

Soil Investigation Findings within the City of Tacoma Right-of-way along Taylor Way

for the

Superlon Plastics Site Tacoma, Washington

Prepared for:

The Chemours Company FC, LLC

and

The White Birch Group LLC

By:



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October 16, 2019

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Boring Logs

1. Introduction

A GeoProbe drilling program was conducted to determine the soil quality within the City of Tacoma right-of-way between the Superlon Plastics Property boundary and Taylor Way. During this investigation nine GeoProbe borings were advanced to a depth of fifteen feet below ground surface (bgs). Soils were collected for each two foot interval, starting at 2 feet below bgs. Perched water was present, and samples were collected, in two borings.

2. Background

This work was conducted on behalf of the White Birch Group, LLC (White Birch) and the Chemours Company FC, LLC (Chemours) hereafter referred to as the “Companies”. The Companies activities described in this report were conducted in accordance with the Model Toxics Control Act (MTCA) Chapter 173-340 of the Washington Administrative Code (WAC) under Agreed Order No. DE 5940. The Agreed Order requires that the Companies develop a report whenever investigative work is to be completed at or adjacent to the Property.

2.1. Property Location and Description

The Property is located at 2116 Taylor Way, Tacoma, Washington in a highly industrial area of the Tacoma Tidal Flats between the Blair and Hylebos Waterways (see Figure 1). The Property is bordered to the northeast by Taylor Way, to the north by a curved rail road right-of-way owned by the City of Tacoma Public Works, to the northwest by Lincoln Avenue and a warehouse operation, and to the southeast by property leased and operated by Gardner-Fields Products, a roofing and waterproofing products manufacturing business, to the southwest by a ditch that separates the Property and Port of Tacoma property, which was formerly leased and operated as the Holbrook Log Yard (see Figure 2).

2.2. Background

A Remedial Investigation for on-Property Soils and Surface Water (RI - OSS) and a Feasibility Study for on-Property Soils and Perched Water (FS - OSP) were conducted as part of the site investigation (PERC/PIONEER 2013, 2014a). Approximately 1,300 soil samples were evaluated in the RI-OSS, but sampling stopped at the property boundary. Additional information was required to assess off-property soil conditions adjacent to property, in the Taylor Way right-of-way prior to the re-construction of Taylor Way by the City of Tacoma (COT) in 2020.

2.3. Objectives

The sampling event addressed the following two objectives:

- Determine if activities on the Property have impacted the soil within the COT’s right-of-way.
- Determine if further investigation is required to assess the soils underlying Taylor Way prior to the City’s reconstruction of that roadway in 2020.

3. Required Permits

The following permits and approvals were obtained prior to the initiation of work:

- Ecology's approval of this Work Plan;
- A permit from the City of Tacoma to conduct work within the right of way along Taylor Way.

4. Soil Sampling Scope of Work

4.1. Soil Sampling

Soil samples were collected using a GeoProbe® direct-push drill rig at the locations (if accessible) shown on Figure EIN 12. Boring-dedicated disposable plastic sleeves were used to collect the sample and reduce decontamination requirements. In general, soil was collected to a total depth of 15 feet bgs. Soil recovery was very poor causing sample compression and the abandonment of one boring SL-114. Generally, soil samples were collected at two foot intervals starting with the 2-4 foot sample to the bottom of the hole. Samples were not collected at intervals, based upon best professional judgement, which contained soils that will not aid in the understanding of the characteristics of the soil to be excavated during the remediation effort (i.e., 0-2 foot samples that consist of asphalt and bedding gravels, etc.). For this project, this was limited to 0-2 foot soil samples that were not collected because they consist of asphalt and bedding gravels and soil intervals that were not present in the sample tube due to perched water.

4.2. Soil Analysis

Fifty four soil samples were collected and analyzed by the on-site XRF to generate real-time data. The use of the XRF eliminated the laboratory turn-around time limitations while still providing high quality data and will allow for discussions with Ecology and/or the City of Tacoma Engineering Department as soon as possible. Forty eight of the collected samples were also be submitted to ARI Laboratories for laboratory analyses.

4.3. Decontamination

Decontamination of personnel and equipment followed the procedures identified in the work plan approved by Ecology and the project Health and Safety Plan (HASP; PERC/PIONEER 2016).

