

Mobile Monitoring Team Monitoring Data Summary Goldsmith, Texas & West Odessa, Texas – October 10 – 13, 2022

The Texas Commission on Environmental Quality (TCEQ) Mobile Monitoring Team (MMT) conducted ambient air monitoring in Goldsmith, Texas and West Odessa, Texas to support a Region 7 investigation of potential hydrogen sulfide (H_2S) emission sources. Elevated H_2S concentrations above the regulatory limit of 80 parts per billion by volume (ppbv) based on 30-minute net averages (30 Texas Administrative Code, Part 1, Chapter 112, Subchapter B, Rule §112.31) have been measured at the Goldsmith Street Continuous Air Monitoring Station (CAMS) 1093. Additionally, elevated H_2S concentrations above 1 part per million by volume (ppmv) were measured with personal monitors and Jerome H_2S analyzers and multiple complaints were received in the West Odessa neighborhood just north of West 42nd Street and east of Farm to Market (FM) Road 1882.

Stationary and mobile survey ambient monitoring was conducted from October 11 – 13, 2022 in Goldsmith and the surrounding area near Goldsmith Gas Plant (RN100222330), James Lake Gas Plant (RN107088759), and various tank batteries and pumpjacks that densely populate the area. The monitoring strategy described in the PB2210 Monitoring Plan was used to map out the monitoring routes followed during this effort. All monitoring was conducted during the evening and overnight hours when the highest concentrations of H_2S and lowest wind speeds were historically observed. During this monitoring trip, winds were light and moderate, averaging approximately 10 miles per hour during all monitoring periods.

Stationary and mobile survey ambient monitoring was conducted from October 11 – 13, 2022, in the West Odessa neighborhood surrounding HC Foster Battery (RN102190485). All monitoring was conducted in the early morning when light and variable winds were observed.

Data were collected by the Strategic Mobile Air Reconnaissance Technology – Rapid Assessment (SMART-RA) van (Van #9427) and one SMART van (Van #5416). Within Van #9427, H_2S data were collected by a Picarro G2204 Cavity Ring-Down Spectrometer (CRDS). Due to generator issues in Van #9427, the Duvas DV3000 Ultraviolet Spectrometer was not used, and volatile organic compound (VOC) and sulfur dioxide (SO_2) data were not collected. In Van #5416, VOC data were collected with a Syft Voice200 Ultra Selected Ion Flow Tube Mass Spectrometer (SIFT-MS), and H_2S data were collected by a Picarro G2204 CRDS. The VOC compounds included benzene, toluene, ethylbenzene + xylenes, styrene, and 1,3-butadiene (BTEX+). H_2S was the focus of this project, and the main VOC of interest was benzene.

Analyte concentrations will be reported in units of ppbv. Concentrations greater than 1000 ppbv will be reported in units of ppmv (1000 ppbv = 1 ppmv).

Stationary Monitoring and Mobile Surveys

Monitoring was conducting during two monitoring periods: Monitoring Period 1 (evening of October 11, 2022, to the morning of October 12, 2022) and Monitoring Period 2 (evening of October 12, 2022, to the morning of October 13, 2022). Monitoring was not conducted the evening of October 10, 2022, due to rain and generator issues.

Mobile surveys were conducted around potential emission sources, and maximum instantaneous values were used to determine where stationary monitoring would occur. Stationary monitoring was conducted in areas downwind of potential sources when elevated concentrations observed in surveys were above action levels stated in the PB2210 Monitoring Plan. Stationary monitoring was performed for a minimum of one hour and was used to establish 30-minute average concentrations for H_2S for comparison to the H_2S regulatory limit of 80 ppbv.

A summary of stationary monitoring locations is shown on Figures 1, 2, and 3 in Attachment A. Global positioning system (GPS) coordinates, minimum/maximum wind speed, average wind direction, and H₂S and BTEX+ minimum/maximum instantaneous and average concentrations for all mobile and stationary data are included in Attachments B and C. One-second SIFT-MS and Picarro G2204 data are available upon request.

Mobile surveys of note shown in Figures 4, 5, 7 through 9, and 12 through 14 display H₂S concentrations and the associated wind direction for that survey. Stationary monitoring events with average H₂S concentrations above 80 ppbv are shown in Figures 6, 10, 11 and 15 and use pollution roses to display wind direction and the relative H₂S concentrations associated with each wind direction. Winds were often light and variable, which could affect the display of primary wind direction in the associated wind roses.

During this project, benzene was not detected above the action level of 120 ppbv noted in the PB2210 Monitoring Plan; therefore, only H₂S concentration maps are provided in this report.

Monitoring Period 1 – Evening of October 11, 2022, to Morning of October 12, 2022

During Monitoring Period 1, winds were predominantly southerly (southwest, south, and southeast) and less than 10 miles per hour.

Surveys conducted in Goldsmith during Monitoring Period 1 did not detect any H₂S concentrations exceeding the 80 ppbv regulatory level. One stationary monitoring event was completed downwind of Goldsmith Gas Plant, and no H₂S concentrations were observed above 80 ppbv. Surveys conducted in West Odessa during Monitoring Period 1 measured maximum instantaneous H₂S concentrations of 3.09 ppmv between 0246 – 0259 (Attachment A, Figure 4) and 403.5 ppbv between 0435 – 0458 (Attachment A, Figure 5). Data for these surveys can be found in Attachment B.

Stationary monitoring was performed in West Odessa where maximum concentrations were observed during survey routes. The maximum instantaneous H₂S concentration observed during this stationary monitoring event was 21.42 ppmv with a maximum 30-minute average H₂S concentration of 373.5 ppbv between 0512 – 0618 (Attachment A, Figure 6). Due to sampler error, this stationary monitoring period was not recorded in the data logger. H₂S and BTEX+ data were obtained directly from the instruments, but wind data could not be obtained; therefore, a pollution rose could not be generated for Figure 6. The predominant wind direction was southwesterly during this stationary sampling event. Regional staff were immediately notified when these H₂S concentrations were observed. Data for this stationary monitoring period can be found in Attachment C.

Monitoring Period 2 – Evening of October 12, 2022, to Morning of October 13, 2022

During Monitoring Period 2, winds were light and variable.

Surveys conducted in Goldsmith during Monitoring Period 2 measured maximum instantaneous H₂S concentrations of 1.15 ppmv between 2314 – 0005 (Attachment A, Figure 7), 219.3 ppbv between 0226 – 0239 (Attachment A, Figure 8), and 383.7 ppbv between 0248 – 0311 (Attachment A, Figure 9). Data for these surveys can be found in Attachment B.

Stationary monitoring was performed in Goldsmith where maximum concentrations were observed during survey routes. The maximum instantaneous H₂S concentrations and maximum 30-minute average H₂S concentrations observed during these stationary monitoring periods were 929.6 ppbv and 145.0 ppbv, respectively, between 0023 – 0212 (Attachment A, Figure 10) and 206.6 ppbv and 83.3 ppbv, respectively, between 0350 – 0457 (Attachment A, Figure 11). Data for these stationary monitoring periods can be found in Attachment C. Based on surveys MA02-221012 and MA01-221013 and stationary monitoring location ST01-221013 (Figures 7, 8, and 10), the average wind directions appear to indicate a source north of W Scharbauer St.

Surveys conducted in West Odessa during Monitoring Period 2 measured maximum instantaneous H₂S concentrations of 239.8 ppbv between 0415 – 0439 (Attachment A, Figure 12), 339.2 ppbv

between 0447 – 0516 (Attachment A, Figure 13), and 683.7 ppbv between 0552 – 0600 (Attachment A, Figure 14). Winds were light and variable during these surveys and the wind roses generated may not fully represent meteorological conditions. Data for these surveys can be found in Attachment B.

Stationary monitoring was performed in West Odessa at the intersection of W 44th St and Hereford Rd, adjacent to HC Foster Battery and flares. The maximum instantaneous H₂S concentration observed during this stationary monitoring period was 61.91 ppmv and the maximum 30-minute average H₂S concentration was 6.61 ppmv between 0601 – 0705 (Attachment A, Figure 15). Winds were light and variable during this stationary monitoring event and the pollution rose generated may not fully represent meteorological conditions. Regional staff were immediately notified when these H₂S concentrations were observed. Data for this stationary monitoring period can be found in Attachment C.

