	95.4	-6.83	-25.0 to 25.0
Benzene	70.0 to 130.	50.0	45.1	90.1	50.0	48.7	97.3	-7.73	-25.0 to 25.0
Benzyl Chloride	70.0 to 130.	50.0	41.2	82.4	50.0	47.6	95.1	-14.3	-25.0 to 25.0
Bromodichloromethane	70.0 to 130.	50.0	47.8	95.6	50.0	49.8	99.6	-4.10	-25.0 to 25.0
Bromoform	70.0 to 130.	50.0	40.6	81.2	50.0	46.3	92.5	-13.0	-25.0 to 25.0
Bromomethane	70.0 to 130.	50.0	52.5	105.	50.0	52.3	105.	0.458	-25.0 to 25.0
Carbon Disulfide	70.0 to 130.	50.0	51.4	103.	50.0	51.1	102.	0.566	-25.0 to 25.0
Carbon Tetrachloride	70.0 to 130.	50.0	45.5	91.0	50.0	48.6	97.1	-6.53	-25.0 to 25.0
Chlorobenzene	70.0 to 130.	50.0	37.4	74.7	50.0	43.0	86.1	-14.1	-25.0 to 25.0
Chloroethane	70.0 to 130.	50.0	47.7	95.5	50.0	49.1	98.2	-2.83	-25.0 to 25.0
Chloroform	70.0 to 130.	50.0	45.4	90.9	50.0	49.8	99.5	-9.06	-25.0 to 25.0
Chloromethane	70.0 to 130.	50.0	53.3	107.	50.0	53.5	107.	-0.319	-25.0 to 25.0
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	45.5	91.0	50.0	49.1	98.2	-7.57	-25.0 to 25.0
Cyclohexane	70.0 to 130.	50.0	44.4	88.9	50.0	46.2	92.4	-3.88	-25.0 to 25.0
Dibromochloromethane	70.0 to 130.	50.0	40.7	81.5	50.0	45.5	91.1	-11.1	-25.0 to 25.0
Ethyl Acetate	70.0 to 130.	50.0	40.0	80.0	50.0	46.2	92.3	-14.3	-25.0 to 25.0
Ethylbenzene	70.0 to 130.	50.0	38.3	76.6	50.0	43.5	87.0	-12.8	-25.0 to 25.0
Freon-11	70.0 to 130.	50.0	49.0	98.0	50.0	50.9	102.	-3.75	-25.0 to 25.0
Freon-113	70.0 to 130.	50.0	44.4	88.7	50.0	47.3	94.6	-6.42	-25.0 to 25.0
Freon-114	70.0 to 130.	50.0	48.1	96.2	50.0	46.9	93.8	2.48	-25.0 to 25.0

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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Freon-12	70.0 to 130.	50.0	50.4	101.	50.0	53.0	106.	-5.08	-25.0 to 25.0
Heptane	70.0 to 130.	50.0	45.1	90.1	50.0	47.9	95.9	-6.17	-25.0 to 25.0
Hexane	70.0 to 130.	50.0	44.3	88.5	50.0	48.2	96.5	-8.58	-25.0 to 25.0
Isopropyl Alcohol	70.0 to 130.	50.0	39.9	79.8	50.0	44.0	88.0	-9.75	-25.0 to 25.0
Methyl Butyl Ketone	70.0 to 130.	50.0	36.5	73.1	50.0	42.9	85.7	-15.9	-25.0 to 25.0
Methyl Ethyl Ketone	70.0 to 130.	50.0	42.8	85.5	50.0	48.4	96.7	-12.3	-25.0 to 25.0
Methyl Isobutyl Ketone	70.0 to 130.	50.0	37.9	75.7	50.0	42.9	85.8	-12.5	-25.0 to 25.0
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	41.5	83.0	50.0	48.0	96.1	-14.6	-25.0 to 25.0
Methylene Chloride	70.0 to 130.	50.0	43.1	86.2	50.0	47.6	95.2	-9.86	-25.0 to 25.0
o-Xylene	70.0 to 130.	50.0	39.6	79.2	50.0	45.8	91.5	-14.4	-25.0 to 25.0
Propylene	70.0 to 130.	50.0	56.0	112.	50.0	57.6	115.	-2.90	-25.0 to 25.0
Styrene	70.0 to 130.	50.0	40.5	81.1	50.0	44.5	89.0	-9.31	-25.0 to 25.0
Tetrachloroethylene	70.0 to 130.	50.0	42.0	83.9	50.0	47.1	94.1	-11.5	-25.0 to 25.0
Tetrahydrofuran	70.0 to 130.	50.0	41.4	82.7	50.0	46.8	93.6	-12.4	-25.0 to 25.0
Toluene	70.0 to 130.	50.0	37.4	74.9	50.0	43.4	86.8	-14.7	-25.0 to 25.0
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	44.6	89.2	50.0	49.4	98.8	-10.2	-25.0 to 25.0
trans-1,3-Dichloropropene	70.0 to 130.	50.0	46.3	92.6	50.0	50.1	100.	-7.76	-25.0 to 25.0
Trichloroethylene	70.0 to 130.	50.0	46.4	92.7	50.0	48.4	96.8	-4.24	-25.0 to 25.0
Vinyl Acetate	70.0 to 130.	50.0	37.4	74.7	50.0	42.7	85.4	-13.3	-25.0 to 25.0
Vinyl Bromide	70.0 to 130.	50.0	50.6	101.	50.0	51.0	102.	-0.847	-25.0 to 25.0
Vinyl Chloride	70.0 to 130.	50.0	53.6	107.	50.0	51.9	104.	3.15	-25.0 to 25.0

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METHOD BLANK REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Lab Sample ID			WG283487-1		WG283608-1							
Type			BLANK		BLANK							
Instrument			MS F		MS F							
Analysis Date			05/09/14		05/12/14							
Analysis Time			14:31		12:41							
	MDL (ppbv)	LOQ (ppbv)	Found (ppbv)	Qual	Found (ppbv)	Qual						
1,1,1-Trichloroethane	2	5.0	ND	U	ND	U						
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	ND	U						
1,1,2-Trichloroethane	2	5.0	ND	U	ND	U						
1,1-Dichloroethane	2	5.0	ND	U	ND	U						
1,1-Dichloroethene	2	5.0	ND	U	ND	U						
1,2,4-Trimethylbenzene	2	5.0	ND	U	ND	U						
1,2-Dibromoethane	2	5.0	ND	U	ND	U						
1,2-Dichlorobenzene	2	5.0	ND	U	ND	U						
1,2-Dichloroethane	2	5.0	ND	U	ND	U						
1,2-Dichloropropane	2	5.0	ND	U	ND	U						
1,3,5-Trimethylbenzene	2	5.0	ND	U	ND	U						
1,3-Butadiene	2	5.0	ND	U	ND	U						
1,3-Dichlorobenzene	2	5.0	ND	U	ND	U						
1,4-Dichlorobenzene	2	5.0	ND	U	ND	U						
1,4-Dioxane	2	20.	ND	U	ND	U						
2,2,4-Trimethylpentane	2	5.0	ND	U	ND	U						
4-Ethyltoluene	2	5.0	ND	U	ND	U						
Acetone	25	25.	ND	U	ND	U						
Allyl Chloride	2	5.0	ND	U	ND	U						
Benzene	2	5.0	ND	U	ND	U						
Benzyl Chloride	2	5.0	ND	U	ND	U						
Bromodichloromethane	2	5.0	ND	U	ND	U						
Bromoform	2	5.0	ND	U	ND	U						
Bromomethane	2	5.0	ND	U	ND	U						
Carbon Disulfide	2	10.	ND	U	ND	U						
Carbon Tetrachloride	2	5.0	ND	U	ND	U						
Chlorobenzene	2	5.0	ND	U	ND	U						
Chloroethane	2	5.0	ND	U	ND	U						
Chloroform	2	5.0	ND	U	ND	U						
Chloromethane	2	5.0	ND	U	ND	U						
cis-1,2-Dichloroethylene	2	5.0	ND	U	ND	U						
cis-1,3-Dichloropropene	2	5.0	ND	U	ND	U						
Cyclohexane	2	5.0	ND	U	ND	U						
Dibromochloromethane	2	5.0	ND	U	ND	U						
Ethyl Acetate	2	5.0	ND	U	ND	U						
Ethylbenzene	2	5.0	ND	U	ND	U						
Freon-11	2	5.0	ND	U	ND	U						
Freon-113	2	5.0	ND	U	ND	U						