4.4. Soil Characteristics

The majority of the soil collected was related to mixed fill deposited during the construction of Taylor Way and the Superlon Plastic Site. This fill typically consisted of brown to tan sand and gravel containing mixed organic debris to a depth of 12 feet. Underlying this fill was an organic rich silt layer that extended to 14 feet bgs. From 14-15 feet the soil typically consisted of a silt rich sand. The notable exception was a one foot thickness of black spherical crystalline particles believed to be "shot" likely originating from the former adjacent US Gypsum Site, located at 2301 Taylor Way at the 4 to 6 foot interval of SL-119.

4.5. Soil Sample Analyses

All samples submitted to ARI were analyzed for arsenic and lead using EPA Method 6010B. The sample collection and analytical processes followed the methods described in the Sampling and Analytical Plan & Quality Assurance Project Plan Version 4 (PERC/PIONEER 2014).

4.6. Laboratory Results

The Method C cleanup standard for arsenic and lead of 88 mg/kg and 1000 mg/kg were used for screening purposes. Of the 55 soils samples collected, 10 contained arsenic concentrations greater than the screening concentration. One sample contained a lead concentration greater than the screening concentration (Table 1). The single lead exceedance also contained one of the 10 arsenic exceedances and was related to an occurrence of visible shot. These samples are represented with the 10 samples intervals listed on Table 2 below. Note that all of the arsenic and lead exceedance locations identified in Table 1 are vertically delineated, i.e., there are samples above and below the screening level exceedance location that have concentrations less than the screening level. This pattern is similar to the Superlon property where there are distinct layers of material that exceed criteria based on what material was used for fill.

TABLE 2: SCREENING LEVEL EXCEEDANCES - BORING DATA - CITY RIGHT OF WAY SAMPLING				
SAMPLE ID	DEPTH - TOP OF SAMPLE	DEPTH - BOTTOM OF SAMPLE	As (mg/kg)	Pb (mg/kg)
BORING 111				
SUP-SL-111-8-10-082219	8	10	215	311
SUP-SL-111-10-12-082219	10	12	123	174
SUP-SL-111-12-14-082219	12	14	453	742
BORING 112				
SUP-SL-112-4-6-082219	4	6	393	18.5
BORING 113				
SUP-SL-113-8-10-082219	8	10	130	35.9
SUP-SL-113-10-12-082219	10	12	335	24.3
BORING 116				
SUP-SL-116-4-6-082219	4	6	166	488
SUP-SL-116-6-8-082219	6	8	565	141
BORING 118				
SUP-SL-118-6-8-082219	6	8	215	553
BORING 119				
SUP-SL-119-4-6-082219 (1)	4	6	562	1,110

(1) Related to the presence of "shot"

5. Taylor Way Reconstruction

In the spring of 2020 the City of Tacoma plans to reconstruct Taylor Way. This work will include the paving of Taylor Way, the moving and replacement of utilities and the construction of sidewalks along the western side of the new road location.

Exposure to contaminated soil will be a consideration during this construction, especially during the installation of utilities. In discussions with the City's Engineering staff the maximum depth of excavation for the utilities will be 7 feet for the majority of the road in the section adjacent to the Superlon property with the exception of near Boring SUP-SL-119 where excavation will be 10 feet.

6. Summary

The following summarizes the findings of this investigative program:

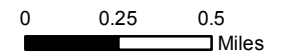
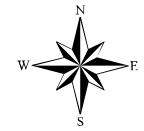
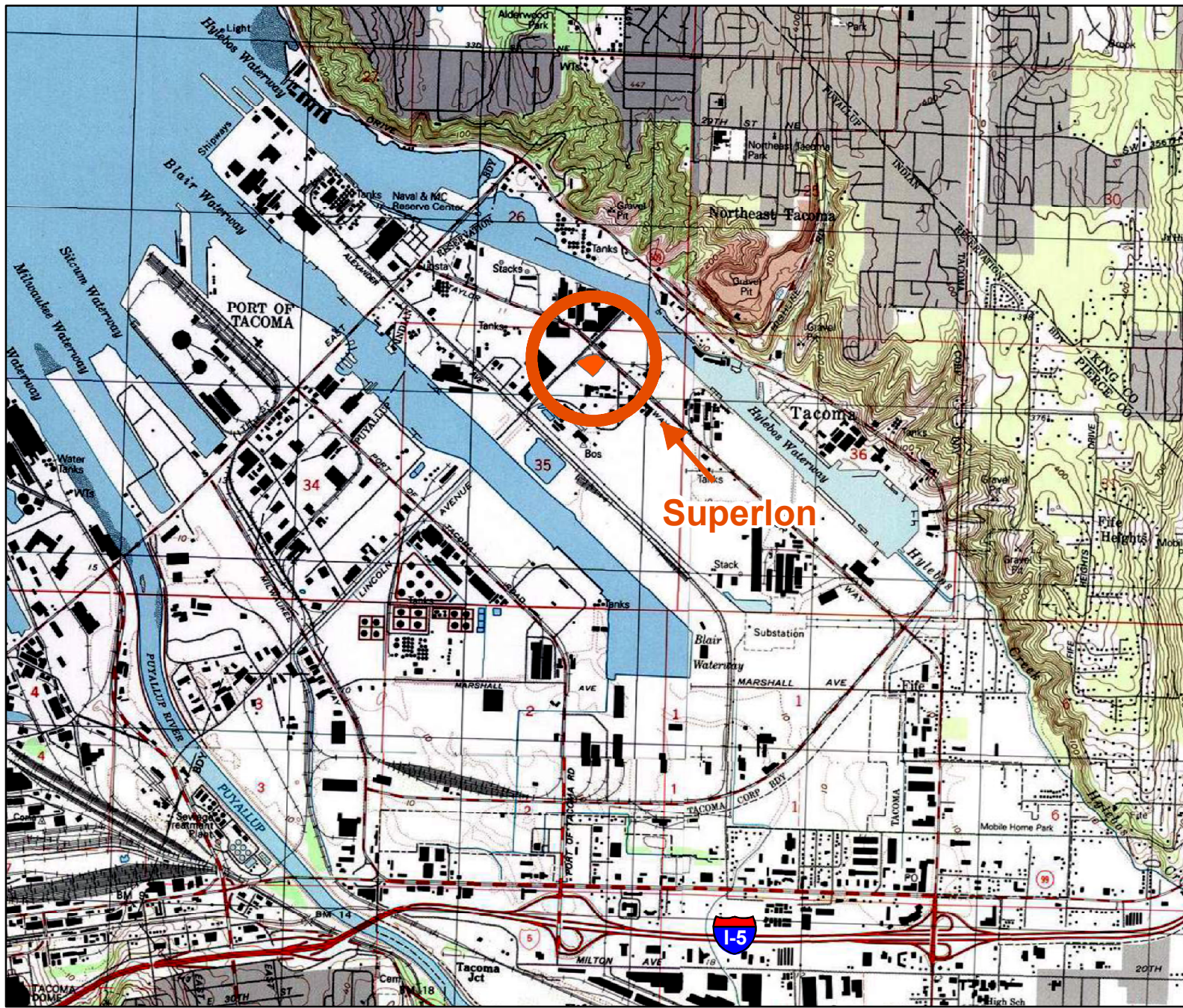
1. Six of the eight borings (SL-111, SL 112, SL-113, SL 116, SL-118 and SL-119) collected from the Taylor Way right-of-way contained arsenic concentrations greater than the screening levels;
2. Ten sample intervals contained arsenic concentrations greater than the screening levels; and
3. Five of these sample intervals (the 4'-6' interval of SL 112, the 4'-6' and 6'-8' intervals of SL 116, the 6'-8' interval of SL-118 and the 4'-6' interval of SL-119) potentially occur within the depth that will require excavation to install utilities.

7. References

PERC/PIONEER. 2014. Sampling and Analytical Plan & Quality Assurance Project Plan. June.

PERC/PIONEER. 2016. Health and Safety Plan for the Superlon Plastics Site, Tacoma, Washington. May.