MMT Quality Control

Van #9427 is equipped with a Picarro G2204 CRDS to measure H₂S concentrations. The Picarro was calibrated prior to this monitoring trip, and quality control (QC) checks were performed before and after the trip, as well as every 24 hours during the trip. All QC levels passed accuracy, precision, and baseline data quality objectives (DQOs) with the following exception. The H₂S equipment blank on October 12, 2022, failed with a 5-min average concentration of 9.7 ppbv, above the limit of detection of 7.0 ppbv. All H₂S concentrations associated with Van #9427 are qualified with “B” and may be biased by +/- 9.7 ppbv.

Van #5416 is equipped with a SIFT-MS to quantitatively measure five different compounds: 1,3-butadiene, benzene, toluene, ethylbenzene + xylene(s), and styrene. The linearity for the SIFT-MS was checked prior to the monitoring trip, and QC checks were performed before and after the trip, as well as every 24 hours during the trip. All QC levels passed accuracy, precision, and baseline DQOs. Van #5416 is also equipped with a Picarro G2204 CRDS to measure H₂S concentrations. The Picarro was calibrated prior to this monitoring trip, and QC checks were performed before and after the trip, as well as every 24 hours during the trip. All QC levels passed accuracy, precision, and baseline DQOs.

Attachment A



Figure 1: Stationary monitoring locations west of Goldsmith, Texas.

This map was generated by the Monitoring Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Monitoring Division at 512-239-1716.

Attachment A



Figure 2: Stationary monitoring location south of Goldsmith, Texas.

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Attachment A



Figure 3: Stationary monitoring locations in West Odessa, Texas.

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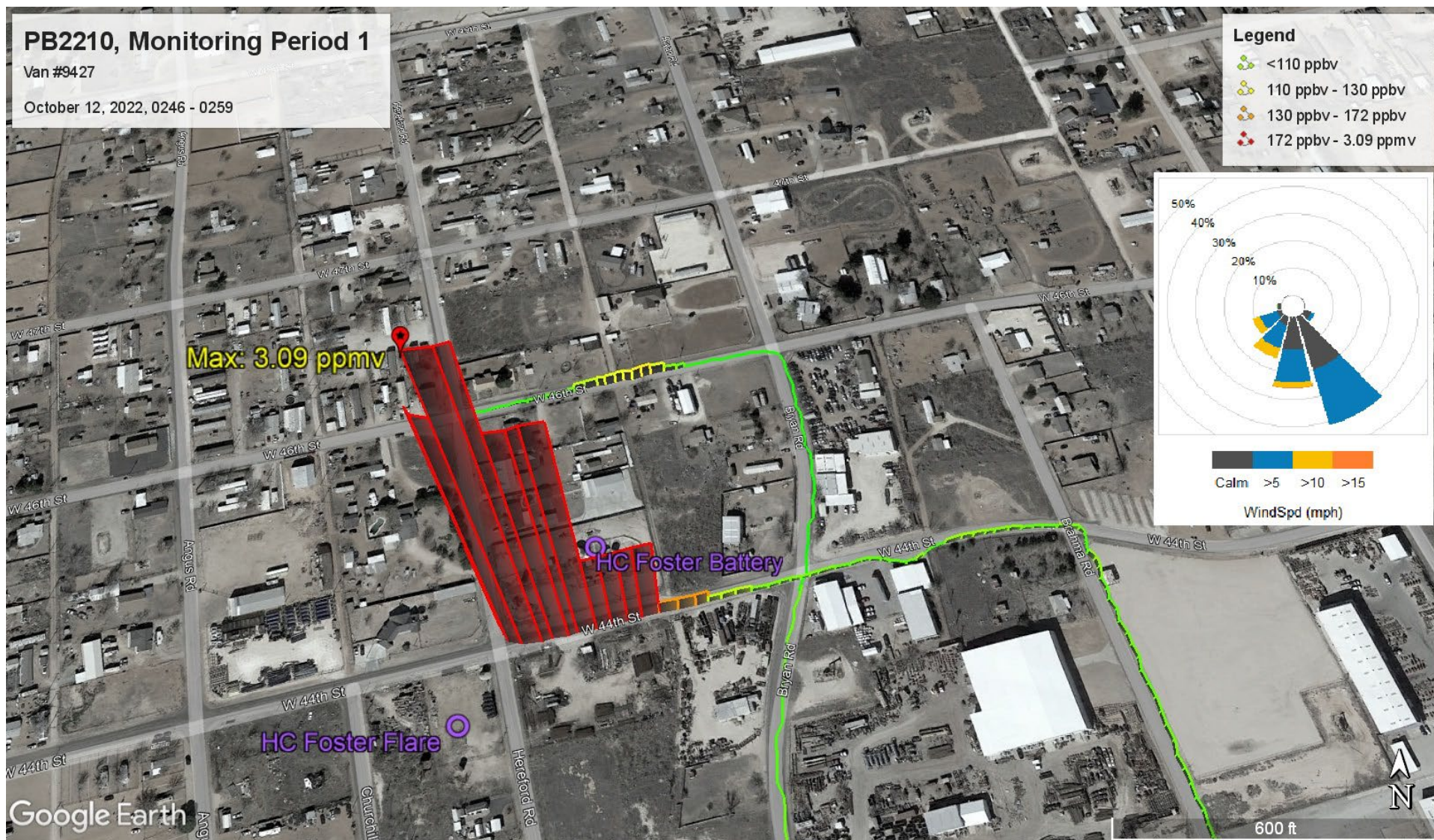


Figure 4: Van #9427 MA01-221012 survey with maximum instantaneous H₂S concentration of 3.09 ppmv on the corner of West 44th Street and Hereford Road in West Odessa, Texas.