Galson Laboratories
6601 Kirkville Rd. E. Syracuse,NY 13057

METHOD BLANK REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317820

Freon-114	2	5.0	ND	U	ND	U						
Freon-12	2	5.0	ND	U	ND	U						
Heptane	2	5.0	ND	U	ND	U						
Hexane	2	5.0	ND	U	ND	U						
Isopropyl Alcohol	25	25.	ND	U	ND	U						
m & p-xylene	3	10.	2.1	U	2.3	U						
Methyl Butyl Ketone	2	20.	ND	U	ND	U						
Methyl Ethyl Ketone	2	5.0	ND	U	ND	U						
Methyl Isobutyl Ketone	2	20.	ND	U	ND	U						
Methyl Tert-Butyl Ether	2	5.0	ND	U	ND	U						
Methylene Chloride	2	5.0	ND	U	ND	U						
o-Xylene	2	5.0	ND	U	ND	U						
Propylene	2	5.0	ND	U	ND	U						
Styrene	2	5.0	ND	U	ND	U						
Tetrachloroethylene	2	5.0	ND	U	ND	U						
Tetrahydrofuran	2	5.0	ND	U	ND	U						
Toluene	2	5.0	ND	U	ND	U						
Trans-1,2-Dichloroethene	2	5.0	ND	U	ND	U						
trans-1,3-Dichloropropene	2	5.0	ND	U	ND	U						
Trichloroethylene	2	5.0	ND	U	ND	U						
Vinyl Acetate	2	5.0	ND	U	ND	U						
Vinyl Bromide	2	5.0	ND	U	ND	U						
Vinyl Chloride	2	5.0	ND	U	ND	U						

300319

5120 North Shore Drive
North Little Rock, AR 72118
Phone: (501) 801-8500
Fax: (501) 801-8501
Website: www.cteh.com

Center for Toxicology and Environmental Health L.L.C.
SAMPLE CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

	Send Report To:	Send Invoice To:
Name	John Wilson	Accounts Payable
Company	CTEH	CTEH
Address	5120 North Shore Drive North Little Rock, AR 72118	5120 North Shore Drive North Little Rock, AR 72118
Phone	(501)801-8500	(501)801-8500
Fax	(501)801-8501	(501)801-8501
e-mail	labresults@cteh.com	lraccounting@cteh.com

CTEH Project #: 10C190

Turnaround Requested:
Same Day __Next Day (24 hour) ✓ Normal
__Other (Specify) _____

Complete Data Packet Requested ☑Yes ☐No

Lab Contact Information:
Galson Laboratories
6601 Kirkville Road
E. Syracuse, NY 13057

Client Sample Identification	Other Sample Identification	Sample Size	Units (Check one) X L / __cm² / MIN	Sample Date	Sample Time (for non-air samples)	Initials	EPA T0-15+TICs
LYVA0502MC0001	WC173 / WR1671	1	L	5/2/14	-	JJ	X
LYVA0502MC0002	WC208 / WR1672	1	L	5/2/14	-	JJ	X
LYVA0502MC0003	WC231 / WR1673	1	L	5/2/14	-	JJ	X
LYVA0502MC0004	WA597 / WR1674	1	L	5/2/14	-	JJ	X
LYVA0502MC0005	WA793 / WR1675	1	L	5/2/14	-	JJ	X
LYVA0501MC0006 *	WC124	1	L	5/1/14	-	JJ	X

not used
JJ 5/3/14

not used
JJ 5/3/14

Matrix
A = air
B = bulk
S = soil
SW = wipe
T = tape
W = water

A A A A A A

Rec'd intact & all accounted for? Yes or No SK
Rec'd w/custody seals intact? Yes or No NA
Rec'd in light sensitive packaging? Yes or No NA
Rec'd with ice pack? Yes or No SK
Rec'd temperature compliant? Yes or No SK

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME	COMMENTS
[redacted]	5/3/14 1730	FedEx	5/3/14 1730	* Req not Recvd (SK)
		[redacted]	5/6/14 1237	

5120 North Shore Drive
North Little Rock, AR 72118
Phone: (501) 801-8500
Fax: (501) 801-8501
Website: www.cteh.com

Center for Toxicology and Environmental Health L.L.C.

SAMPLE CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

81

	Send Report To:	Send Invoice To:
Name	JT Wilson	Accounts Payable
Company	CTEH	CTEH
Address	5120 North Shore Drive North Little Rock, AR 72118	5120 North Shore Drive North Little Rock, AR 72118
Phone	(501)801-8500	(501)801-8500
Fax	(501)801-8501	(501)801-8501
e-mail	labresults@cteh.com	lraccounting@cteh.com

CTEH Project #: 10619Ø

Turnaround Requested:
Same Day __Next Day (24 hour) ✓ Normal
__Other (Specify) _____

Complete Data Packet Requested ☒Yes ☐No

Lab Contact Information:
Galson Laboratories
6601 Kirkville Road
E. Syracuse, NY 13057

Client Sample Identification	Other Sample Identification	Sample Size	Units (Check one) __L __cm² (MIN)	Sample Date	Sample Time (for non-air samples)	Initials	WET SOP 13	Matrix (A = air, B = bulk, S = soil, SW = wipe, T = tape, W = water)
LYVAØ5Ø2H2SØØ1		1455	mins	5/2/14	-	JJ	X	A Radiello
LYVAØ5Ø2H2SØØ2		145Ø	mins	5/2/14	-	JJ	X	A
LYVAØ5Ø2H2SØØ3		145Ø	mins	5/2/14	-	JJ	X	A
LYVAØ5Ø2H2SØØ4		146Ø	mins	5/2/14	-	JJ	X	A
LYVAØ5Ø2H2SØØ5		146Ø	mins	5/2/14	-	JJ	X	A
LYVAØ5Ø2H2SØØ7		Blank	—		-	JJ	X	A

not used
5/3/14 JJ

not used
5/3/14
JJ

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
[redacted]	1730 5/3/14	Fed Ex	1730 5/3/14
		[redacted]	5/6/14 1237

COMMENTS
Rec'd intact & all accounted for? Yes or No SL
Rec'd w/custody seals intact? Yes or No NA
Rec'd in light sensitive packaging? Yes or No NA
Rec'd with ice pack? Yes or No SL
Rec'd temperature compliant? Yes or No SL

Mr. JT Wilson
Center for Toxicology & Env. Health LLC
2000 Anders Lane
Kemah, TX 77565

May 13, 2014

Lynchburg, VA

DOH ELAP #11626
AIHA-LAP #100324

Account# 15330

Login# L317826

Dear Mr. Wilson:

Enclosed are the analytical results for the samples received by our laboratory on May 06, 2014. All test results meet the quality control requirements of AIHA-LAP and NELAC unless otherwise stated in this report. All samples on the chain of custody were received in good condition unless otherwise noted.

Results in this report are based on the sampling data provided by the client and refer only to the samples as they were received at the laboratory. Unless otherwise requested, all samples will be discarded 14 days from the date of this report, with the exception of IOMs, which will be cleaned and disposed of after seven calendar days.

Current Scopes of Accreditation can be viewed at www.galsonlabs.com in the accreditations section under the "about Galson" tab.

Please contact Caroline Hudson at (888) 432-5227, if you would like any additional information regarding this report.

Thank you for using Galson Laboratories.