FIGURES



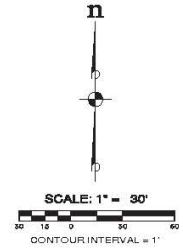
Site Location
 Superlon Plastics Site, Tacoma, Washington

DWN: LG	PROJECT: Superlon
DATE: October 2019	FIGURE NO.: 1

A PORTION OF THE NE 1/4 OF SECTION35, TWP 21 N., RGE 3 E., W.M., CITY OF TACOMA, PIERCE COUNTY, WASHINGTON



● Boring Location



HORIZONTAL DATUM
WASHINGTON STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, FWD 83/07, PROJEKT 83, INTERSECTION VAN DER MEER, POINTS 100, 100 AND 102 AS REPORTED ON THAT MAP FILED "LAND-PLATTES BOVENLAND SURVEY CONTROL, MAP OF PLANNING FOR THE PORT OF TACOMA, DATED FEB 3, 1997"

BASIS OF BEARINGS
S ASHES 18' 49" ALONG THE CENTERLINE OF LINCOLN AVENUE AS DEFINED SHEET 08 OF THAT RECORD OF SURVEY MAP FILED UNDER PIERCE COUNTY RECORDING NO. 228042/1/03/03.

VERTICAL DATUM
CITY OF TACOMA 1026.26

BASED ON POINT 180 AS NOTED CONTROL, MAP AS NOTED ABOVE, ELEVATION OF POINT 180 = 124.3 (M.A.S.L.)

ELEVATIONS SHOWN ARE M.S.L. (1026.26) CITY OF TACOMA DATUM. DATUM CONVERSIONS FROM M.S.L. TO M.A.S.L.

SUBTRACT 6.30 FEET FROM M.A.S.L. TO OBTAIN M.S.L. (1020.26) CITY OF TACOMA ELEVATIONS. SEE TACOMA PUBLIC WORKS VERTICAL DATUM CONVERSION SHEET PREPARED BY TACOMA PUBLIC WORKS, REVISED FEBRUARY 2004.

NOTES
THE BOUNDARY DEFINED HEREIN IS CALCULATED BASED ON SHEET 08 OF THAT RECORD OF SURVEY MAP FILED UNDER PIERCE COUNTY RECORDING NO. 228042/00/01 AND SHEET 1 OF THAT RECORD OF SURVEY MAP FILED UNDER PIERCE COUNTY RECORDING NO. 228042/00/01.

THE POSITION OF SURFACE FEATURES (DITCH, BORING, LIGHTS, BURNERS, ETC.) ARE FROM ACTUAL FIELD LOCATIONS. THE POSITION OF UNDERGROUND UTILITIES ARE FROM ACTUAL FIELD LOCATIONS IF VISIBLE FEATURES. THE UNDERGROUND LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND SHOULD NOT BE RELIED UPON FOR ANY CONSTRUCTION ON SITE.

- LEGEND**
- BOLLARD
 - ST INFORMATION SIGN
 - STORM DRAIN MANHOLE
 - LANEWAY 6" DIA
 - 6" GAS VALVE
 - 6" GAS AND/OR
 - ELECTRICAL JUNCTION PULL/BOX
 - POWER POLE 4" / 5000 VA
 - POWER POLE 4" / LIGHT
 - POWER POLE
 - POWER POLE 4" / TRANSFORMER
 - TRAFFIC SIGNAL POLE
 - FIRE HYDRANT
 - HOSE REEL
 - WATER METER
 - POST INDICATOR VALVE
 - WATER VALVE
 - FOULD BRASS CAP
 - FOULD HUB & GEAR
 - FOULD IRON PIPE
 - FOULD PVC LINE
 - FOULD HEAVY AND GWP
 - SET HUB A THICK
 - SET PK FAL
 - SET 200MB
 - EDGE OF WATER
 - FENCE, CHAIN-LINK
 - GUARD RAIL
 - FENCE, HDG W/PC
 - ESROW
 - PROPOSED STOCKPILE LOCATION

THE INFORMATION CONTAINED HEREIN IS FOR THE CITY OF TACOMA, WASHINGTON. IT IS NOT TO BE USED FOR ANY OTHER PROJECT OR PURPOSE. THE CITY OF TACOMA ACCEPTS NO LIABILITY FOR ANY ERRORS OR OMISSIONS. DATE: 04/15/2013

