

26th St N/Old Dominion Task Force

Meeting #6: February 7, 2019

**Shallow subsurface soil and asphalt and
concrete wipe sampling and analysis**



Lead Sampling Background

- The old salt dome structure exterior was painted with lead based paint.
- Froehling & Robertson, Inc (F&R) conducted shallow sub-surface soil and asphalt and/or concrete wipe sampling and analysis in the areas surrounding the salt dome structure as part of the pre- and post demolition
- Sample results compared to Virginia Department of Environmental Quality (VDEQ) Voluntary Remediation Program (VRP) thresholds:
 - Tier III Industrial soil screening level for lead is 800 milligrams per kilograms (mg/kg)
 - Tier II Residential soil screening level for lead is 270 milligrams per kilograms (mg/kg)

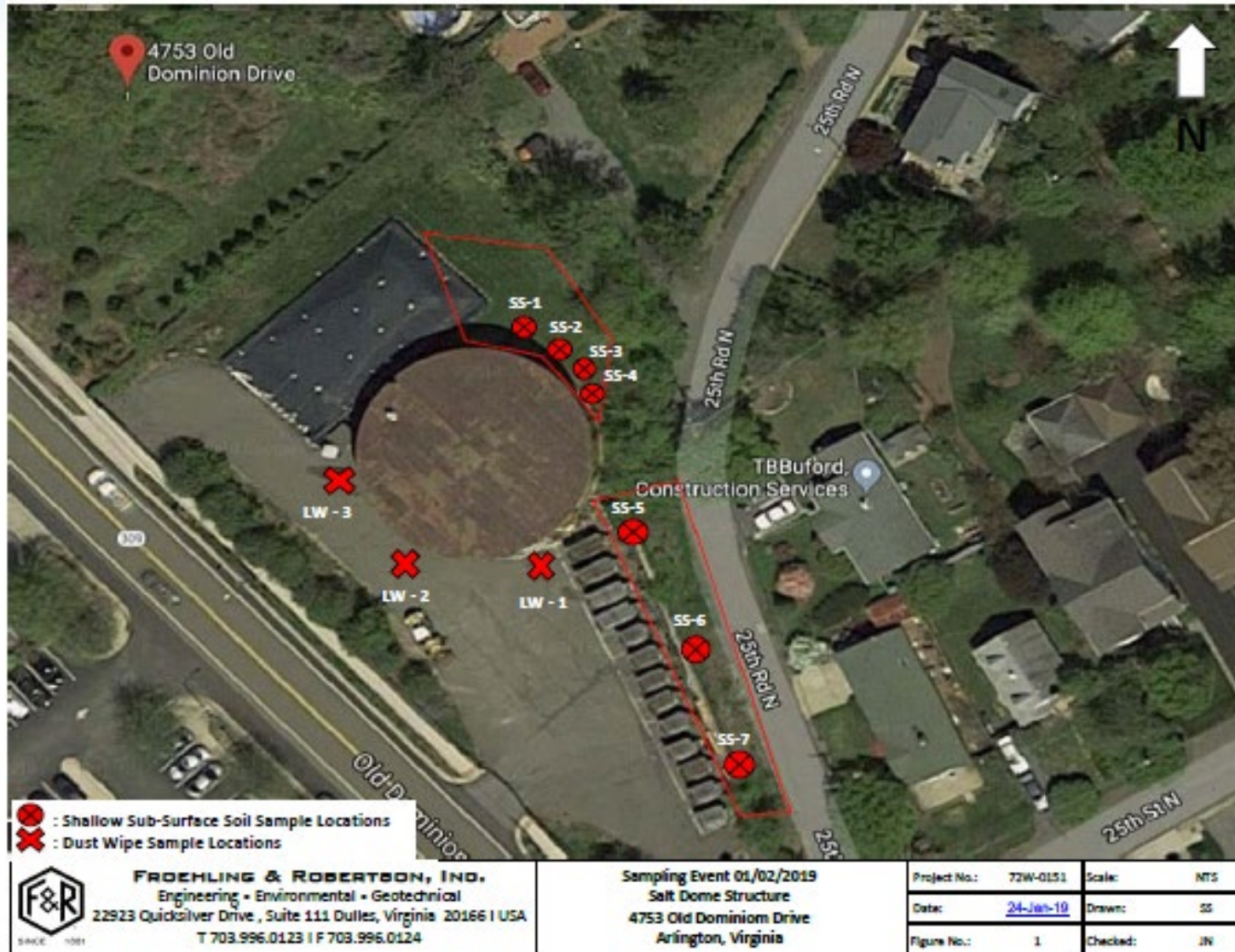
Testing

- Prior to demolition activities testing:
 - All samples collected were below VDEQ screening levels
- Post demolition activities testing:
 - Lead concentrations along the boundary roadway, 25th Road North were below the VDEQ – VRP, Tier II Residential Soil Screening Level.
 - Two (2) soil samples collected from the soils surrounding the previous salt dome structure exceeded the VDEQ – VRP, Tier III Industrial Soil Screening Level for lead; and
 - The wipe samples collected from the asphalt and concrete on the south side of the structure were significantly elevated in comparison to the wipe samples collected prior to demolition of the structure.
- Generally, lead concentrations in soils decrease with distance from the former structure.