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Attachment A

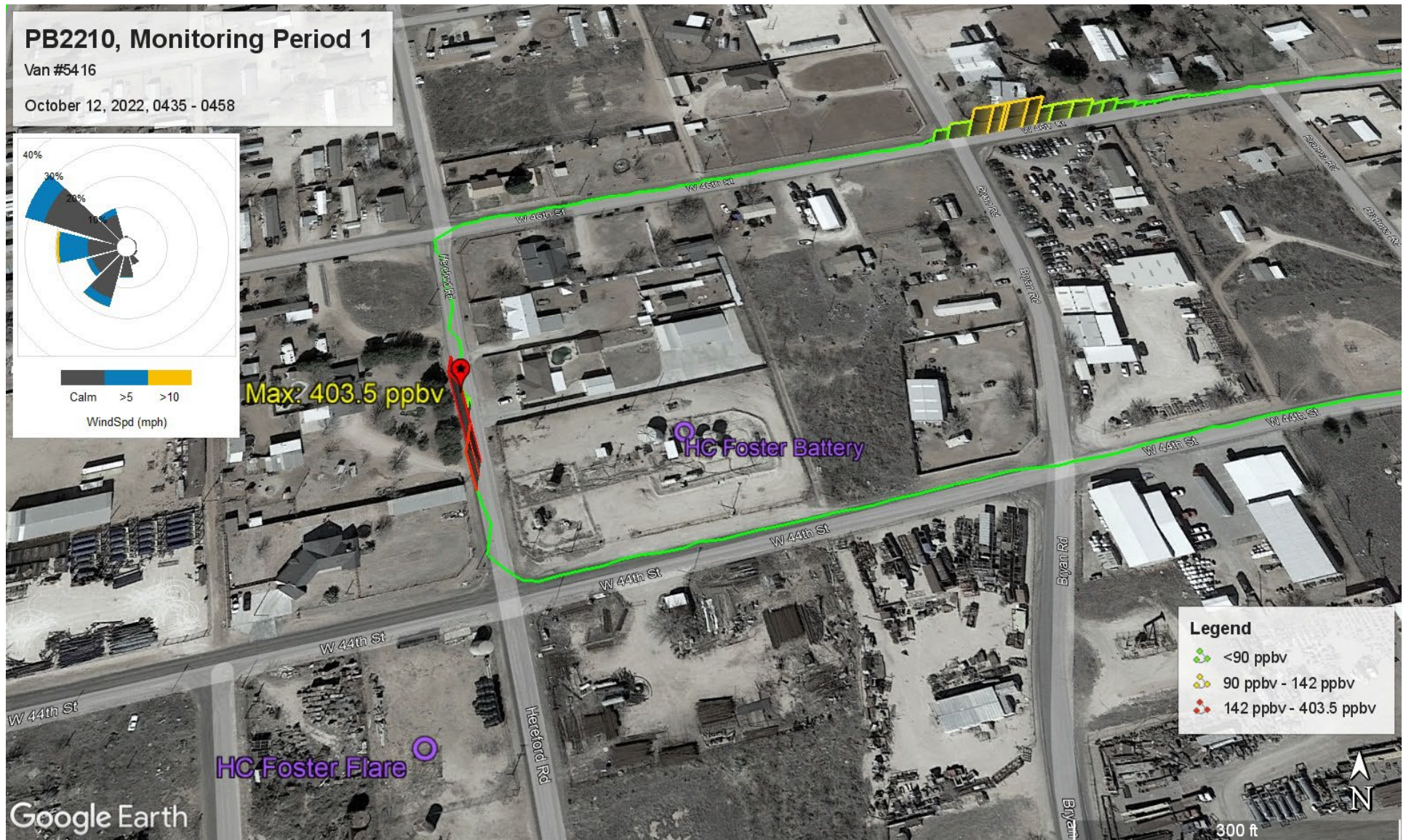


Figure 5: Van #5416 MA06-221012 survey with maximum instantaneous H₂S concentration of 403.5 ppbv on Hereford Road between West 46th Street and West 44th Street in West Odessa, Texas.

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Attachment A



Figure 6: Van #5416 ST02-221012 stationary monitoring location with maximum instantaneous H_2S concentration of 21.42 ppmv and maximum 30-minute average H_2S concentration of 373.5 ppbv on Hereford Road between West 46th Street and West 44th Street in West Odessa, Texas. A pollution rose could not be generated due to missing wind data.

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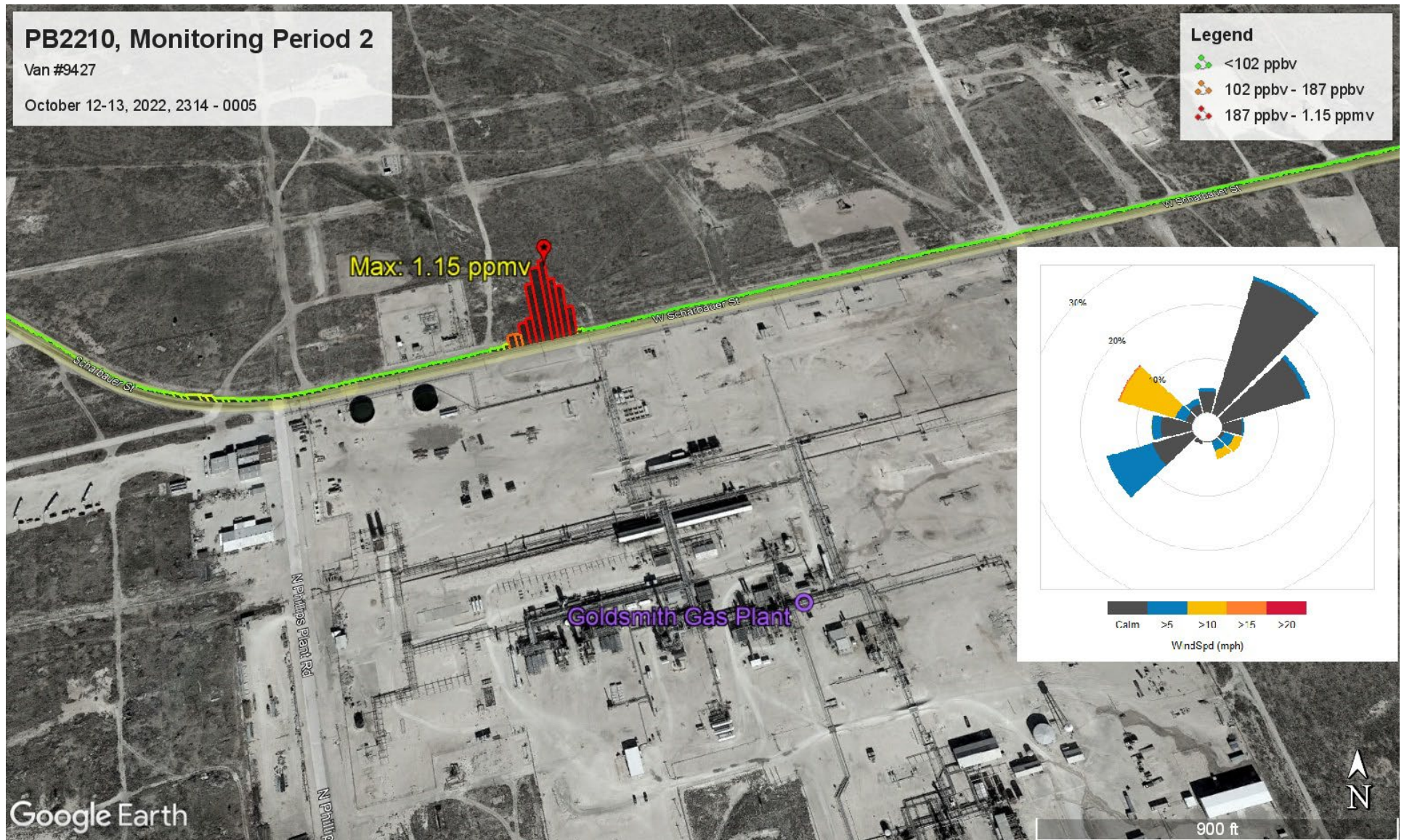


Figure 7: Van #9427 MA02-221012 survey with maximum instantaneous H₂S concentration of 1.15 ppmv on West Scharbauer Street just north of Goldsmith Gas Plant in Goldsmith, Texas.