REVISIONS	
NO.	DESCRIPTION, DATE
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SUPERLON PLASTICS T.E.S.S. PLAN CITY OF TACOMA WASHINGTON	
USER NO.: 1824-001-008 DWG. NAME: BR-12 DESIGNED BY:	DRAWN BY: KJB CHECKED BY: DATE: 04/15/2013 DATE OF PRINT:
EN-12 1 of 1 SHEETS	

TABLES

TABLE 1: BORING DATA - CITY RIGHT OF WAY SAMPLING

SAMPLE ID	DEPTH - TOP OF SAMPLE	DEPTH - BOTTOM OF SAMPLE	As (mg/kg)	Pb (mg/kg)
BORING 111				
SUP-SL-111-2-4-082219	2	4	32.8	50.1
SUP-SL-111-4-6-082219	4	6	16.7	28.4
SUP-SL-111-6-8-082219	6	8	60.1	67.6
SUP-SL-111-8-10-082219	8	10	215	311
SUP-SL-111-10-12-082219	10	12	123	174
SUP-SL-111-12-14-082219	12	14	453	742
SUP-SL-111-14-15-082219	14	15	7.18	2.87
BORING 112				
SUP-SL-112-2-4-082219	2	4		
SUP-SL-112-4-6-082219	4	6	393	18.5
SUP-SL-112-6-8-082219	6	8	28.9	32.8
SUP-SL-112-8-10-082219	8	10	58.7	7.65
SUP-SL-112-10-12-082219	10	12	8.95	3.04
SUP-SL-112-12-14-082219	12	14	6.21	3.09
SUP-SL-112-14-15-082219	14	15	10.5	
BORING 113				
SUP-SL-113-2-4-082219	2	4	15.9	13.6
SUP-SL-113-4-6-082219	4	6	42.3	33.9
SUP-SL-113-6-8-082219	6	8	67.8	28.9
SUP-SL-113-8-10-082219	8	10	130	35.9
SUP-SL-113-10-12-082219	10	12	335	24.3
SUP-SL-113-12-14-082219	12	14	54.2	5.15
SUP-SL-113-14-15-082219	14	15	6.05	2.97
BORING 114				
SUP-SL-114-2-4-082219	2	4	NO SAMPLES	
SUP-SL-114-4-6-082219	4	6		
SUP-SL-114-6-8-082219	6	8		
SUP-SL-114-8-10-082219	8	10		
SUP-SL-114-10-12-082219	10	12		
SUP-SL-114-12-14-082219	12	14		
BORING 115				
SUP-SL-115-2-4-082219	2	4	41.2	102
SUP-SL-115-4-6-082219	4	6	33	72.2
SUP-SL-115-6-8-082219	6	8	14.2	23.8
SUP-SL-115-8-10-082219	8	10	46.2	3.91
SUP-SL-115-10-12-082219	10	12	32.3	12.9
SUP-SL-115-12-14-082219	12	14	5.79	3.51
SUP-SL-115-14-15-082219	14	15	3.42	1.61
BORING 116				
SUP-SL-116-2-4-082219	2	4		
SUP-SL-116-4-6-082219	4	6	166	488
SUP-SL-116-6-8-082219	6	8	565	141
SUP-SL-116-8-10-082219	8	10	21.9	6.39
SUP-SL-116-10-12-082219	10	12	15.5	8.22
SUP-SL-116-12-14-082219	12	14	6.5	4.31
SUP-SL-116-14-15-082219	14	15	3.43	2.36

TABLE 1: BORING DATA - CITY RIGHT OF WAY SAMPLING (CONT)

SAMPLE ID	DEPTH - TOP OF SAMPLE	DEPTH - BOTTOM OF SAMPLE	As (mg/kg)	Pb (mg/kg)
BORING 117				
SUP-SL-117-2-4-082219	2	4	59.5	70.5
SUP-SL-117-4-6-082219	4	6	81.8	196
SUP-SL-117-6-8-082219	6	8	38.7	57.5
SUP-SL-117-8-10-082219	8	10	78.1	218
SUP-SL-117-10-12-082219	10	12	2.85	2.3
SUP-SL-117-12-14-082219	12	14	13.5	15.1
SUP-SL-117-14-15-082219	14	15	4.05	3.07
BORING 118				
SUP-SL-118-2-4-082219	2	4	35.5	67.4
SUP-SL-118-4-6-082219	4	6	55.5	308
SUP-SL-118-6-8-082219	6	8	215	553
SUP-SL-118-8-10-082219	8	10	26.8	28.9
SUP-SL-118-10-12-082219	10	12	10.1	9.12
SUP-SL-118-12-14-082219	12	14	3.62	2.5
SUP-SL-118-14-15-082219	14	15	1.76	1.22
BORING 119				
SUP-SL-119-2-4-082219	2	4	39.8	57.9
SUP-SL-119-4-6-082219	4	6	562	1110
SUP-SL-119-6-8-082219	6	8	73.6	123
SUP-SL-119-8-10-082219	8	10	8.35	3.53
SUP-SL-119-10-12-082219	10	12	48.5	88.7
SUP-SL-119-12-14-082219	12	14	6.2	2.96
SUP-SL-119-14-15-082219	14	15	1.49	0.922