Sincerely,

Galson Laboratories

Mary G. Unangst
Laboratory Director

Enclosure(s)

GALSON LABORATORIES

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East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
www.galsonlabs.com

LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831064

Account No.: 15330
Login No. : L317826

Hydrogen Sulfide

Sample ID	Lab ID	Time minutes	Total ug	ppm
LYVA0503H2S001	L317826-6	1440	<1.2	<0.0087
LYVA0503H2S002	L317826-7	1440	<1.2	<0.0087
LYVA0503H2S003	L317826-8	1440	<1.2	<0.0087
LYVA0503H2S004	L317826-9	1445	<1.2	<0.0087
LYVA0503H2S005	L317826-10	1445	<1.2	<0.0087
LYVA0503H2S007	L317826-11	NA	<1.2	NA

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Level of quantitation: 1.2 ug
Analytical Method : In-house: WET-SOP-13; Colorimetric
OSHA PEL (TWA) : 20 ppm CEIL
Collection Media : Radiello

Submitted by: PJD
Approved by : JGC
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
mg -Milligrams
ug -Micrograms
ND -Not Detected
m3 -Cubic Meters
l -Liters
ppm -Parts per Million
kg -Kilograms
NS -Not Specified

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC001 **Lab ID : L317826-1**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	4.6	J	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	ND	U	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified
MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC001 **Lab ID : L317826-1**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	2.6	J	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	4.1	J	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified
MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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www.galsonlabs.com

LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC001 **Lab ID : L317826-1**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than	MG -Milligrams	M3 -Cubic Meters
> -Greater Than	UG -Micrograms	L -Liters
NA -Not Applicable	ND -Not Detected	ppbv-Parts per Billion Volume
NS -Not Specified	KG -Kilograms	LOQ -Limit of Quantitation

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East Syracuse, NY 13057
(315) 432-5227
FAX: (315) 437-0571
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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC002 **Lab ID : L317826-2**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	2.6	J	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	26		1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	13		1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	2.0	J	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC002 **Lab ID : L317826-2**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	7.4		1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	6.4		1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
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Site : Lynchburg, VA

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Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC002 **Lab ID : L317826-2**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
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Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC003 **Lab ID : L317826-3**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	2.3	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
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Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC003 **Lab ID : L317826-3**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
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Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC003 **Lab ID : L317826-3**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
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Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC004 **Lab ID : L317826-4**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	4.0	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
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Date : 13-MAY-14 NYS DOH # : 11626
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Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC004 **Lab ID : L317826-4**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	9.4		1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

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Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC004 **Lab ID : L317826-4**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
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Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC005 **Lab ID : L317826-5**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Propylene	2	5.0	ND	U	1
Freon-12	2	5.0	ND	U	1
Chloromethane	2	5.0	ND	U	1
Freon-114	2	5.0	ND	U	1
Vinyl Chloride	2	5.0	ND	U	1
1,3-Butadiene	2	5.0	ND	U	1
Bromomethane	2	5.0	ND	U	1
Chloroethane	2	5.0	ND	U	1
Vinyl Bromide	2	5.0	ND	U	1
Freon-11	2	5.0	ND	U	1
Isopropyl Alcohol	25	25	ND	U	1
Acetone	25	25	ND	U	1
1,1-Dichloroethene	2	5.0	ND	U	1
Methylene Chloride	2	5.0	ND	U	1
Freon-113	2	5.0	ND	U	1
Allyl Chloride	2	5.0	ND	U	1
Carbon Disulfide	2	10	6.8	J	1
Trans-1,2-Dichloroethene	2	5.0	ND	U	1
Methyl Tert-Butyl Ether	2	5.0	ND	U	1
1,1-Dichloroethane	2	5.0	ND	U	1
Vinyl Acetate	2	5.0	ND	U	1
Methyl Ethyl Ketone	2	5.0	ND	U	1
cis-1,2-Dichloroethylene	2	5.0	ND	U	1
Hexane	2	5.0	ND	U	1
Ethyl Acetate	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
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Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC005 **Lab ID : L317826-5**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
Chloroform	2	5.0	ND	U	1
Tetrahydrofuran	2	5.0	ND	U	1
1,2-Dichloroethane	2	5.0	ND	U	1
1,1,1-Trichloroethane	2	5.0	ND	U	1
Cyclohexane	2	5.0	ND	U	1
Carbon Tetrachloride	2	5.0	ND	U	1
Benzene	2	5.0	ND	U	1
1,4-Dioxane	2	20	ND	U	1
2,2,4-Trimethylpentane	2	5.0	ND	U	1
Heptane	2	5.0	ND	U	1
1,2-Dichloropropane	2	5.0	ND	U	1
Trichloroethylene	2	5.0	ND	U	1
Bromodichloromethane	2	5.0	ND	U	1
cis-1,3-Dichloropropene	2	5.0	ND	U	1
trans-1,3-Dichloropropene	2	5.0	ND	U	1
1,1,2-Trichloroethane	2	5.0	ND	U	1
Toluene	2	5.0	ND	U	1
Dibromochloromethane	2	5.0	ND	U	1
Methyl Isobutyl Ketone	2	20	ND	U	1
Methyl Butyl Ketone	2	20	ND	U	1
1,2-Dibromoethane	2	5.0	ND	U	1
Tetrachloroethylene	2	5.0	ND	U	1
Chlorobenzene	2	5.0	ND	U	1
Ethylbenzene	2	5.0	ND	U	1
Bromoform	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
NS -Not Specified
MG -Milligrams
UG -Micrograms
ND -Not Detected
KG -Kilograms
M3 -Cubic Meters
L -Liters
ppbv-Parts per Billion Volume
LOQ -Limit of Quantitation

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831114

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC005 **Lab ID : L317826-5**
Date Sampled : 05/03/14 **Date Analyzed : 05/09/14**

Parameter	MDL ppbv	LOQ ppbv	Result ppbv	Qualifier	Dilution Factor
m & p-xylene	3	10	ND	U	1
Styrene	2	5.0	ND	U	1
o-Xylene	2	5.0	ND	U	1
1,1,2,2-Tetrachloroethane	2	5.0	ND	U	1
4-Ethyltoluene	2	5.0	ND	U	1
1,3,5-Trimethylbenzene	2	5.0	ND	U	1
1,2,4-Trimethylbenzene	2	5.0	ND	U	1
1,3-Dichlorobenzene	2	5.0	ND	U	1
Benzyl Chloride	2	5.0	ND	U	1
1,4-Dichlorobenzene	2	5.0	ND	U	1
1,2-Dichlorobenzene	2	5.0	ND	U	1

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by : Tony D'Amico

< -Less Than
> -Greater Than
NA -Not Applicable
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MG -Milligrams
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M3 -Cubic Meters
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ppbv-Parts per Billion Volume
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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831115

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC001 **Lab ID : L317826-1**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Isobutane	000075-28-5	4.53	5.2	0.012	J
Butane	000106-97-8	4.80	12	0.028	J
Pentane	000109-66-0	6.35	8.0	0.023	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831115

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC002 **Lab ID : L317826-2**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Butane	000106-97-8	4.80	7.5	0.018	J
Pentane	000109-66-0	6.35	11	0.032	J
Pentane, 2-methyl-	000107-83-5	8.35	5.2	0.018	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831115

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC003 **Lab ID : L317826-3**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
No Volatiles Found			0	0	

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831115

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC004 **Lab ID : L317826-4**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Unknown Compound-1		22.26	11	0.093	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY ANALYSIS REPORT

Client : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received : 06-MAY-14
Date Analyzed : 09-MAY-14
Report ID : 831115

Account No.: 15330
Login No. : L317826

Client ID : LYVA0503MC005 **Lab ID : L317826-5**

Tentatively Identified Compounds	CAS Number	Retention Time	Estimated Concentration ppbv	mg/m3	Qual
Acetonitrile	000075-05-8	5.55	10	0.017	J
Pentane	000109-66-0	6.35	9.3	0.027	J

Analytical Method : mod. OSHA PV2120/mod. EPA
Collection Media : Mini Can

Submitted by: BHB
Approved by : nkp
Date : 13-MAY-14 NYS DOH # : 11626
QC by: Tony D'Amico

< -Less Than mg -Milligrams m3 -Cubic Meters kg -Kilograms
> -Greater Than ug -Micrograms l -Liters LOQ -Limit of Quantitation
NA -Not Applicable ND -Not Detected NS -Not Specified ppbv-Parts per Billion Volume

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

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LABORATORY FOOTNOTE REPORT

Client Name : CSX Transportation
Site : Lynchburg, VA

Date Sampled : 03-MAY-14
Date Received: 06-MAY-14
Date Analyzed: 09-MAY-14

Account No.: 15330
Login No. : L317826

Unless otherwise noted below, all quality control results associated with the samples were within established control limits or did not impact reported results.

Unrounded results are carried through the calculations that yield the final result and the final result is rounded to the number of significant figures appropriate to the accuracy of the analytical method. Please note that results appearing in the columns preceeding the final result column may have been rounded in order to fit the report format and therefore, if carried through the calculations, may not yield an identical final result to the one reported.

The stated LOQs for each analyte represent the demonstrated LOQ concentrations prior to correction for desorption efficiency (if applicable).

Unless otherwise noted below, reported results have not been blank corrected for any field blank or method blank.