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Attachment A

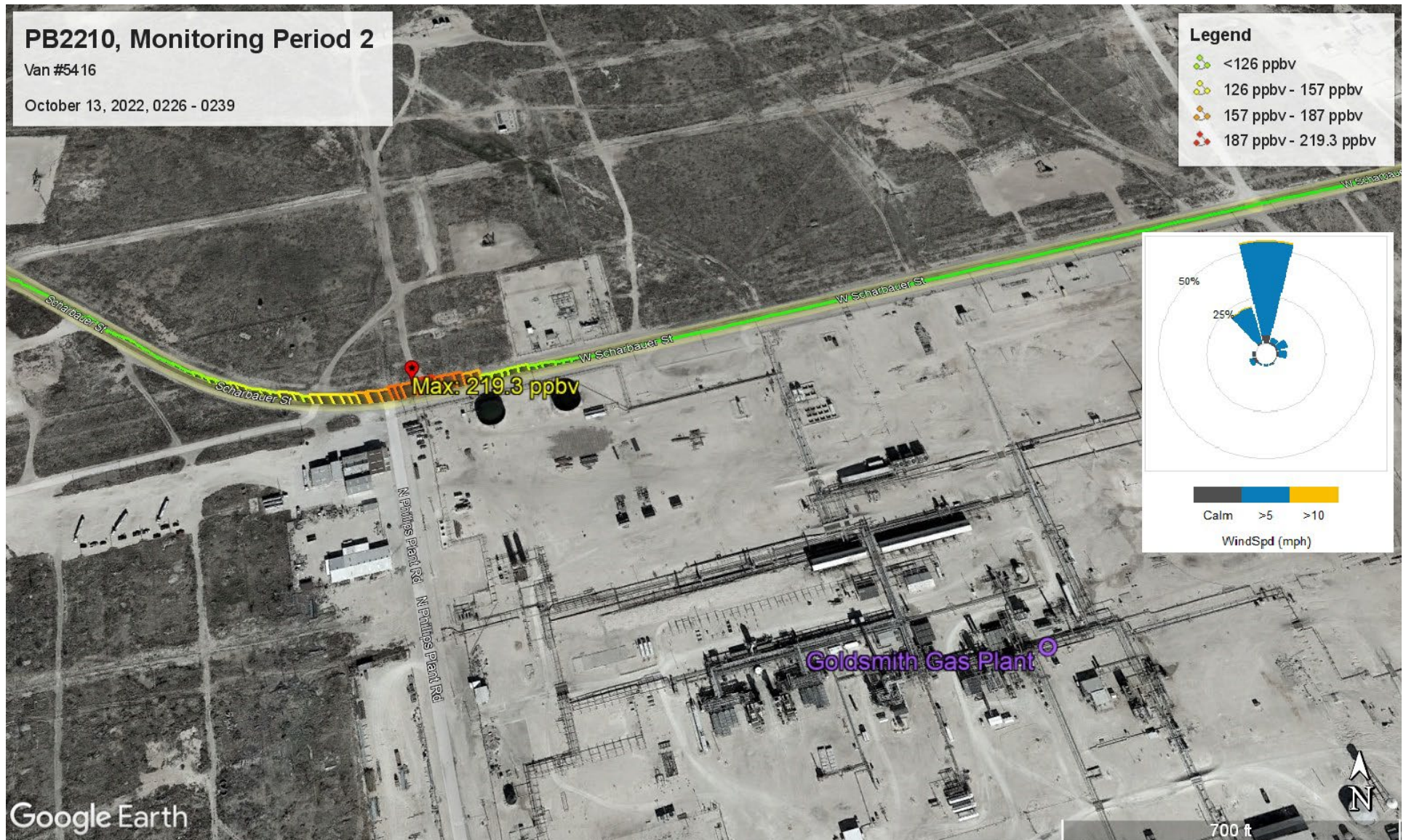


Figure 8: Van #5416 MA01-221013 survey with maximum instantaneous H₂S concentration of 219.3 ppbv on West Scharbauer Street just north of Goldsmith Gas Plant in Goldsmith, Texas.

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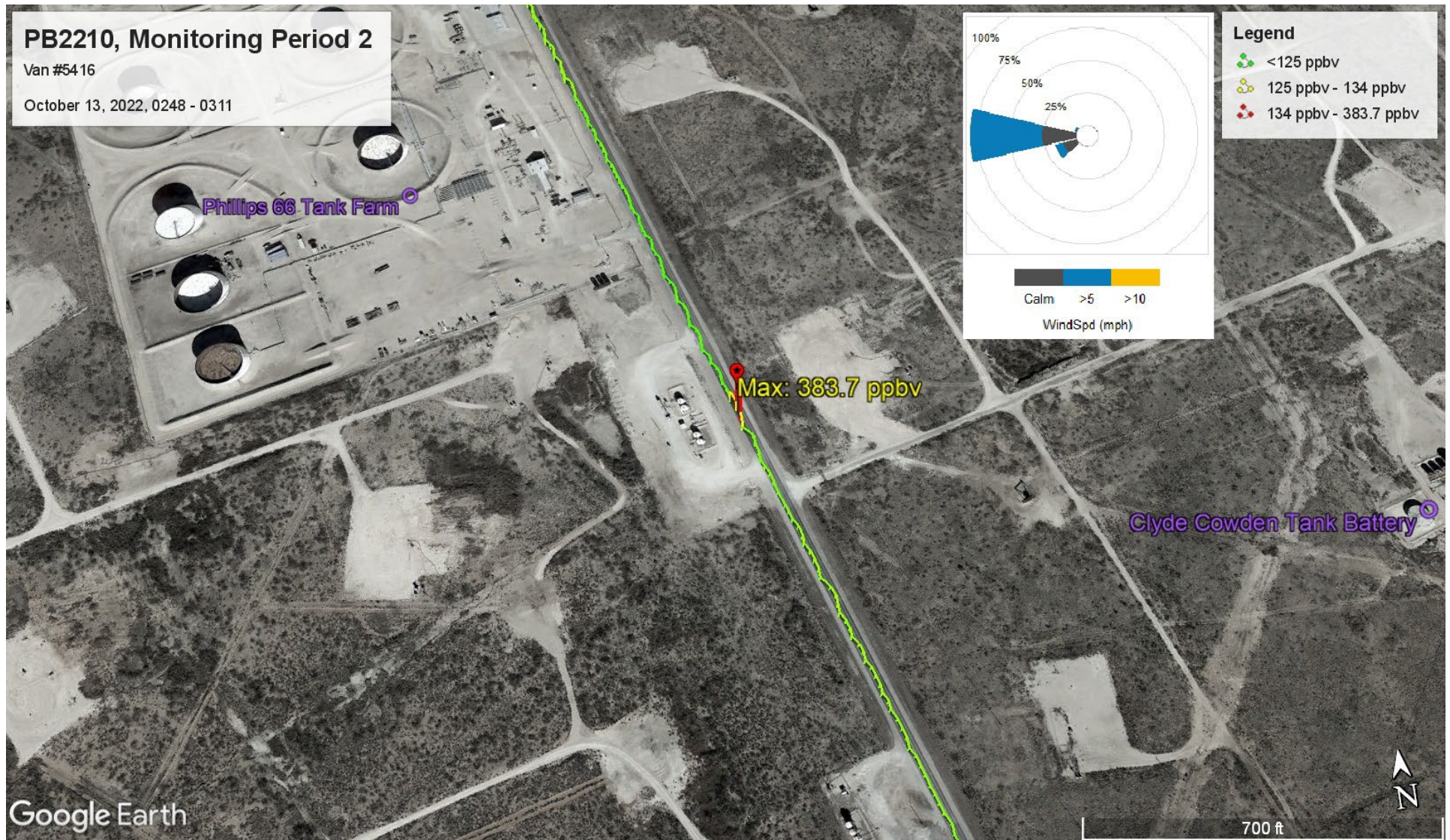


Figure 9: Van #5416 MA02-221013 survey with maximum instantaneous H₂S concentration of 383.7 ppbv on Farm to Market 866 south of Goldsmith, Texas. This map was generated by the Monitoring Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Monitoring Division at 512-239-1716.

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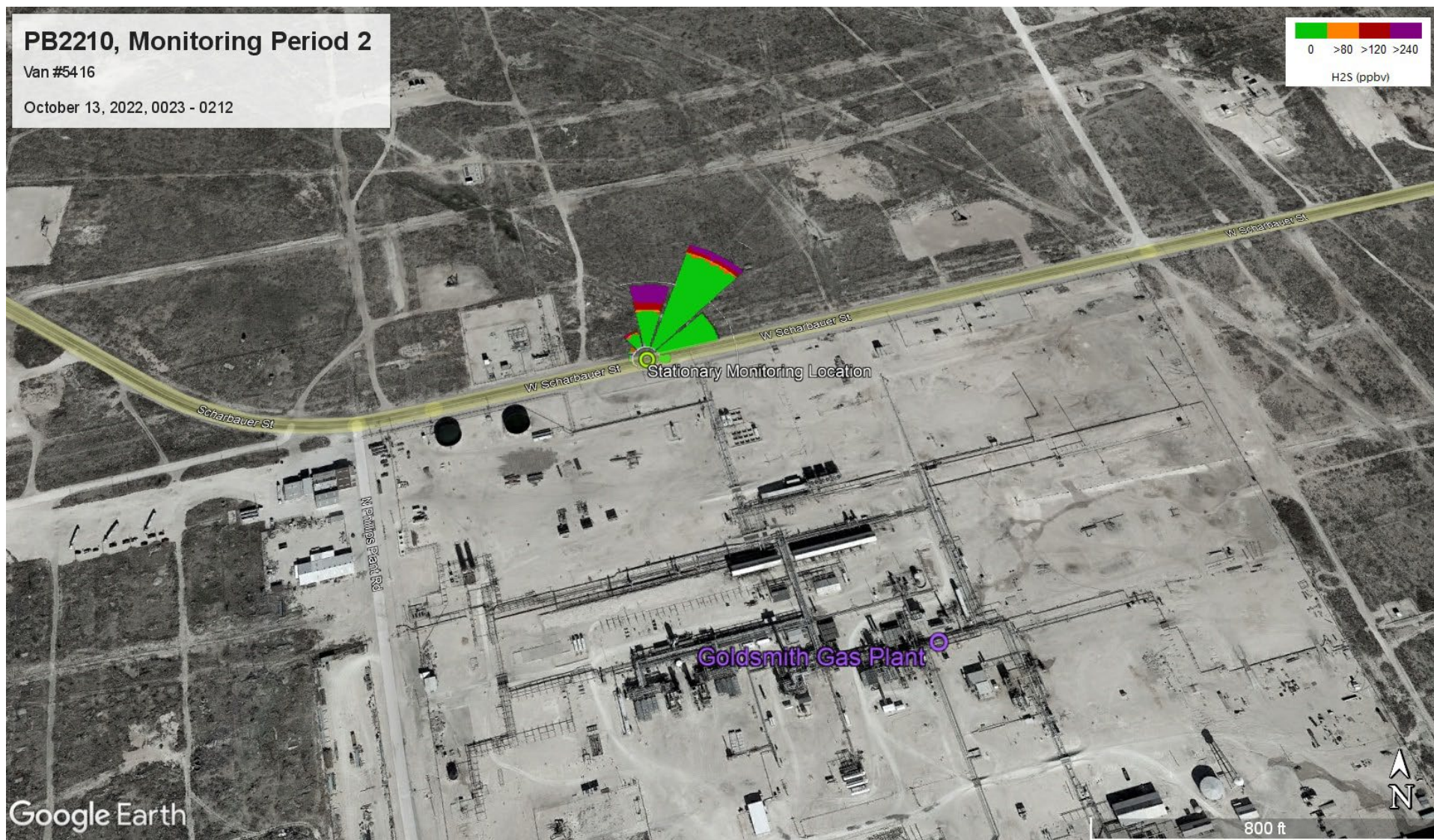


