



Sherwin Williams Facility Fire
Garland, TX

Preliminary Environmental Sampling and
Analysis Plan (SAP)

Version 1.4

Prepared on Behalf of:

Miller Environmental

Prepared By:



CTEH, LLC

5120 Northshore Drive

Little Rock, AR 72118

501-801-8500

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	Name/Organization	Signature	Date Signed
Prepared by:	Autumn Adams, CTEH		8/10/23
Reviewed by:	Jessica Chopyk, PhD, CTEH		8/10/23
Approved by:			
Approved by:			

1.0 Introduction and Purpose

This Sampling and Analysis Plan (SAP) was prepared by CTEH®, LLC. on behalf of Miller Environmental to provide environmental sampling work plans related to the Sherwin Williams Facility Fire in Garland, TX. The incident occurred on August 7, 2023. The coordinates for the approximate location of the release site are: (32.9053838, -96.6666843). The location of the incident is depicted on the Site Location Map in Appendix A.

The objectives of the environmental investigation and proposed sampling include:

1. The collection of soil samples to delineate extent and nature of potential impact related to the incident;
2. The collection of surface water (where present) samples to delineate extent and nature of potential impact related to the incident;
3. The collection of background samples to determine a baseline and develop the range of potential background concentrations for comparative purposes and to distinguish between target analytes related to this incident and non-related target analytes;
4. The collection of source product samples for comparative analysis, if needed.

2.0 Health and Safety

CTEH sampling personnel will review and adhere to the site-specific Health and Safety Plan. Sampling and documentation activities will be conducted only under weather and other environmental conditions that do not create an unsafe working environment.

3.0 Data Quality Objectives

The data collected during field activities will be used to assess potential exposures to human health and the environment to constituents potentially related to the release.

A strategic planning approach based on scientific method will be employed for data collection activities providing a systematic procedure to ensure the type, quantity and quality of data used in decision-making will be appropriate for the intended application. All samples will be submitted to the analytical laboratory for a Level II data quality package.

4.0 Soil Sampling

4.1 Soil Sampling Methodology and Analysis

Soil grab samples from each location will be collected by stainless steel spoons or hand trowels. For samples submitted in the laboratory supplied soil jars, the sample containers will be completely filled to

minimize headspace. Where applicable sampling will be in accordance with the sampling methodology outlined in US EPA Method 5035. Samples will be collected after vegetation, rocks, litter, and other non-native soil material, which may bias the sample are carefully removed. The depth below ground surface at which each sample is collected will be recorded in a log book and SIERA. Additionally, the final report will clearly state the depth at which each sample was collected.

Background samples will be collected from areas near the site that have not been impacted by any of the activities associated with onsite operations or the incident.

Samples will be submitted under strict chain-of-custody to Pace Analytical, Baton Rouge, LA and/or Pace National, Mt. Juliet TN, both NELAP accredited laboratories, for laboratory analysis as presented in Table 1. The planned analyses for soil samples are listed below in Table 1.

Table 1 Soil Sampling Summary

Analysis	Method	Sample Container	Preservative	Hold Time
Metals (RCRA-8)	US EPA 6020/7471	1 x 4 oz Glass	Ice, maintained at 4°C +/- 2 °C	180 days (Hg 28 days)
Volatile Organic Compounds (VOCs)	US EPA 5035/8260	Terracore; 2 x 40 mL VOA	Methanol; Ice, maintained at 4°C +/- 2 °C	14 days
Semi Volatile Organic Compounds (SVOCs)	US EPA 8270	1 x 4oz. Glass	Ice, maintained at 4°C +/- 2 °C	14 days
Per-and Polyfluoroalkyl Substances (PFAS)	US EPA 537m	1 x 90-120 mL HDPE	Ice, maintained at 4°C +/- 2 °C	28 days
Total Petroleum Hydrocarbons (TPH)	TX 1005	Terracore; 2 x 40 mL VOA	Ice, maintained at 4°C +/- 2 °C	14 days

4.2 Location and Frequency

Soil samples will be collected to determine whether product(s) or combustion byproducts released from this incident have impacted nearby soils.