L317826 (Report ID: 831064):
SOPs: WET-SOP-13(4)
The sampling rate is based on 25 deg. C. No adjustments have been made for the actual temperatures that the samplers may have been exposed to in the sampling environment.

Accuracy and mean recovery data presented below is based on a 95% confidence interval (k=2). The estimated uncertainty applies to the media, technology, and SOP referenced in this report and does not account for the uncertainty associated with the sampling process.

Parameter	Accuracy	Mean Recovery
Hydrogen Sulfide	+/-9%	102%

L317826 (Report ID: 831114):
SOPs: in-vocs(26)
U = undetected, J = estimated

L317826-1 (Report ID: 831114):
Propylene result may be biased high due to co-elution with Propane.

L317826-2 (Report ID: 831114):
Acetone result may be biased high due to co-elution with 2-Methylbutane.
Propylene result may be biased high due to co-elution with Propane.
Carbon Disulfide result may be biased high due to background laboratory levels.

L317826-3 (Report ID: 831114):
Carbon Disulfide result may be biased high due to background laboratory levels.

L317826-4 (Report ID: 831114):
Carbon Disulfide result may be biased high due to background laboratory levels.

L317826-5 (Report ID: 831114):
Carbon Disulfide result may be biased high due to background laboratory levels.

L317826 (Report ID: 831115):
Tentatively Identified Compounds (TICS) are estimated values. TICS are calculated using an average response factor of 1 for all compounds.
SOPs: in-vocs(26)

< -Less Than	mg -Milligrams	m3 -Cubic Meters	kg -Kilograms
> -Greater Than	ug -Micrograms	l -Liters	NS -Not Specified
NA -Not Applicable	ND -Not Detected	ppm -Parts per Million	

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-3								
Type		CCV								
Spike Lot #		IH441322-1								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.916	0.895	97.7						

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-4								
Type		ICV								
Spike Lot #		IH441302-1								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	90.0 to 113.	0.344	0.338	98.3						

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-5			WG283493-7			WG283493-12		
Type		CCV			CCV			CCV		
Spike Lot #		IH441322-2			IH441322-2			IH441322-2		
Instrument		SPEC			SPEC			SPEC		
Analysis Date		May 09, 2014 11:56			May 09, 2014 11:56			May 09, 2014 11:56		
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.573	0.582	102.	0.573	0.548	95.7	0.573	0.550	96.1

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INITIAL/CONTINUING CALIBRATION REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-17								
Type		CCV								
Spike Lot #		IH441322-2								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	89.3 to 111.	0.573	0.554	96.7						

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INITIAL/CONTINUING BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317826

Lab Sample ID **Type** **Instrument** **Analysis Date** **Analysis Time**		WG283493-13 CCB SPEC 05/09/14 11:56	WG283493-18 CCB SPEC 05/09/14 11:56	WG283493-6 CCB SPEC 05/09/14 11:56	WG283493-8 CCB SPEC 05/09/14 11:56	WG283493-1 ICB SPEC 05/09/14 11:56			
	LOQ (ug)	Found (ug)	Found (ug)	Found (ug)	Found (ug)	Found (ug)			
Hydrogen Sulfide	1.2	<1.2	<1.2	<1.2	<1.2	<1.2			

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DETECTION LIMIT STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-2								
Type		DLS								
Spike Lot #		IH441322-3								
Instrument		SPEC								
Analysis Date		May 09, 2014 11:56								
	Limits (%)	True Value (ug/mL)	Found (ug/mL)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
Hydrogen Sulfide	70.0 to 130.	0.115	0.105	92.1						

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METHOD BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317826

Lab Sample ID **Type** **Instrument** **Analysis Date** **Analysis Time**		WG283493-14 MBLANK SPEC 05/09/14 11:56	WG283493-9 MBLANK SPEC 05/09/14 11:56						
	LOQ (ug)	Found (ug)	Found (ug)						
Hydrogen Sulfide	1.2	<1.2	<1.2						

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BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-10			WG283493-11				
Type		BS			BSD				
Spike Lot #		21559			21559				
Instrument		SPEC			SPEC				
Analysis Date		May 09, 2014 11:56			May 09, 2014 11:56				
	Limits (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	RPD	RPD Limits
Hydrogen Sulfide	88.6 to 116.	0.573	0.569	99.3	0.573	0.562	98.1	1.22	-10.0 to 10.0

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BLANK SPIKE/BLANK SPIKE DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283493-15			WG283493-16				
Type		BS			BSD				
Spike Lot #		21559			21559				
Instrument		SPEC			SPEC				
Analysis Date		May 09, 2014 11:56			May 09, 2014 11:56				
	Limits (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	True Value (ug/ml)	Found (ug/ml)	Recovery (%)	RPD	RPD Limits
Hydrogen Sulfide	88.6 to 116.	0.573	0.555	96.9	0.573	0.548	95.7	1.25	-10.0 to 10.0

GC/MS QA-QC Check Report

Tune File : [redacted]
Tune Time : 05/08/14 09:17
Daily Calibration File : [redacted]
Internal Standard Areas: 250651 1105241 887467

Sample	Client ID	File	Surr%	Acquired on	Internal Standard Responses		
WG283362-5	Continuing Verifier	F0508402	109	05/08/14 10:00	250651	1105241	887467
WG283362-2	Lab Control Spike	F0508404	107	05/08/14 11:23	240786	1029644	829883
WG283362-3	LCS Duplicate	F0508405	114	05/08/14 12:09	253011	1065131	874469
WG283362-4	DLS	F0508406	113	05/08/14 12:50	245641	944694	760853
WG283362-1	Method Blank	F0508407	115	05/08/14 13:31	234409	941418	731657
WG283362-6	Continuing Verifier	F0508414	112	05/08/14 18:42	229683	966695	802743
WG283362-7	Continuing Verifier	F0508424	116	05/09/14 01:41	220437	906338	733337
L317826-1	LYVA0503MC001	F0508425	114	05/09/14 02:23	225628	926711	712195
L317826-2	LYVA0503MC002	F0508426	110	05/09/14 03:04	217064	881294	679367
L317826-3	LYVA0503MC003	F0508427	108	05/09/14 03:46	223530	962409	768506
L317826-4	LYVA0503MC004	F0508428	115	05/09/14 04:28	216168	908597	708905
L317826-5	LYVA0503MC005	F0508429	110	05/09/14 05:09	224224	953971	724550
WG283362-8	Continuing Verifier	F0508430	113	05/09/14 05:52	216813	901147	725211

* = Value outside limits Surrogate Limits = 80 - 120 Internal Standard Limits = +/- 40%