Figure 10: Van #5416 ST01-221013 stationary monitoring location with maximum instantaneous H₂S concentration of 929.6 ppbv and maximum 30-minute average H₂S concentration of 145.0 ppbv on West Scharbauer Street just north of Goldsmith Gas Plant in Goldsmith, Texas.

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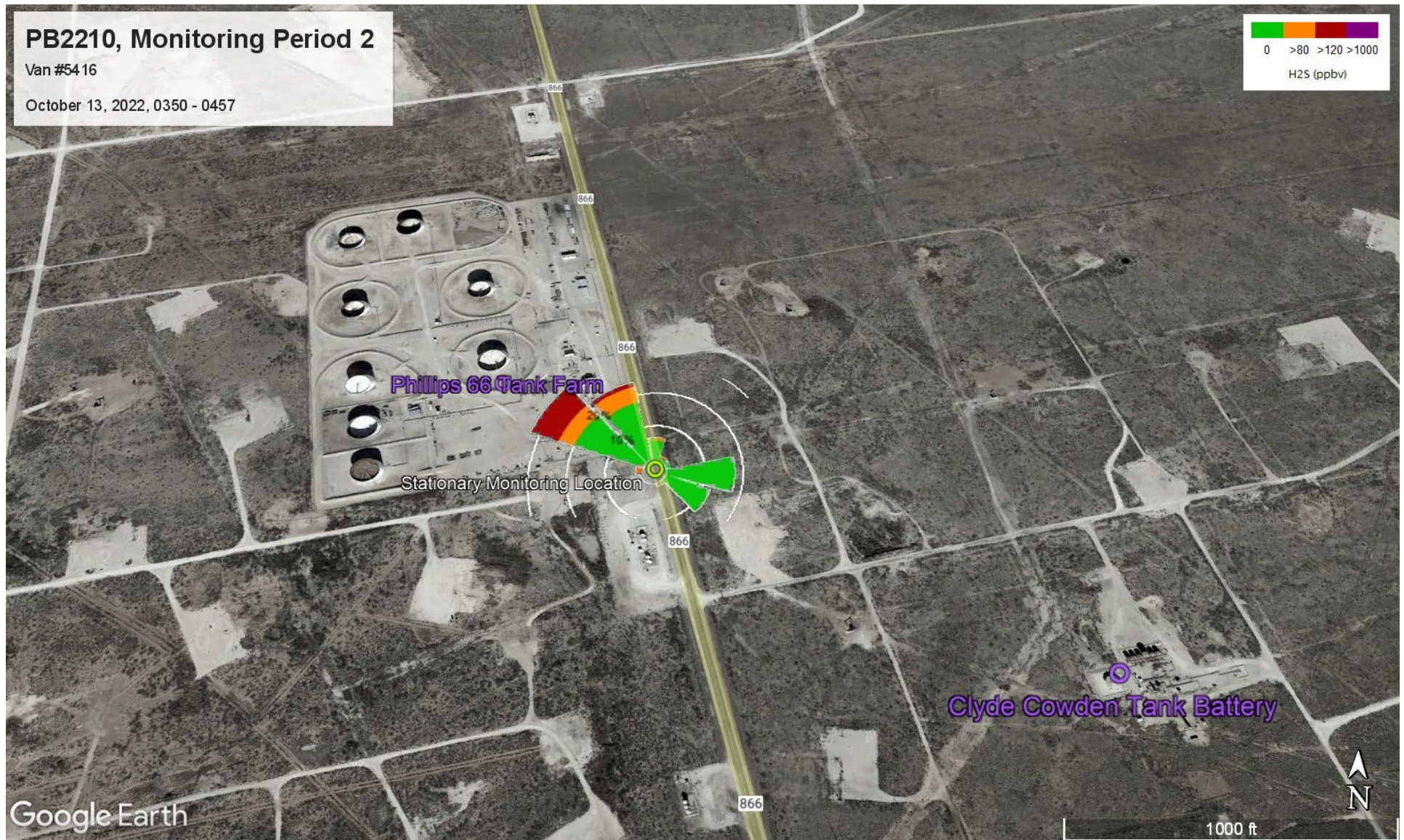


Figure 11: Van #5416 ST03-221013 stationary monitoring location and pollution rose with maximum instantaneous H₂S concentration of 206.6 ppbv and maximum 30-minute average H₂S concentration of 83.3 ppbv on Farm to Market 866 south of Goldsmith, Texas.

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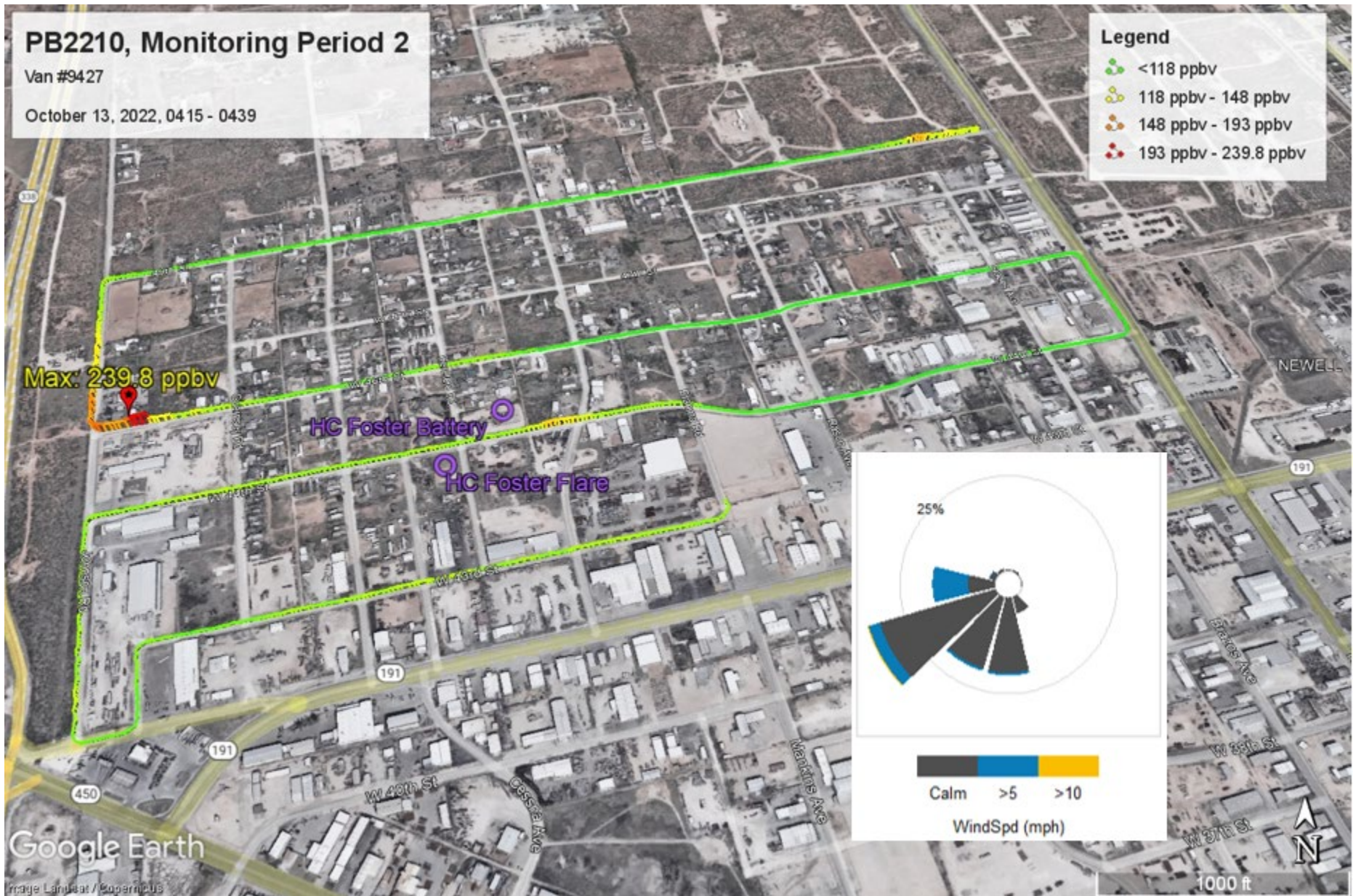