Initially proposed soil sample locations include the following:

- immediately adjacent to the Site;
- downwind and/or down gradient of the Site;
- upwind and/or up gradient of the Site (Background)

Soil samples will be collected one time initially at each location. Subsequent samples may be collected, as required for statistical representativeness. Additional sampling locations may be added as appendices based on a review of the preliminary results and/or a change in operational areas and activities.

5.0 Surface Water Monitoring and Sampling

5.1 Surface Water Monitoring

In order to determine that water quality is maintained for the duration of response and post response/remediation activities, monitoring at various surface water sampling locations may be conducted using a Horiba multi-parameter water quality meter, or equivalent. Surface water monitoring may be conducted daily or on an as needed basis (e.g., concurrent with sample collection) and may include the following parameters:

- Temperature (°C)
- pH (0-14 standard units)
- Conductivity (Siemens/meter)
- Dissolved Oxygen (milligrams/liter)
- Turbidity (NTU)

Visual observations of product, sheen, soot, discoloration, or odor will be made at each surface water sampling location and electronically noted using a hand-held data collection device or recorded in a log dedicated to this project. The water quality meters in use on this project will be calibrated in accordance with the manufacturer's specifications.

5.2 Surface Water Sampling Methodology and Analysis

Surface water grab samples will be decanted directly into laboratory supplied sample containers and submitted to Pace Analytical, Baton Rouge, LA and/or Pace National, Mt. Juliet TN, both NELAP accredited laboratories, for laboratory analysis as presented in Table 2. Water quality parameters, including: temperature, pH, conductivity, dissolved oxygen, and turbidity may be recorded for each surface water sample. Surface water sampling may involve collection of water at various depths.

Table 2 Surface Water Sampling Summary

Analysis	Method	Sample Container	Preservative	Hold Time
Metals	US EPA 200.8	1 x 250 mL HNO ₃	Ice, maintained at 4°C +/- 2 °C	14 days (Hg 28 days)
Volatile Organic Compounds (VOCs) + AP9 + Tentatively Identified Compounds	US EPA 8260	3 x 40mL HCl VOAs	HCL to pH < 2; Ice, maintained at 4°C +/- 2 °C	14 days
Semi Volatile Organic Compounds (SVOCs) + Tentatively Identified Compounds	US EPA 8270	3 x 100 mL Amber Glass	Ice, maintained at 4°C +/- 2 °C	7 days/ 45 days
Per-and	US EPA 537m	2 x 125 mL HDPE	Ice, maintained at	28 Days

Polyfluoroalkyl Substances (PFAS)			4°C +/- 2 °C	
Total Petroleum Hydrocarbons (TPH)	TX 1005	2 x 40mL HCl VOAs	HCL to pH < 2; Ice, maintained at 4°C +/- 2 °C	14 days
Methyl Alcohol	US EPA 8015	2 x 40 mL HCl VOAs	HCL to pH < 2; Ice, maintained at 4°C +/- 2 °C	14 days
Ethylene Glycol	US EPA 8015	2 x 40 mL VOA	Ice, maintained at 4°C +/- 2 °C	14 days
Ammonia	US EPA 350.1	1 x 250 mL Plastic or Glass H ₂ SO ₄	H ₂ SO ₄ to pH < 2; Ice, maintained at 4°C +/- 2 °C	28 days
N-butyl acrylate	US EPA 8260	3 x 40 mL HCl VOA	HCL to pH < 2; Ice, maintained at 4°C +/- 2 °C	14 days

5.3 Location and Frequency

Where present, surface water samples may be collected from surrounding surface water bodies / surface water drainage features near and downstream from the Site, as well as upstream from the Site to establish background concentrations.

Additional sampling locations may be added as appendices based on a review of the preliminary results and/or a change in operational areas and activities.