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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283362-5			WG283362-6			WG283362-7		
Type		CCV			CCV			CCV		
Spike Lot #		IH437422			IH437422			IH437422		
Instrument		MS F			MS F			MS F		
Analysis Date		May 08, 2014 10:00			May 08, 2014 18:42			May 09, 2014 01:41		
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)
1,1,1-Trichloroethane	70.0 to 130.	50.0	44.6	89.3	50.0	47.6	95.3	50.0	49.0	98.0
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	42.3	84.6	50.0	42.7	85.3	50.0	43.0	86.0
1,1,2-Trichloroethane	70.0 to 130.	50.0	49.3	98.5	50.0	48.1	96.3	50.0	49.3	98.6
1,1-Dichloroethane	70.0 to 130.	50.0	49.8	99.6	50.0	47.0	94.1	50.0	48.3	96.6
1,1-Dichloroethene	70.0 to 130.	50.0	49.2	98.4	50.0	47.1	94.2	50.0	47.3	94.6
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	42.5	85.0	50.0	43.2	86.4	50.0	43.9	87.8
1,2-Dibromoethane	70.0 to 130.	50.0	45.6	91.1	50.0	43.5	87.1	50.0	46.7	93.3
1,2-Dichlorobenzene	70.0 to 130.	50.0	44.9	89.9	50.0	44.3	88.5	50.0	43.6	87.2
1,2-Dichloroethane	70.0 to 130.	50.0	52.4	105.	50.0	50.9	102.	50.0	52.7	105.
1,2-Dichloropropane	70.0 to 130.	50.0	49.8	99.6	50.0	46.4	92.8	50.0	48.8	97.7
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	42.2	84.4	50.0	41.6	83.2	50.0	42.2	84.3
1,3-Butadiene	70.0 to 130.	50.0	52.8	106.	50.0	46.4	92.9	50.0	47.2	94.4
1,3-Dichlorobenzene	70.0 to 130.	50.0	44.5	89.0	50.0	43.8	87.5	50.0	45.2	90.3
1,4-Dichlorobenzene	70.0 to 130.	50.0	46.6	93.2	50.0	44.1	88.2	50.0	44.1	88.2
1,4-Dioxane	70.0 to 130.	50.0	44.3	88.6	50.0	46.6	93.2	50.0	48.6	97.2
2,2,4-Trimethylpentane	70.0 to 130.	50.0	46.1	92.2	50.0	45.9	91.8	50.0	48.9	97.7
4-Ethyltoluene	70.0 to 130.	50.0	40.9	81.9	50.0	41.0	82.0	50.0	43.1	86.3
Acetone	70.0 to 130.	50.0	50.0	100.	50.0	47.0	94.1	50.0	47.6	95.2
Allyl Chloride	70.0 to 130.	50.0	49.8	99.5	50.0	46.8	93.6	50.0	48.4	96.8
Benzene	70.0 to 130.	50.0	47.0	94.1	50.0	47.0	94.0	50.0	47.7	95.4
Benzyl Chloride	70.0 to 130.	50.0	43.4	86.7	50.0	43.9	87.9	50.0	45.8	91.5
Bromodichloromethane	70.0 to 130.	50.0	47.1	94.2	50.0	47.0	93.9	50.0	49.3	98.6
Bromoform	70.0 to 130.	50.0	48.0	96.0	50.0	45.7	91.3	50.0	47.0	94.0
Bromomethane	70.0 to 130.	50.0	51.1	102.	50.0	46.8	93.6	50.0	47.9	95.7
Carbon Disulfide	70.0 to 130.	50.0	49.7	99.3	50.0	45.4	90.9	50.0	46.9	93.7
Carbon Tetrachloride	70.0 to 130.	50.0	45.0	90.0	50.0	47.2	94.5	50.0	49.3	98.7
Chlorobenzene	70.0 to 130.	50.0	43.6	87.2	50.0	42.9	85.8	50.0	44.0	88.0
Chloroethane	70.0 to 130.	50.0	49.0	98.0	50.0	45.4	90.9	50.0	46.9	93.8
Chloroform	70.0 to 130.	50.0	50.4	101.	50.0	49.3	98.7	50.0	49.8	99.6
Chloromethane	70.0 to 130.	50.0	52.1	104.	50.0	44.6	89.3	50.0	46.3	92.5
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	50.1	100.	50.0	48.3	96.5	50.0	48.1	96.1
cis-1,3-Dichloropropene	70.0 to 130.	50.0	48.3	96.5	50.0	48.3	96.5	50.0	48.9	97.9
Cyclohexane	70.0 to 130.	50.0	43.2	86.5	50.0	44.6	89.2	50.0	46.4	92.7
Dibromochloromethane	70.0 to 130.	50.0	46.9	93.7	50.0	44.8	89.5	50.0	47.6	95.2
Ethyl Acetate	70.0 to 130.	50.0	49.7	99.5	50.0	47.9	95.8	50.0	47.6	95.3
Ethylbenzene	70.0 to 130.	50.0	42.1	84.2	50.0	40.3	80.6	50.0	42.9	85.8
Freon-11	70.0 to 130.	50.0	51.1	102.	50.0	51.9	104.	50.0	51.1	102.
Freon-113	70.0 to 130.	50.0	49.6	99.2	50.0	47.6	95.1	50.0	47.3	94.6

Galson Laboratories
6601 Kirkville Rd. E. Syracuse,NY 13057

ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Freon-114	70.0 to 130.	50.0	52.5	105.	50.0	47.3	94.7	50.0	47.6	95.3
Freon-12	70.0 to 130.	50.0	49.9	99.8	50.0	48.8	97.6	50.0	49.3	98.5
Heptane	70.0 to 130.	50.0	45.4	90.8	50.0	46.0	92.0	50.0	49.3	98.5
Hexane	70.0 to 130.	50.0	49.1	98.1	50.0	46.1	92.1	50.0	47.9	95.9
Isopropyl Alcohol	70.0 to 130.	50.0	48.3	96.6	50.0	47.6	95.2	50.0	47.7	95.4
Methyl Butyl Ketone	70.0 to 130.	50.0	42.0	84.1	50.0	42.9	85.7	50.0	45.3	90.6
Methyl Ethyl Ketone	70.0 to 130.	50.0	49.8	99.5	50.0	46.8	93.6	50.0	47.8	95.7
Methyl Isobutyl Ketone	70.0 to 130.	50.0	40.6	81.3	50.0	40.8	81.5	50.0	43.5	86.9
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	49.5	98.9	50.0	47.0	94.0	50.0	46.1	92.2
Methylene Chloride	70.0 to 130.	50.0	48.1	96.2	50.0	45.6	91.1	50.0	45.8	91.5
o-Xylene	70.0 to 130.	50.0	42.4	84.8	50.0	42.6	85.2	50.0	42.9	85.8
Propylene	70.0 to 130.	50.0	49.9	99.8	50.0	45.6	91.1	50.0	46.6	93.3
Styrene	70.0 to 130.	50.0	44.9	89.8	50.0	41.5	83.0	50.0	44.2	88.4
Tetrachloroethylene	70.0 to 130.	50.0	45.0	90.0	50.0	43.1	86.1	50.0	44.6	89.2
Tetrahydrofuran	70.0 to 130.	50.0	48.7	97.5	50.0	46.0	91.9	50.0	46.7	93.3
Toluene	70.0 to 130.	50.0	45.6	91.1	50.0	42.4	84.8	50.0	44.7	89.4
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	49.5	99.0	50.0	47.4	94.7	50.0	47.8	95.6
trans-1,3-Dichloropropene	70.0 to 130.	50.0	49.2	98.3	50.0	49.7	99.3	50.0	49.9	99.7
Trichloroethylene	70.0 to 130.	50.0	43.9	87.8	50.0	45.5	91.0	50.0	46.6	93.2
Vinyl Acetate	70.0 to 130.	50.0	49.3	98.5	50.0	44.4	88.9	50.0	45.5	91.1
Vinyl Bromide	70.0 to 130.	50.0	51.5	103.	50.0	48.1	96.3	50.0	48.3	96.6
Vinyl Chloride	70.0 to 130.	50.0	51.7	103.	50.0	46.0	92.0	50.0	46.6	93.1

Galson Laboratories
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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283362-8								
Type		CCV								
Spike Lot #		IH437422								
Instrument		MS F								
Analysis Date		May 09, 2014 05:52								
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
1,1,1-Trichloroethane	70.0 to 130.	50.0	50.1	100.						
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	45.4	90.9						
1,1,2-Trichloroethane	70.0 to 130.	50.0	52.8	106.						
1,1-Dichloroethane	70.0 to 130.	50.0	49.2	98.5						
1,1-Dichloroethene	70.0 to 130.	50.0	48.9	97.9						
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	44.6	89.2						
1,2-Dibromoethane	70.0 to 130.	50.0	48.7	97.5						
1,2-Dichlorobenzene	70.0 to 130.	50.0	44.2	88.3						
1,2-Dichloroethane	70.0 to 130.	50.0	55.1	110.						
1,2-Dichloropropane	70.0 to 130.	50.0	51.9	104.						
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	45.1	90.3						
1,3-Butadiene	70.0 to 130.	50.0	49.4	98.8						
1,3-Dichlorobenzene	70.0 to 130.	50.0	45.0	90.0						
1,4-Dichlorobenzene	70.0 to 130.	50.0	45.0	89.9						
1,4-Dioxane	70.0 to 130.	50.0	47.3	94.6						
2,2,4-Trimethylpentane	70.0 to 130.	50.0	49.0	98.0						
4-Ethyltoluene	70.0 to 130.	50.0	44.2	88.3						
Acetone	70.0 to 130.	50.0	52.2	104.						
Allyl Chloride	70.0 to 130.	50.0	50.0	99.9						
Benzene	70.0 to 130.	50.0	49.4	98.7						
Benzyl Chloride	70.0 to 130.	50.0	46.2	92.4						
Bromodichloromethane	70.0 to 130.	50.0	50.5	101.						
Bromoform	70.0 to 130.	50.0	48.4	96.7						
Bromomethane	70.0 to 130.	50.0	49.2	98.5						
Carbon Disulfide	70.0 to 130.	50.0	49.2	98.5						
Carbon Tetrachloride	70.0 to 130.	50.0	49.9	99.9						
Chlorobenzene	70.0 to 130.	50.0	46.6	93.2						
Chloroethane	70.0 to 130.	50.0	47.0	94.1						
Chloroform	70.0 to 130.	50.0	51.2	102.						
Chloromethane	70.0 to 130.	50.0	47.3	94.6						
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	50.5	101.						
cis-1,3-Dichloropropene	70.0 to 130.	50.0	51.9	104.						
Cyclohexane	70.0 to 130.	50.0	47.4	94.8						
Dibromochloromethane	70.0 to 130.	50.0	47.7	95.3						
Ethyl Acetate	70.0 to 130.	50.0	50.5	101.						
Ethylbenzene	70.0 to 130.	50.0	45.6	91.3						
Freon-11	70.0 to 130.	50.0	52.3	105.						
Freon-113	70.0 to 130.	50.0	49.3	98.6						