Figure 12: Van #9427 MA06-221013 survey with maximum instantaneous H₂S concentration of 239.8 ppbv on West 46th Street between Johnson Road and Guernsey Road in West Odessa, Texas.

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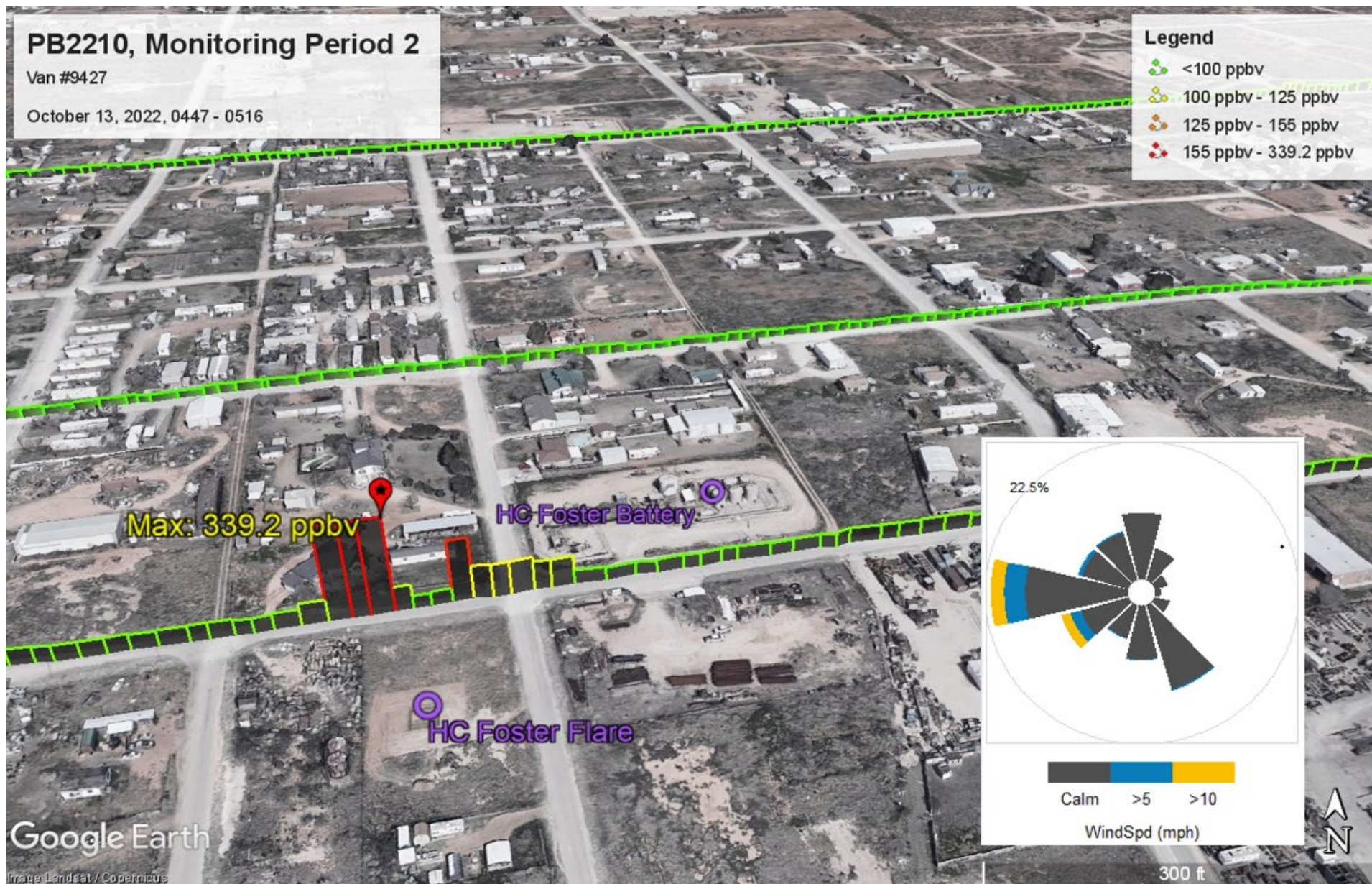


Figure 13: Van #9427 MA07-221013 survey with maximum instantaneous H₂S concentration of 339.2 ppbv on West 44th Street between Churchill Road and Hereford Road in West Odessa, Texas.

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Attachment A



Figure 14: Van #9427 MA08-221013 survey with maximum instantaneous H₂S concentration of 683.7 ppbv on West 44th Street between Churchill Road and Hereford Road in West Odessa, Texas.