NON DETECT

Visible "shot"

CONCENTRATION >SCREENING LEVELS

BORING LOGS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID:	SUP_SL_111	Corrospounding #	
Project Name	SUPERLON PLASTICS	NOTES:	
Drilling Method	Direct Push - GeoProbe	Located near the southern edge of the east access road entry	
Driller			
Drill Rig	GeoProbe		
Field Professional	King		
Start Date	Thursday, August 22, 2019		
Stop Date	Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE INTRODUCED BACKFILL	25%	N	NA	NA	NO
1	2	NO SAMPLE INTRODUCED BACKFILL	25%	N	NA	NA	NO
2	4	Tan S&G	75%	N	GRAB	NA	YES
4	6	Tan S&G	75%	N	GRAB	NA	YES
6	8	Wet light grey silt w black sand	75%	Y	GRAB	NA	YES
8	10	Wet light grey silt w black sand	75%	Y	GRAB	NA	YES
10	12	Grey Course sand w gravel	90%	Y	GRAB	NA	YES
12	14	Black course sand grading to grey "pea" gravel at 13.5'	90%	N	GRAB	NA	YES
14	15	Grey sandy silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	2	INTRODUCED GRAVEL	S&G
2	14	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS
14	15	GREY SILT	SILT

OTHER RELEVANT INFORMATION & LEGEND

S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID:	SUP_SL_112	Corresponding #	
Project Name	SUPERLON PLASTICS	NOTES:	
Drilling Method	Direct Push - GeoProbe	Located 25' south of SL-111, PW SAMPLE COLLECTED, very poor recovery, samples should be used for indication only and not for depth of contamination	
Driller			
Drill Rig	GeoProbe		
Field Professional	King		
Start Date	Thursday, August 22, 2019		
Stop Date	Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE RECOVERY	0%	N	NA	NA	NO
1	2	NO SAMPLE RECOVERY	>5%	N	NA	NA	NO
2	4	NO SAMPLE RECOVERY	>5%	N	NA	NA	NO
4	6	WATER at 5', sample washed out above '	15%	Y	GRAB	NA	YES
6	8	Wet light grey silt w black sand	25%	Y	GRAB	NA	YES
8	10	Wet light grey silt w black sand	35%	Y	GRAB	NA	YES
10	12	Grey silt	45%	Y	GRAB	NA	YES
12	14	Grey silt	90%	N	GRAB	NA	YES
14	15	Dark grey sandy silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	4	NO SAMPLE	????
4	15	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS

OTHER RELEVANT INFORMATION & LEGEND

S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION		
Boring ID: SUP_SL_113	Corrospounding #	
Project Name: SUPERLON PLASTICS	NOTES:	
Drilling Method: Direct Push - GeoProbe	Located 20' south of SL-112, Poor initial recovery	
Driller:		
Drill Rig: GeoProbe		
Field Professional: King		
Start Date: Thursday, August 22, 2019		
Stop Date: Thursday, August 22, 2019		

SAMPLE COLLECTION							
Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE INTRODUCED BACKFILL	5%	N	GRAB	NA	NO
1	2	NO SAMPLE INTRODUCED BACKFILL	5%	N	GRAB	NA	NO
2	4	Deposited concrete	25%	N	GRAB	NA	YES
4	6	Black sand and silt w mixed debris	25%	N	GRAB	NA	YES
6	8	Grey sand	45%	N	GRAB	NA	YES
8	10	Grey sand to 9', Wet light grey silt w black sand a 9'	65%	Y	GRAB	NA	YES
10	12	Wet Black course gravel w sand	75%	Y	GRAB	NA	YES
12	14	Grey silt	90%	N	GRAB	NA	YES
14	15	Grey silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING			
Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	2	INTRODUCED GRAVEL	S&G
2	13	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS
13	15	GREY SILT WITH SAND	SILT AND SAND