Galson Laboratories
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ASTD 50ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Freon-114	70.0 to 130.	50.0	50.3	101.		
Freon-12	70.0 to 130.	50.0	50.3	101.		
Heptane	70.0 to 130.	50.0	49.6	99.2		
Hexane	70.0 to 130.	50.0	48.5	97.0		
Isopropyl Alcohol	70.0 to 130.	50.0	49.9	99.9		
Methyl Butyl Ketone	70.0 to 130.	50.0	46.0	92.1		
Methyl Ethyl Ketone	70.0 to 130.	50.0	50.0	100.		
Methyl Isobutyl Ketone	70.0 to 130.	50.0	44.9	89.7		
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	50.6	101.		
Methylene Chloride	70.0 to 130.	50.0	48.6	97.2		
o-Xylene	70.0 to 130.	50.0	46.4	92.7		
Propylene	70.0 to 130.	50.0	47.4	94.8		
Styrene	70.0 to 130.	50.0	47.1	94.3		
Tetrachloroethylene	70.0 to 130.	50.0	44.9	89.9		
Tetrahydrofuran	70.0 to 130.	50.0	49.8	99.7		
Toluene	70.0 to 130.	50.0	47.7	95.4		
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	49.0	97.9		
trans-1,3-Dichloropropene	70.0 to 130.	50.0	53.3	107.		
Trichloroethylene	70.0 to 130.	50.0	47.2	94.4		
Vinyl Acetate	70.0 to 130.	50.0	50.5	101.		
Vinyl Bromide	70.0 to 130.	50.0	50.0	99.9		
Vinyl Chloride	70.0 to 130.	50.0	48.0	96.1		

Galson Laboratories
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ASTD 5ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283362-4								
Type		DLS								
Spike Lot #		IH437283								
Instrument		MS F								
Analysis Date		May 08, 2014 12:50								
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value ()	Found ()	Recovery (%)	True Value ()	Found ()	Recovery (%)
1,1,1-Trichloroethane	60.0 to 140.	5.00	4.97	99.4						
1,1,2,2-Tetrachloroethane	60.0 to 140.	5.00	4.30	86.0						
1,1,2-Trichloroethane	60.0 to 140.	5.00	4.69	93.8						
1,1-Dichloroethane	60.0 to 140.	5.00	4.74	94.8						
1,1-Dichloroethene	60.0 to 140.	5.00	4.77	95.4						
1,2,4-Trimethylbenzene	60.0 to 140.	5.00	4.75	95.0						
1,2-Dibromoethane	60.0 to 140.	5.00	4.14	82.8						
1,2-Dichlorobenzene	60.0 to 140.	5.00	4.75	95.0						
1,2-Dichloroethane	60.0 to 140.	5.00	4.72	94.4						
1,2-Dichloropropane	60.0 to 140.	5.00	4.62	92.4						
1,3,5-Trimethylbenzene	60.0 to 140.	5.00	4.69	93.8						
1,3-Butadiene	60.0 to 140.	5.00	4.76	95.2						
1,3-Dichlorobenzene	60.0 to 140.	5.00	4.95	99.0						
1,4-Dichlorobenzene	60.0 to 140.	5.00	4.64	92.8						
1,4-Dioxane	60.0 to 140.	5.00	5.49	110.						
2,2,4-Trimethylpentane	60.0 to 140.	5.00	4.87	97.4						
4-Ethyltoluene	60.0 to 140.	5.00	4.61	92.2						
Acetone	60.0 to 140.	5.00	6.36	127.						
Allyl Chloride	60.0 to 140.	5.00	5.04	101.						
Benzene	60.0 to 140.	5.00	4.77	95.4						
Benzyl Chloride	60.0 to 140.	5.00	3.95	79.0						
Bromodichloromethane	60.0 to 140.	5.00	4.79	95.8						
Bromoform	60.0 to 140.	5.00	4.27	85.4						
Bromomethane	60.0 to 140.	5.00	4.81	96.2						
Carbon Disulfide	60.0 to 140.	5.00	4.87	97.4						
Carbon Tetrachloride	60.0 to 140.	5.00	4.98	99.6						
Chlorobenzene	60.0 to 140.	5.00	4.37	87.4						
Chloroethane	60.0 to 140.	5.00	4.69	93.8						
Chloroform	60.0 to 140.	5.00	4.71	94.2						
Chloromethane	60.0 to 140.	5.00	4.78	95.6						
cis-1,2-Dichloroethylene	60.0 to 140.	5.00	4.60	92.0						
cis-1,3-Dichloropropene	60.0 to 140.	5.00	4.42	88.4						
Cyclohexane	60.0 to 140.	5.00	4.99	99.8						
Dibromochloromethane	60.0 to 140.	5.00	4.32	86.4						
Ethyl Acetate	60.0 to 140.	5.00	4.60	92.0						
Ethylbenzene	60.0 to 140.	5.00	4.39	87.8						
Freon-11	60.0 to 140.	5.00	5.15	103.						
Freon-113	60.0 to 140.	5.00	4.82	96.4						

Galson Laboratories
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ASTD 5ppb STANDARD RECOVERY REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Freon-114	60.0 to 140.	5.00	4.97	99.4		
Freon-12	60.0 to 140.	5.00	4.88	97.6		
Heptane	60.0 to 140.	5.00	4.94	98.8		
Hexane	60.0 to 140.	5.00	4.60	92.0		
Isopropyl Alcohol	60.0 to 140.	5.00	5.83	117.		
Methyl Butyl Ketone	60.0 to 140.	5.00	4.86	97.2		
Methyl Ethyl Ketone	60.0 to 140.	5.00	5.40	108.		
Methyl Isobutyl Ketone	60.0 to 140.	5.00	4.93	98.6		
Methyl Tert-Butyl Ether	60.0 to 140.	5.00	4.88	97.6		
Methylene Chloride	60.0 to 140.	5.00	5.02	100.		
o-Xylene	60.0 to 140.	5.00	4.53	90.6		
Propylene	60.0 to 140.	5.00	4.91	98.2		
Styrene	60.0 to 140.	5.00	4.28	85.6		
Tetrachloroethylene	60.0 to 140.	5.00	4.85	97.0		
Tetrahydrofuran	60.0 to 140.	5.00	5.47	109.		
Toluene	60.0 to 140.	5.00	4.18	83.6		
Trans-1,2-Dichloroethene	60.0 to 140.	5.00	4.65	93.0		
trans-1,3-Dichloropropene	60.0 to 140.	5.00	4.23	84.6		
Trichloroethylene	60.0 to 140.	5.00	5.09	102.		
Vinyl Acetate	60.0 to 140.	5.00	4.96	99.2		
Vinyl Bromide	60.0 to 140.	5.00	4.89	97.8		
Vinyl Chloride	60.0 to 140.	5.00	4.82	96.4		