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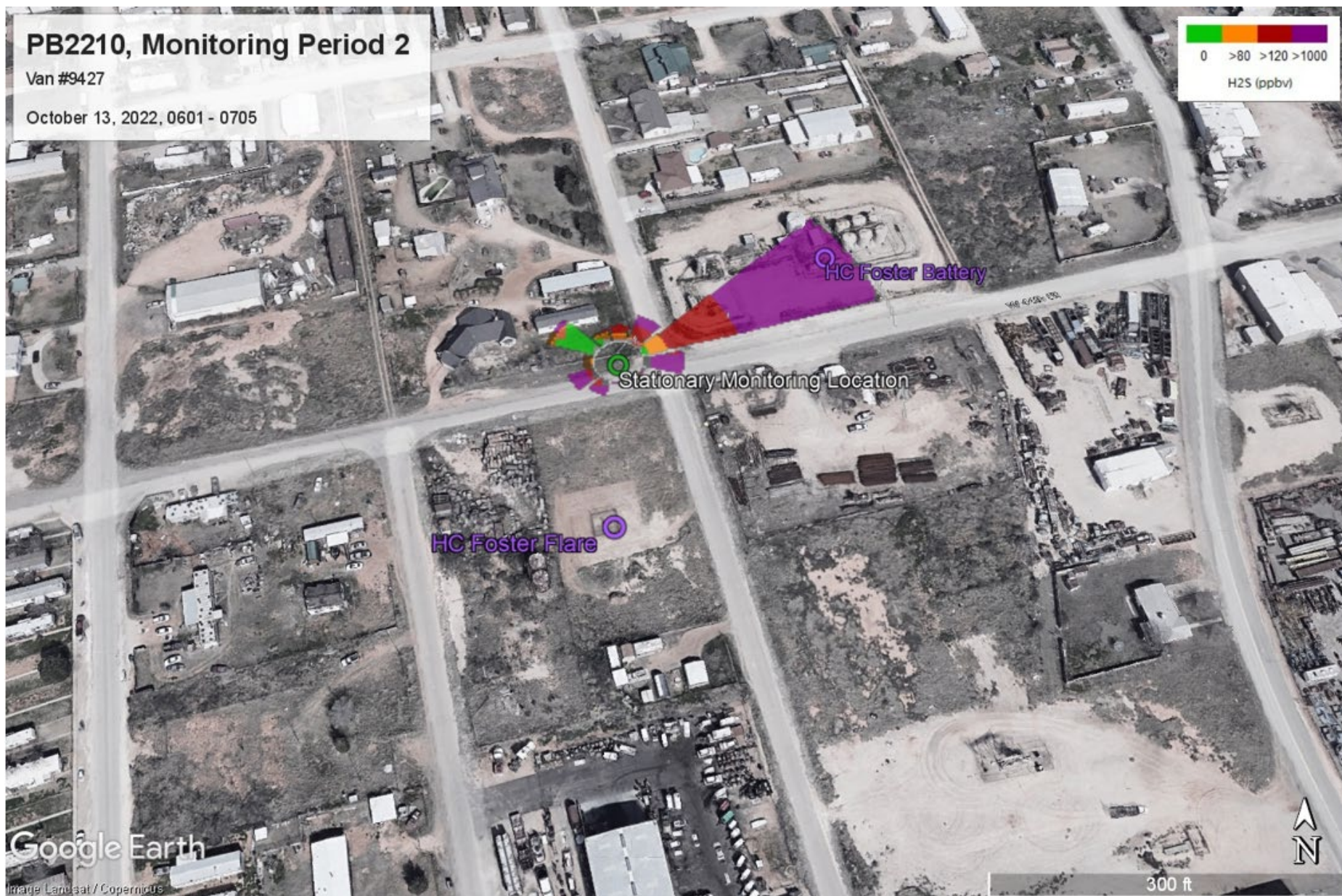


Figure 15: Van #9427 ST01-221013 stationary monitoring location with maximum instantaneous H₂S concentration of 61.91 ppmv and maximum 30-minute average H₂S concentration of 6.61 ppmv on West 44th Street between Churchill Road and Hereford Road in West Odessa, Texas.

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Mobile Survey Data Summary

Monitoring Period 1, October 11 - 12, 2022

10/11/2022

Van #9427 MA02-221011 Survey - Goldsmith, TX								
Route Time	2321 - 2346							
Route Start	Goldsmith Street and Avenue H (31.9884323, -102.6166203)							
Route Stop	N Sharbauer Street and West Gulf Avenue (31.9813858, -102.6158579)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	3.3	198	-3.0	NA	NA	NA	NA	NA
Max Values	27.2		9.9	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Van #5416 MA01-221011 Survey - Goldsmith, TX								
Route Time	2341 - 2357							
Route Start	Highway 158 and Highway 866 (31.981456, -102.612144)							
Route Stop	High 158 ~1.5 miles East of Highway 866 (31.98812, -102.583768)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.1	167	-1.4	0.0	0.0	0.0	0.0	0.0
Max Values	12.1		6.0	0.8	1.5	2.9	4.6	3.6

Van #9427 MA03-221011 Survey - Goldsmith, TX								
Route Time	2354 - 0008							
Route Start	Highway 866 and Highway 302 (31.905736 -102.588512)							
Route Stop	N Sharbauer Street and West Gulf Avenue (31.9813858, -102.6158579)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	2.2	236	-2.9	NA	NA	NA	NA	NA
Max Values	25.9		16.9	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

10/12/2022

Van #5416 MA01-221012 Survey - Goldsmith, TX								
Route Time	0000 - 0017							
Route Start	Highway 158 ~ 1.5 miles East of Highway 866 (31.98812, -102.583768)							
Route Stop	Intersection of Highway 158 and Highway 866 (31.981698, -102.611768)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	1.0	220	-2.2	0.0	0.0	0.1	0.0	0.1
Max Values	12.5		5.4	0.5	23.5	7.8	1.4	1.8

Mobile Survey Data Summary

Monitoring Period 1, October 11 - 12, 2022

10/12/2022

Van #5416 MA02-221012 Survey - Goldsmith, TX								
Route Time	0051 - 0104							
Route Start	West Sharbauer Street and Odessa Street (31.987178, -102.618696)							
Route Stop	West Scharbauer Street ~1.5 miles West of Odessa Street (31.983542, -102.641312)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.6	235	-1.6	0.0	0.0	0.0	0.0	0.0
Max Values	10.2		28.0	0.8	64.0	12.2	4.8	3.6

Van #5416 MA03-221012 Survey - Goldsmith, TX								
Route Time	0113 - 0120							
Route Start	West Scharbauer Street ~1.5 miles West of Odessa Street (31.983542, -102.641312)							
Route Stop	West Scharbauer Street ~0.5 miles West of Odessa Street (31.984558, -102.631176)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.1	204	-1.0	0.0	0.0	0.1	0.0	0.0
Max Values	7.9		10.5	0.6	3.8	2.7	1.2	1.3

Van #5416 MA04-221012 Survey - Goldsmith, TX								
Route Time	0212 - 0222							
Route Start	Highway 866 ~ 3 miles South of Highway 158 (31.942732, -102.600344)							
Route Stop	Highway 866 ~4 miles South of Highway 158 (31.927146, -102.595312)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	5.8	261	0.9	0.0	0.0	0.0	0.0	0.0
Max Values	13.3		7.8	0.5	1.6	1.3	1.0	1.2

Van #5416 MA05-221012 Survey - Goldsmith, TX								
Route Time	0239 - 0252							
Route Start	Intersection of West Sharbauer Street and Odessa Street (31.987182, -102.61872)							
Route Stop	West Scharbauer Street ~ 1.5 miles East of Odessa Street (31.983574, -102.641376)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.7	248	-1.4	0.0	0.0	0.0	0.0	0.0
Max Values	7.3		14.8	0.5	4.2	2.4	1.0	0.9

Mobile Survey Data Summary

Monitoring Period 1, October 11 - 12, 2022

10/12/2022

Van #9427 MA01-221012 Survey - West Odessa, TX								
Route Time	0246 - 0259							
Route Start	Bryan Road and West 44th Street (31.879744, -102.412024)							
Route Stop	Bryan Road and West 44th Street (31.879744, -102.412024) Same location as start							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.3	176	3.5	NA	NA	NA	NA	NA
Max Values	16.6		3087.2	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #5416 MA06-221012 Survey - West Odessa, TX								
Route Time	0435 - 0458							
Route Start	Angus Road and West 43rd Street (31.876842, -102.415056)							
Route Stop	Rasco Avenue and West 46th Street (31.881998, -102.408688)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.2	266	-1.3	0.0	0.0	0.0	0.0	0.0
Max Values	13.7		403.5	0.6	2.0	7.7	3.8	1.0

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Mobile Survey Data Summary

Monitoring Period 2, October 12 - 13, 2022

10/12/2022

Van #5416 MA07-221012 Survey - Goldsmith, TX								
Route Time	2310 - 2330							
Route Start	Highway 158 and Highway 866 (31.980946, -102.612576)							
Route Stop	Highway 866 ~2.5 miles South of Highway 158 (31.94522, -102.601144)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.1	293	9.4	0.0	0.0	0.0	0.0	0.0
Max Values	5.3		43.1	0.8	5.6	2.2	1.7	1.1

Van #9427 MA02-221012 Survey - Goldsmith, TX								
Route Time	2314 - 0005							
Route Start	Avenue H and North Sharbauer Street (31.85649, -102.319696)							
Route Stop	North Sharbauer Street and Avenue B (31.982512, -102.61588)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.2	5	4.0	NA	NA	NA	NA	NA
Max Values	20.3		1145.4	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