Surface water samples will be collected one time initially at each location. Subsequent samples may be collected, as required for statistical representativeness.

5.4 Health-Based Screening Comparisons

As results are received, comparisons will be made between surface water sampling results and available health-based, health-protective screening levels or background concentrations, which will be used to support the delineation, extent and nature of potential impact and assess potential exposures to human health. Samples will be screened against the TCEQ's Texas Risk Reduction Program (TRRP) human health surface water health-based environmental levels (RBELs). If RBELs are not available for a chemical, surface water sampling results will be compared against, the EPA National Recommended Water Quality Criteria, the EPA Regional Screening Levels (RSLs) for surface water (recreator), or the Tier 1 residential class 3 groundwater Protective Concentration Levels (PCLs) (GW_{Class3}).

6.0 Sample Handling Procedures

Samples will be placed in laboratory supplied sample containers, appropriate for the intended analysis, labeled with sample identification number, sample depth, sampler name, sample date, analysis and

methodology requested, and time of sample collection, and immediately placed in a cooler on ice pending laboratory analysis. Samples will be packaged, labeled, retained on ice, and documented in an area which is free of impact and provides for secure storage. Custody seals will be placed on each sample containing cooler, and chain-of-custody procedures will be maintained from the time of sample collection until arrival at the laboratory to protect sample integrity. Shipping or transporting of samples to the laboratory will be done within a timeframe such that recommended holding times are met. When applicable soil and water sampling will adhere to the PFAS Sampling and Handling Operating Procedure

7.0 Sample Labeling

Sample containers will be clearly labeled with the following information:

- Unique sample identification;
- Sample Type (discrete or composite, sediment and/or soil samples only)
- Sampler name or initials;
- Date sample collected;
- Time sample collected; and
- Analysis to be performed.

Acceptable QA designations include MS (1 in 20 by media), MSD (1 in 20 by media), rinsate blank (RB) only when using non-dedicated sampling equipment, and duplicates (DUP) in 1 out of 10 samples by media. Field blank samples will be collected once every 10 samples.

8.0 Quality Assurance

Sampling will be carried out in conjunction with a well-defined quality assurance (QA) program. The goal of the field QA program is to document that samples are collected without the effects of accidental cross- or systematic contamination and refers to the sampling, analysis, and data validation procedures for generating valid and defensible data. To provide QA for the proposed sampling event, the following sampling, analysis, and data validation procedures will be performed:

8.1 Field Calibration

Instruments used in the field as part of this sampling event are anticipated to consist of GPS units, digital cameras, and handheld data collection devices such as tablets/smart phones. Other equipment is not anticipated to require field calibration. Operators of each piece of equipment are responsible for maintaining (including proper battery charge) and operating this equipment such that it conforms to each respective manufacturer's specifications.

8.2 Field Duplicate Sample

For approximately every ten samples collected in the field, one field duplicate will be collected and submitted for laboratory analyses to verify the reproducibility of the sampling methods. Field duplicates will be prepared by separately submitting an aliquot from the same sample location to the laboratory for analysis consistent with the proscribed analyses. The submitted duplicate will be submitted such that the laboratory is not aware that it is a duplicate (i.e., the sample ID will not identify it as a “duplicate” for any specific sample location). At least one field duplicate will be collected each day that samples are collected.

8.3 Field Split Samples

Field split samples refer to samples collected by the regulatory agency or its designee from the same sampling location and independently submitted to a different laboratory for analysis. Field split samples may be collected at the discretion of representatives of the regulatory agency or Incident Command.

8.4 Laboratory QA

Laboratory quality control procedures will be conducted in a manner consistent with relevant State and federal regulatory guidance. Deliverables will contain the supporting documentation necessary for data validation. Internal laboratory quality control checks will include method blanks, matrix spikes (and matrix spike duplicates), surrogate samples, calibration standards, and laboratory control standards (LCSs).