Galson Laboratories
6601 Kirkville Rd. E. Syracuse,NY 13057

LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Lab Sample ID		WG283362-2			WG283362-3				
Type		LCS			LCSD				
Spike Lot #		IH434422			IH434422				
Instrument		MS F			MS F				
Analysis Date		May 08, 2014 11:23			May 08, 2014 12:09				
	Limits (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	True Value (ppbv)	Found (ppbv)	Recovery (%)	RPD	RPD Limits
1,1,1-Trichloroethane	70.0 to 130.	50.0	49.9	99.8	50.0	47.3	94.6	5.35	-25.0 to 25.0
1,1,2,2-Tetrachloroethane	70.0 to 130.	50.0	47.4	94.8	50.0	44.0	88.0	7.48	-25.0 to 25.0
1,1,2-Trichloroethane	70.0 to 130.	50.0	54.4	109.	50.0	49.4	98.8	9.69	-25.0 to 25.0
1,1-Dichloroethane	70.0 to 130.	50.0	52.4	105.	50.0	49.0	98.1	6.63	-25.0 to 25.0
1,1-Dichloroethene	70.0 to 130.	50.0	54.1	108.	50.0	48.5	97.0	10.9	-25.0 to 25.0
1,2,4-Trimethylbenzene	70.0 to 130.	50.0	48.1	96.1	50.0	45.6	91.1	5.34	-25.0 to 25.0
1,2-Dibromoethane	70.0 to 130.	50.0	49.1	98.2	50.0	44.4	88.7	10.2	-25.0 to 25.0
1,2-Dichlorobenzene	70.0 to 130.	50.0	48.9	97.9	50.0	44.7	89.4	9.01	-25.0 to 25.0
1,2-Dichloroethane	70.0 to 130.	50.0	56.0	112.	50.0	51.1	102.	9.02	-25.0 to 25.0
1,2-Dichloropropane	70.0 to 130.	50.0	53.2	106.	50.0	48.3	96.6	9.60	-25.0 to 25.0
1,3,5-Trimethylbenzene	70.0 to 130.	50.0	45.9	91.7	50.0	44.0	87.9	4.25	-25.0 to 25.0
1,3-Butadiene	70.0 to 130.	50.0	56.4	113.	50.0	49.4	98.8	13.3	-25.0 to 25.0
1,3-Dichlorobenzene	70.0 to 130.	50.0	50.6	101.	50.0	45.3	90.5	11.1	-25.0 to 25.0
1,4-Dichlorobenzene	70.0 to 130.	50.0	50.8	102.	50.0	46.4	92.8	8.96	-25.0 to 25.0
1,4-Dioxane	70.0 to 130.	50.0	44.9	89.8	50.0	41.3	82.5	8.45	-25.0 to 25.0
2,2,4-Trimethylpentane	70.0 to 130.	50.0	50.3	101.	50.0	47.5	95.0	5.77	-25.0 to 25.0
4-Ethyltoluene	70.0 to 130.	50.0	45.4	90.8	50.0	42.6	85.2	6.34	-25.0 to 25.0
Acetone	70.0 to 130.	50.0	52.4	105.	50.0	47.1	94.1	10.6	-25.0 to 25.0
Allyl Chloride	70.0 to 130.	50.0	51.4	103.	50.0	47.0	93.9	9.11	-25.0 to 25.0
Benzene	70.0 to 130.	50.0	51.7	103.	50.0	49.6	99.2	4.07	-25.0 to 25.0
Benzyl Chloride	70.0 to 130.	50.0	50.4	101.	50.0	46.1	92.2	8.99	-25.0 to 25.0
Bromodichloromethane	70.0 to 130.	50.0	51.9	104.	50.0	47.5	95.0	8.89	-25.0 to 25.0
Bromoform	70.0 to 130.	50.0	51.0	102.	50.0	45.8	91.7	10.7	-25.0 to 25.0
Bromomethane	70.0 to 130.	50.0	55.8	112.	50.0	49.9	99.9	11.1	-25.0 to 25.0
Carbon Disulfide	70.0 to 130.	50.0	55.8	112.	50.0	50.1	100.	10.6	-25.0 to 25.0
Carbon Tetrachloride	70.0 to 130.	50.0	50.6	101.	50.0	47.4	94.7	6.54	-25.0 to 25.0
Chlorobenzene	70.0 to 130.	50.0	47.8	95.6	50.0	44.2	88.3	7.94	-25.0 to 25.0
Chloroethane	70.0 to 130.	50.0	53.1	106.	50.0	46.2	92.4	13.8	-25.0 to 25.0
Chloroform	70.0 to 130.	50.0	53.3	107.	50.0	49.4	98.7	7.67	-25.0 to 25.0
Chloromethane	70.0 to 130.	50.0	53.2	106.	50.0	49.7	99.4	6.76	-25.0 to 25.0
cis-1,2-Dichloroethylene	70.0 to 130.	50.0	52.0	104.	50.0	48.5	97.0	6.83	-25.0 to 25.0
Cyclohexane	70.0 to 130.	50.0	47.7	95.3	50.0	44.5	89.1	6.75	-25.0 to 25.0
Dibromochloromethane	70.0 to 130.	50.0	50.0	100.	50.0	46.2	92.5	7.83	-25.0 to 25.0
Ethyl Acetate	70.0 to 130.	50.0	53.8	108.	50.0	46.5	93.0	14.6	-25.0 to 25.0
Ethylbenzene	70.0 to 130.	50.0	48.7	97.4	50.0	42.2	84.5	14.2	-25.0 to 25.0
Freon-11	70.0 to 130.	50.0	55.2	110.	50.0	49.0	97.9	12.0	-25.0 to 25.0
Freon-113	70.0 to 130.	50.0	52.1	104.	50.0	48.1	96.1	8.07	-25.0 to 25.0
Freon-114	70.0 to 130.	50.0	50.7	101.	50.0	44.7	89.4	12.5	-25.0 to 25.0

Galson Laboratories
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LCS/LCS DUPLICATE REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Freon-12	70.0 to 130.	50.0	52.7	105.	50.0	50.0	100.	5.18	-25.0 to 25.0
Heptane	70.0 to 130.	50.0	49.2	98.4	50.0	47.4	94.9	3.60	-25.0 to 25.0
Hexane	70.0 to 130.	50.0	51.2	102.	50.0	48.7	97.5	4.83	-25.0 to 25.0
Isopropyl Alcohol	70.0 to 130.	50.0	48.8	97.6	50.0	44.0	88.0	10.3	-25.0 to 25.0
Methyl Butyl Ketone	70.0 to 130.	50.0	46.9	93.7	50.0	41.1	82.3	13.0	-25.0 to 25.0
Methyl Ethyl Ketone	70.0 to 130.	50.0	53.7	107.	50.0	48.4	96.7	10.4	-25.0 to 25.0
Methyl Isobutyl Ketone	70.0 to 130.	50.0	46.8	93.7	50.0	41.8	83.6	11.4	-25.0 to 25.0
Methyl Tert-Butyl Ether	70.0 to 130.	50.0	53.0	106.	50.0	46.4	92.8	13.2	-25.0 to 25.0
Methylene Chloride	70.0 to 130.	50.0	51.0	102.	50.0	47.2	94.4	7.70	-25.0 to 25.0
o-Xylene	70.0 to 130.	50.0	48.7	97.5	50.0	44.6	89.3	8.80	-25.0 to 25.0
Propylene	70.0 to 130.	50.0	57.0	114.	50.0	56.3	113.	1.18	-25.0 to 25.0
Styrene	70.0 to 130.	50.0	48.3	96.7	50.0	43.9	87.8	9.60	-25.0 to 25.0
Tetrachloroethylene	70.0 to 130.	50.0	48.1	96.3	50.0	44.2	88.5	8.45	-25.0 to 25.0
Tetrahydrofuran	70.0 to 130.	50.0	52.6	105.	50.0	47.5	94.9	10.3	-25.0 to 25.0
Toluene	70.0 to 130.	50.0	50.0	99.9	50.0	45.1	90.1	10.3	-25.0 to 25.0
Trans-1,2-Dichloroethene	70.0 to 130.	50.0	52.0	104.	50.0	48.5	97.0	6.91	-25.0 to 25.0
trans-1,3-Dichloropropene	70.0 to 130.	50.0	54.5	109.	50.0	51.0	102.	6.67	-25.0 to 25.0
Trichloroethylene	70.0 to 130.	50.0	50.1	100.	50.0	49.6	99.1	1.04	-25.0 to 25.0
Vinyl Acetate	70.0 to 130.	50.0	48.3	96.5	50.0	41.3	82.6	15.5	-25.0 to 25.0
Vinyl Bromide	70.0 to 130.	50.0	55.5	111.	50.0	49.8	99.6	10.9	-25.0 to 25.0
Vinyl Chloride	70.0 to 130.	50.0	53.2	106.	50.0	48.4	96.9	9.39	-25.0 to 25.0