10/13/2022

Van #9427 MA01-221013 Survey - Goldsmith, TX								
Route Time	0016 - 0036							
Route Start	Alma Street and West Gulf Avenue (31.981672, -102.61284)							
Route Stop	North Sharbauer Street and Avenue F (31.98645, -102.61748)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.0	310	7.6	NA	NA	NA	NA	NA
Max Values	7.3		69.9	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Van #9427 MA02-221013 Survey - Goldsmith, TX								
Route Time	0040 - 0053							
Route Start	North Sharbauer Street and Avenue F (31.98645, -102.61748)							
Route Stop	West Gulf Avenue and N Alma Street (31.981568, -102.612808)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.1	59	3.9	NA	NA	NA	NA	NA
Max Values	5.8		23.3	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Mobile Survey Data Summary

Monitoring Period 2, October 12 - 13, 2022

10/13/2022

Van #9427 MA03-221013 Survey - Goldsmith, TX								
Route Time	0214 - 0240							
Route Start	Highway 866 and Avenue M (31.97742, -102.611672)							
Route Stop	Avenue A and Alma Street (31.9832312, -102.613168)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.0	160	3.0	NA	NA	NA	NA	NA
Max Values	13.2		21.6	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Van #5416 MA01-221013 Survey - Goldsmith, TX								
Route Time	0226 - 0239							
Route Start	Sharbauer Street ~1.5 miles West of Odessa Street (31.984004, -102.64248)							
Route Stop	Sharbauer Street and Avenue E (31.985294, -102.616896)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	1.3	359	5.1	0.0	0.0	0.1	0.0	0.0
Max Values	11.2		219.3	0.5	33.2	8.5	2.5	0.7

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #5416 MA02-221013 Survey - Goldsmith, TX								
Route Time	0248 - 0311							
Route Start	Highway 866 and Highway 158 (31.981242, -102.61304)							
Route Stop	Highway 866 ~ 2 miles South of Highway 158 (31.944756, -102.600976)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	1.0	265	7.2	0.0	0.0	0.4	0.0	0.0
Max Values	10.7		383.7	0.6	4.2	2.3	1.7	0.6

*VOC data incomplete due to software logging error.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #9427 MA04-221013 Survey - Goldsmith, TX								
Route Time	0248 - 0306							
Route Start	North Sharbauer Street and Avenue F (31.986536, -102.617104)							
Route Stop	North Sharbauer Street and Highway 181 (31.980282, -102.680952)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	1.6	153	3.3	NA	NA	NA	NA	NA
Max Values	9.3		71.2	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Mobile Survey Data Summary

Monitoring Period 2, October 12 - 13, 2022

10/13/2022

Van #9427 MA06-221013 Survey - West Odessa, TX								
Route Time	0415 - 0439							
Route Start	FM1882 and West 49th Street (31.886504, -102.404168)							
Route Stop	West 43rd Street and Brahma Road (31.87849, -102.409656)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.3	224	6.1	NA	NA	NA	NA	NA
Max Values	11.6		239.8	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #9427 MA07-221013 Survey - West Odessa, TX								
Route Time	0447 - 0516							
Route Start	West 43rd Street and Brahma Road (31.87849, -102.409656)							
Route Stop	West 42nd Street and West 43rd Street (31.874446, -102.417888)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.0	261	30.0	NA	NA	NA	NA	NA
Max Values	14.1		339.2	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #5416 MA03-221013 Survey - Goldsmith, TX								
Route Time	0504 - 0517							
Route Start	Highway 158 and Alma Street (31.981572, -102.61164)							
Route Stop	Highway 158 ~ 1 mile East of Alma Street (31.987222, -102.587600)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	2.7	343	7.4	0.0	0.0	0.4	0.0	0.0
Max Values	13.2		47.7	1.0	3.6	2.7	2.4	0.6

Van #9427 MA08-221013 Survey - West Odessa, TX								
Route Time	0552 - 0600							
Route Start	Johnson Road and West 44th Street (31.878116, -102.419576)							
Route Stop	West 44th Street and Hereford Road (31.879386, -102.414064)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.2	90	86.0	NA	NA	NA	NA	NA
Max Values	4.7		683.7	NA	NA	NA	NA	NA

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Stationary Data Summary

Monitoring Period 1, October 11 - 12, 2022

10/12/2022

Van #5416 ST01-221012 Stationary Monitoring Location - Goldsmith, TX								
Route Time	0259 - 0326							
Monitoring Location	Sharbauer Street ~1.5 miles West of Odessa Street (31.983504, -102.635496)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.1	184	-1.5	0.0	0.7	1.0	0.0	0.0
Max Values	6.6		5.9	1.1	9.1	6.0	3.0	1.0
Max Avg*								

* Maximum average values are 1-hour averages. The maximum average value for hydrogen sulfide is a 30-minute average.

Van #5416 ST02-221012 Stationary Monitoring Location - West Odessa, TX								
Route Time	0512 - 0618							
Monitoring Location	44th and Hereford (31.87961, -102.413976)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	NA	NA	0.3	0.0	0.0	0.0	0.0	0.0
Max Values	NA		21417.2	1.2	20.1	70.8	95.0	1.4
Max Avg*			373.5	0.1	1.6	2.5	1.7	0.3

* Maximum average values are 1-hour averages. The maximum average value for hydrogen sulfide is a 30-minute average.

NA - Not applicable; Due to sampler error, the data logger software did not record ST02. The raw data was extracted from the Picarro and SIFT-MS, but the weather data could not be obtained.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Stationary Data Summary

Monitoring Period 2, October 12 - 13, 2022

10/12/2022

Van #5416 ST03-221012 Stationary Monitoring Location - Goldsmith, TX								
Route Time	2346 - 0018							
Monitoring Location	Sharbauer Street ~0.5 miles West of Odessa Street (31.98388, -102.634552)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.0	70	12.2	0.0	0.0	0.0	0.0	0.0
Max Values	6.6		31.0	1.6	3.1	1.7	2.2	0.9
Max Avg*			23.8					

* Maximum average values are 1-hour averages. The maximum average value for hydrogen sulfide is a 30-minute average.

10/13/2022

Van #5416 ST01-221013 Stationary Monitoring Location - Goldsmith, TX								
Route Time	0023 - 0212							
Monitoring Location	Sharbauer Street ~1 mile West of Odessa Street (31.983386, -102.636184)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.1	26	2.5	0.0	0.0	0.0	0.0	0.0
Max Values	8.5		929.6	0.9	29.9	23.0	6.9	1.1
Max Avg*			145.0	0.1	3.5	2.3	1.2	0.2

* Maximum average values are 1-hour averages. The maximum average value for hydrogen sulfide is a 30-minute average.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #5416 ST03-221013 Stationary Monitoring Location - Goldsmith, TX								
Route Time	0350 - 0457							
Monitoring Location	Highway 866 ~ 2 miles South of Highway 158 (31.949324, -102.60244)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.0	346	10.3	0.0	0.0	0.1	0.0	0.0
Max Values	6.9		206.6	1.1	13.8	6.1	3.5	0.9
Max Avg*			83.3	0.1	2.6	1.6	0.9	0.2

* Maximum average values are 1-hour averages. The maximum average value for hydrogen sulfide is a 30-minute average.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.

Van #9427 ST01-221013 Stationary Monitoring Location - West Odessa, TX								
Route Time	0601 - 0705							
Monitoring Location	West 44th Street and Hereford Road (31.879386, -102.414064)							
Parameters	WindSpeed (mph)	Average WindDir (degrees)	Hydrogen sulfide ^B (ppbv)	1,3 - butadiene (ppbv)	Benzene (ppbv)	Toluene (ppbv)	Ethylbenzene + Xylenes (ppbv)	Styrene (ppbv)
Min Values	0.0	48	0.0	NA	NA	NA	NA	NA
Max Values	3.6		61914.5	NA	NA	NA	NA	NA
Max Avg*			6616.0	NA	NA	NA	NA	NA

* Maximum average values are 1-hour averages. The maximum average value for hydrogen sulfide is a 30-minute average.

B - One equipment blank did not pass acceptance criteria. All instantaneous concentrations may be biased +/- 9.7 ppbv.

NA - Not applicable, VOC data was not collected in Van #9427.

Yellow shading indicates the value is above the regulatory limit of 80 ppbv.