OTHER RELEVANT INFORMATION & LEGEND
S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID:	SUP_SL_114	Corresponding #	
Project Name	SUPERLON PLASTICS	NOTES:	
Drilling Method	Direct Push - GeoProbe	Located 25' south of SL-113, NO recovery	
Driller			
Drill Rig	GeoProbe		
Field Professional	King		
Start Date	Thursday, August 22, 2019		
Stop Date	Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO RECOVERY IN THIS HOLE. ATTEMPTED RELOCATION AND REDRILLING 4 TIMES, HOLE ADANDONED AFTER FOUTH ATTEMPT					
1	2						
2	4						
4	6						
6	8						
8	10						
10	12						
12	14						
14	15						

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	2	???	
2	10	???	

OTHER RELEVANT INFORMATION & LEGEND

- S&G = Sand and Gravel
- GC = Medium Gray Silty Clay with Organics - Aquitard 1
- DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
- Shot = Spherical black glassy particles (USG waste Product)
- HL = Hydrated Lime Fill (varying in color from white to



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID: SUP_SL_115	Corresponding #	
Project Name: SUPERLON PLASTICS	NOTES:	
Drilling Method: Direct Push - GeoProbe	Located 25' south of SL-112, Poor recovery TO 5'	
Driller:		
Drill Rig: GeoProbe		
Field Professional: King		
Start Date: Thursday, August 22, 2019		
Stop Date: Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE INTRODUCED BACKFILL	5%	N	NA	NA	NO
1	2	NO SAMPLE INTRODUCED BACKFILL	5%	N	NA	NA	NO
2	4	Deposited concrete	15%	N	GRAB	NA	YES
4	6	Tan S&G	25%	N	GRAB	NA	YES
6	8	Tan S&G	45%	N	GRAB	NA	YES
8	10	Tan S&G to 9', lens of black S&G to 10', Water at 10'	90%	Y	GRAB	NA	YES
10	12	Silt w organics	90%	Y	GRAB	NA	YES
12	14	Grey silt	90%	N	GRAB	NA	YES
14	15	Sandy silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	2	INTRODUCED GRAVEL	S&G
2	15	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS

OTHER RELEVANT INFORMATION & LEGEND

S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID: SUP_SL_116	Corresponding #	
Project Name: SUPERLON PLASTICS	NOTES:	
Drilling Method: Direct Push - GeoProbe	Located 20' south of SL-115, Poor recovery to 6'	
Driller:		
Drill Rig: GeoProbe		
Field Professional: King		
Start Date: Thursday, August 22, 2019		
Stop Date: Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE RECOVERY	5%	N	NA	NA	NO
1	2	NO SAMPLE RECOVERY	5%	N	NA	NA	NO
2	4	NO SAMPLE RECOVERY	15%	N	NA	NA	YES
4	6	Tan S&G	25%	N	GRAB	NA	YES
6	8	Tan S&G	45%	N	GRAB	NA	YES
8	10	Tan S&G to 9', lens of black S&G to 10'	90%	Y	GRAB	NA	YES
10	12	Silt w organics, Water at 12'	90%	Y	GRAB	NA	YES
12	14	Grey silt	90%	N	GRAB	NA	YES
14	15	Sandy silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	4	NO SAMPLE RECOVERY	S&G
4	15	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS

OTHER RELEVANT INFORMATION & LEGEND

S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID:	SUP_SL_117	Corresponding #	
Project Name	SUPERLON PLASTICS	NOTES:	
Drilling Method	Direct Push - GeoProbe		
Driller			
Drill Rig	GeoProbe	Located 20' south of SL-116, Poor recovery to 6'	
Field Professional	King		
Start Date	Thursday, August 22, 2019		
Stop Date	Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE RECOVERY	5%	N	NA	NA	NO
1	2	NO SAMPLE RECOVERY	5%	N	NA	NA	NO
2	4	Tan S&G	15%	N	GRAB	NA	YES
4	6	Tan S&G	25%	N	GRAB	NA	YES
6	8	Tan S&G, Water at 6'	45%	Y	GRAB	NA	YES
8	10	Brown silty S&G	90%	Y	GRAB	NA	YES
10	12	Silt w organics	90%	Y	GRAB	NA	YES
12	14	Grey silt	90%	N	GRAB	NA	YES
14	15	Sandy silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	4	NO SAMPLE RECOVERY	S&G
4	15	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS

OTHER RELEVANT INFORMATION & LEGEND

- S&G = Sand and Gravel
- GC = Medium Gray Silty Clay with Organics - Aquitard 1
- DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
- Shot = Spherical black glassy particles (USG waste Product)
- HL = Hydrated Lime Fill (varying in color from white to

CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID:	SUP_SL_118	Corresponding #	
Project Name	SUPERLON PLASTICS	NOTES:	
Drilling Method	Direct Push - GeoProbe	Located 20' south of SL-117, collected PW sample (PW118)	
Driller			
Drill Rig	GeoProbe		
Field Professional	King		
Start Date	Thursday, August 22, 2019		
Stop Date	Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE RECOVERY	5%	N	NA	NA	NO
1	2	NO SAMPLE RECOVERY	5%	N	NA	NA	NO
2	4	Tan S&G	15%	N	GRAB	NA	YES
4	6	Tan S&G	25%	N	GRAB	NA	YES
6	8	Tan S&G	45%	N	GRAB	NA	YES
8	10	Brown silty S&G	90%	N	GRAB	NA	YES
10	12	Silt w organics, Water at 11'	90%	Y	GRAB	NA	YES
12	14	Grey silt	90%	N	GRAB	NA	YES
14	15	Sandy silt	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	4	NO SAMPLE RECOVERY	S&G
4	15	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS

OTHER RELEVANT INFORMATION & LEGEND

S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS



SOIL BORING LOG FORM

BORING INFORMATION

Boring ID: SUP_SL_119	Corresponding #	
Project Name: SUPERLON PLASTICS	NOTES:	
Drilling Method: Direct Push - GeoProbe	Located 20' south of SL-118, In north 5 feet of south haul road	
Driller:		
Drill Rig: GeoProbe		
Field Professional: King		
Start Date: Thursday, August 22, 2019		
Stop Date: Thursday, August 22, 2019		

SAMPLE COLLECTION

Sample Depth (ft.)		Localized Soil/Rock Description	% Recov.	Contacts or GW?	Sampling Method	PID (ppm)	Sent to Lab?
From	To						
0	1	NO SAMPLE TAKEN - OVERBURDEN (INTRODUCED GRAVEL)	15%	N	NA	NA	NO
1	2	NO SAMPLE TAKEN - OVERBURDEN (INTRODUCED GRAVEL)	15%	N	NA	NA	NO
2	4	Tan S&G	25%	N	GRAB	NA	YES
4	6	Tan S&G, 9" of shot from 5'	35%	N	GRAB	NA	YES
6	8	Grey sand w silt	45%	N	GRAB	NA	YES
8	10	Grey sand w silt & organics	90%	N	GRAB	NA	YES
10	12	Silty sand with organics	90%	N	GRAB	NA	YES
12	14	Grey sandy silt	90%	N	GRAB	NA	YES
14	15	Black silty sand	90%	N	GRAB	NA	YES

GENERALIZED DESCRIPTION OF SOIL/ROCK ENCOUNTERED IN BORING

Depth of Boring		Generalized Soil or Rock Description	USCS Soil Type
From	To		
0	2	NO SAMPLE RECOVERY	S&G
2	15	FILL - MIXED WASTE	SAND, GRAVEL, SILT AND DEBRIS

OTHER RELEVANT INFORMATION & LEGEND

S&G = Sand and Gravel
GC = Medium Gray Silty Clay with Organics - Aquitard 1
DS1 = Dredge Sands 1 (Black Sorted Sand with red particles)
Shot = Spherical black glassy particles (USG waste Product)
HL = Hydrated Lime Fill (varying in color from white to
CONCENTRATIONS >SCREENING LEVELS