Galson Laboratories
6601 Kirkville Rd. E. Syracuse,NY 13057

METHOD BLANK REPORT

Client :CSX Transportation
Account No:15330
Login No. :L317826

Lab Sample ID			WG283362-1							
Type			BLANK							
Instrument			MS F							
Analysis Date			05/08/14							
Analysis Time			13:31							
	MDL (ppbv)	LOQ (ppbv)	Found (ppbv)	Qual						
1,1,1-Trichloroethane	2	5.0	ND	U						
1,1,2,2-Tetrachloroethane	2	5.0	ND	U						
1,1,2-Trichloroethane	2	5.0	ND	U						
1,1-Dichloroethane	2	5.0	ND	U						
1,1-Dichloroethene	2	5.0	ND	U						
1,2,4-Trimethylbenzene	2	5.0	ND	U						
1,2-Dibromoethane	2	5.0	ND	U						
1,2-Dichlorobenzene	2	5.0	ND	U						
1,2-Dichloroethane	2	5.0	ND	U						
1,2-Dichloropropane	2	5.0	ND	U						
1,3,5-Trimethylbenzene	2	5.0	ND	U						
1,3-Butadiene	2	5.0	ND	U						
1,3-Dichlorobenzene	2	5.0	ND	U						
1,4-Dichlorobenzene	2	5.0	ND	U						
1,4-Dioxane	2	20.	ND	U						
2,2,4-Trimethylpentane	2	5.0	ND	U						
4-Ethyltoluene	2	5.0	ND	U						
Acetone	25	25.	ND	U						
Allyl Chloride	2	5.0	ND	U						
Benzene	2	5.0	ND	U						
Benzyl Chloride	2	5.0	ND	U						
Bromodichloromethane	2	5.0	ND	U						
Bromoform	2	5.0	ND	U						
Bromomethane	2	5.0	ND	U						
Carbon Disulfide	2	10.	ND	U						
Carbon Tetrachloride	2	5.0	ND	U						
Chlorobenzene	2	5.0	ND	U						
Chloroethane	2	5.0	ND	U						
Chloroform	2	5.0	ND	U						
Chloromethane	2	5.0	ND	U						
cis-1,2-Dichloroethylene	2	5.0	ND	U						
cis-1,3-Dichloropropene	2	5.0	ND	U						
Cyclohexane	2	5.0	ND	U						
Dibromochloromethane	2	5.0	ND	U						
Ethyl Acetate	2	5.0	ND	U						
Ethylbenzene	2	5.0	ND	U						
Freon-11	2	5.0	ND	U						
Freon-113	2	5.0	ND	U						

Galson Laboratories
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METHOD BLANK REPORT

Client : CSX Transportation
Account No: 15330
Login No. : L317826

Freon-114	2	5.0	ND	U						
Freon-12	2	5.0	ND	U						
Heptane	2	5.0	ND	U						
Hexane	2	5.0	ND	U						
Isopropyl Alcohol	25	25.	ND	U						
m & p-xylene	3	10.	ND	U						
Methyl Butyl Ketone	2	20.	ND	U						
Methyl Ethyl Ketone	2	5.0	ND	U						
Methyl Isobutyl Ketone	2	20.	ND	U						
Methyl Tert-Butyl Ether	2	5.0	ND	U						
Methylene Chloride	2	5.0	ND	U						
o-Xylene	2	5.0	ND	U						
Propylene	2	5.0	ND	U						
Styrene	2	5.0	ND	U						
Tetrachloroethylene	2	5.0	ND	U						
Tetrahydrofuran	2	5.0	ND	U						
Toluene	2	5.0	ND	U						
Trans-1,2-Dichloroethene	2	5.0	ND	U						
trans-1,3-Dichloropropene	2	5.0	ND	U						
Trichloroethylene	2	5.0	ND	U						
Vinyl Acetate	2	5.0	ND	U						
Vinyl Bromide	2	5.0	ND	U						
Vinyl Chloride	2	5.0	ND	U						

5120 North Shore Drive
North Little Rock, AR 72118
Phone: (501) 801-8500
Fax: (501) 801-8501
Website: www.cteh.com

Center for Toxicology and Environmental Health L.L.C.
SAMPLE CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

	Send Report To:	Send Invoice To:
Name	John Wilson	Accounts Payable
Company	CTEH	CTEH
Address	5120 North Shore Drive North Little Rock, AR 72118	5120 North Shore Drive North Little Rock, AR 72118
Phone	(501)801-8500	(501)801-8500
Fax	(501)801-8501	(501)801-8501
e-mail	labresults@cteh.com [redacted]	lraccounting@cteh.com

CTEH Project #: 106-190

Turnaround Requested:
Same Day __Next Day (24 hour) ✓ Normal
__Other (Specify) _____

Complete Data Packet Requested ☑ Yes ☐ No

Lab Contact Information:
Galson Laboratories
6601 Kirkville Road
E. Syracuse, NY 13057

Client Sample Identification	Other Sample Identification	Sample Size	Units (Check one) L / cm² / MIN	Sample Date	Sample Time (for non-air samples)	Initials	EPA TO-15 + TICs (VOCs+TICs)	Matrix
LYVA0503MC001	WA432	1	L	5/3/14	—	dl	X	A
LYVA0503MC002	WA352	1	L	5/3/14	—	dl	X	A
LYVA0503MC003	WC102	1	L	5/3/14	—	dl	X	A
LYVA0503MC004	WA572	1	L	5/3/14	—	dl	X	A
LYVA0503MC005	WA834	1	L	5/3/14	—	dl	X	A
~~LYVA0503MC006~~ KP		1	L	5/3/14	—	KP	X	A

804577741387
Date:05/06/14
Shipper:FEDEX
Initials:ctk
Prep:PSY303679

Matrix
A = air
B = bulk
S = soil
SW = wipe
T = tape
W = water

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
[redacted]	5/4/14	Cameron Kennedy [redacted]	5/6/14 1234

Rec'd intact & all accounted for? Yes or No CM
Rec'd w/custody seals intact? Yes or No NA
Rec'd in light sensitive packaging? Yes or No NA
Rec'd with ice pack? Yes or No CM
Rec'd temperature compliant? Yes or No CM

5120 North Shore Drive
North Little Rock, AR 72118
Phone: (501) 801-8500
Fax: (501) 801-8501
Website: www.cteh.com

Center for Toxicology and Environmental Health L.L.C.
SAMPLE CHAIN OF CUSTODY AND ANALYSIS REQUEST FORM

	Send Report To:	Send Invoice To:
Name	John Wilson	Accounts Payable
Company	CTEH	CTEH
Address	2000 Anders Lane Kemah, Texas 77565	5120 North Shore Drive North Little Rock, AR 72118
Phone	(281)535-2834	(501)801-8500
Fax	(281)535-0232	(501)801-8501
e-mail	labresults@cteh.com [redacted]	lraccounting@cteh.com

CTEH Project #: 106-190

Turnaround Requested:
Same Day __Next Day (24 hour) ✓Normal
__Other (Specify) _____

Complete Data Packet Requested ☑Yes ☐No

Lab Contact Information:
Galson Laboratories
6601 Kirkville Road
E. Syracuse, NY 13057

Client Sample Identification	Other Sample Identification	Sample Size	Units (Check one) X L / __cm²	Sample Date	Sample Time (for non-air samples)	Initials	WET SOP - 13	Matrix (A = air, B = bulk, S = soil, SW = wipe, T = tape, W = water)
LYVA 0503 H2S 001	Student 1440	1440	mins	5/3/14	—	a	X	A
LYVA 0503 H2S 002		1440	mins	5/3/14	—	a	X	A
LYVA 0503 H2S 003		1440	mins	5/3/14	—	a	X	A
LYVA 0503 H2S 004		1445	mins	5/3/14	—	a	X	A
LYVA 0503 H2S 005		1445	mins	5/3/14	—	a	X	A
~~LYVA 0503 H2S 006~~				~~5/3/14~~	—	VR		A
LYVA 0503 H2S 007	Blank	—	—	5/3/14	—	a	X	A

VR

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
[redacted]	5/4/14		
		Cameron Kennedy [redacted]	5/6/14 1234

Rec'd intact & all accounted for? (Yes) or No CM
Rec'd w/custody seals intact? Yes or No NA
Rec'd in light sensitive packaging? Yes or No NA
Rec'd with ice pack? Yes or (No) CM
Rec'd temperature compliant? (Yes) or No CM