8.5 Matrix Spike/Matrix Spike Duplicate Sample

Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples refer to field samples spiked with the analytes of interest prior to being analyzed at the laboratory to gauge the quality of analysis. Approximately one in twenty samples will be analyzed as MS/MSD samples.

8.6 Data Validation

Validation of the data generated by the laboratory performing the analyses will include at a minimum sample holding times, accuracy, precision, contamination of field generated or laboratory method blanks, and surrogate compound recovery. Accuracy will be determined by evaluating LCS and MS recovery. Precision will be determined by evaluating laboratory and field duplicate samples. Level II data verification will be performed on 100% of the samples.

9.0 Decontamination Procedures

Decontamination procedures refer to the steps undertaken to minimize the potential for offsite contamination and cross-contamination between individual sampling locations. Prior to collecting any sample for this release, the following decontamination procedures will be undertaken: non-disposable sampling equipment such as stainless-steel hand trowels which come into contact with sampling media

will be decontaminated using a bristled brush and a solution comprised of a laboratory grade, non-phosphate detergent (e.g., Alconox or Liquinox) and deionized water. Depending on ancillary activities being conducted for the response to this release, the decontamination of sampling equipment will be conducted over poly sheeting at the sample location or in a nearby designated area. The sampling equipment to be decontaminated will first be placed in a bucket containing the detergent solution and thoroughly washed using a bristled brush. The items will then be transferred to the second 5-gallon bucket containing deionized water for rinsing. Following the initial rinsing, the item will be held over the third 5-gallon bucket while deionized water is carefully decanted over each item. Decontaminated items will be wrapped in clean aluminum foil for transit to the next sampling location.

Nitrile gloves will be worn by sampling personnel and changed between activities at each discrete sample collection location. Previously worn nitrile gloves will be discarded in appropriate waste receptacles with other PPE.

10.0 Sampling Waste Disposal

Decontamination fluids and contaminated Personal Protective Equipment (PPE) will be containerized and collected at the designated onsite waste staging area as needed.

All produced waste onsite will be managed and disposed of in a manner consistent with all regulatory guidelines and requirements.


11.0 Data Analysis


To assess the potential impact from the incident, the results of sampling will be reviewed for the presence/absence of these compounds, and should they be found, the concentrations of these parameters relative to appropriate regulatory standards. The results of laboratory analyses will be provided to the Sherwin Williams facility.


12.0 Records Management

Records management refers to the procedures for generating, controlling, and archiving project-specific records and records of field activities. Project records, particularly those that are anticipated to be used as evidentiary data, directly support current or ongoing technical studies and activities, and provide historical evidence needed for later reviews and analyses, will be legible, identifiable, retrievable and protected against damage, deterioration, or loss on a centralized electronic database. Handwritten records will be written in indelible ink. Records will likely include, but are not limited to, the following: bound field notebooks on pre-numbered pages, sample collection forms, personnel qualification and training forms, sample location maps, equipment maintenance and calibration forms, chain-of custody forms, maps and drawings, transportation and disposal documents, reports issued as a result of the work,

procedures used, correspondences, and any deviations from the procedural records. Documentation errors will be corrected by drawing a single line through the error so it remains legible and will be initialed by the responsible individual, along with the date of change, and the correction will be written adjacent to the error.

Change from version 1.0 to 1.1	Name/Organization	Signature	Date Signed
<i>In the section titled: Addressed EPA comments</i>			
Prepared by:	Jessica Chopyk/CTEH		8/8/23
Review by:			
Approved by:			
Approved by:			

Change from version 1.1 to 1.2	Name/Organization	Signature	Date Signed
<i>In the section titled: Added analytes and methods per conversation with PACE labs</i>			
Prepared by:	Jessica Chopyk/CTEH		8/9/23

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<i>In the section titled: Addressed TCEQ comments</i>			
Prepared by:	Jessica Chopyk/CTEH		8/9/23

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<i>In the section titled: Addressed EPA comments</i>			

Prepared by:

Jessica
Chopyk/CTEH



8/10/23

Appendix A: Site Location Map