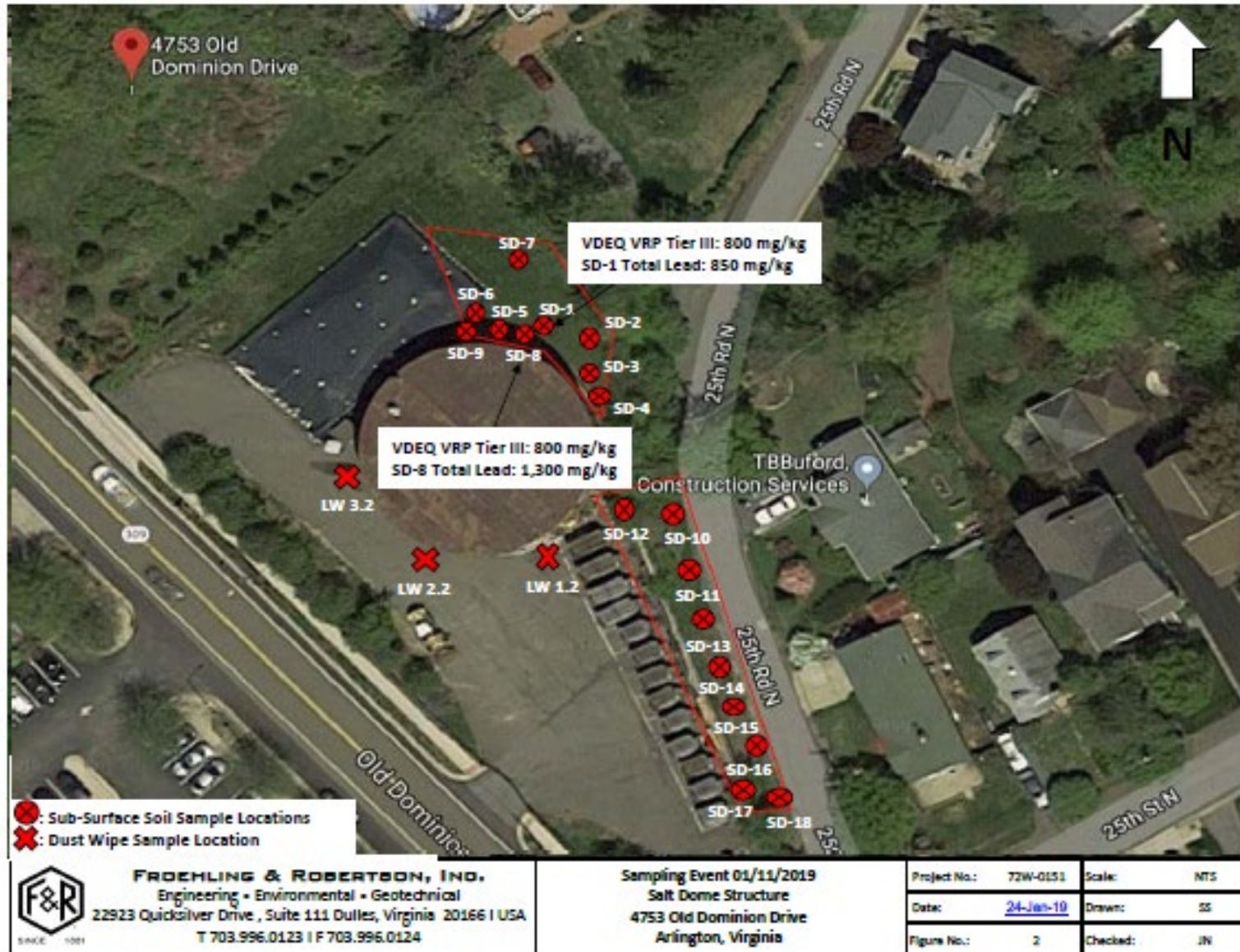
Testing continued

- Toxicity Characteristic Leaching Procedure (TCLP) Lead by EPA Method SW-846 6020A analysis was performed on the two (2) soil samples that exceeded the VDEQ – VRP Tier III Industrial Soil Screening Level for lead.
- The Environmental Protection Agency (EPA) Regulatory Limit for disposal of lead in soil is 5.0 parts per million (ppm) or milligrams per liter (mg/l).
- The laboratory analytical results indicated that the soil samples are below the EPA Regulatory Limit to characterize the soil as hazardous waste.

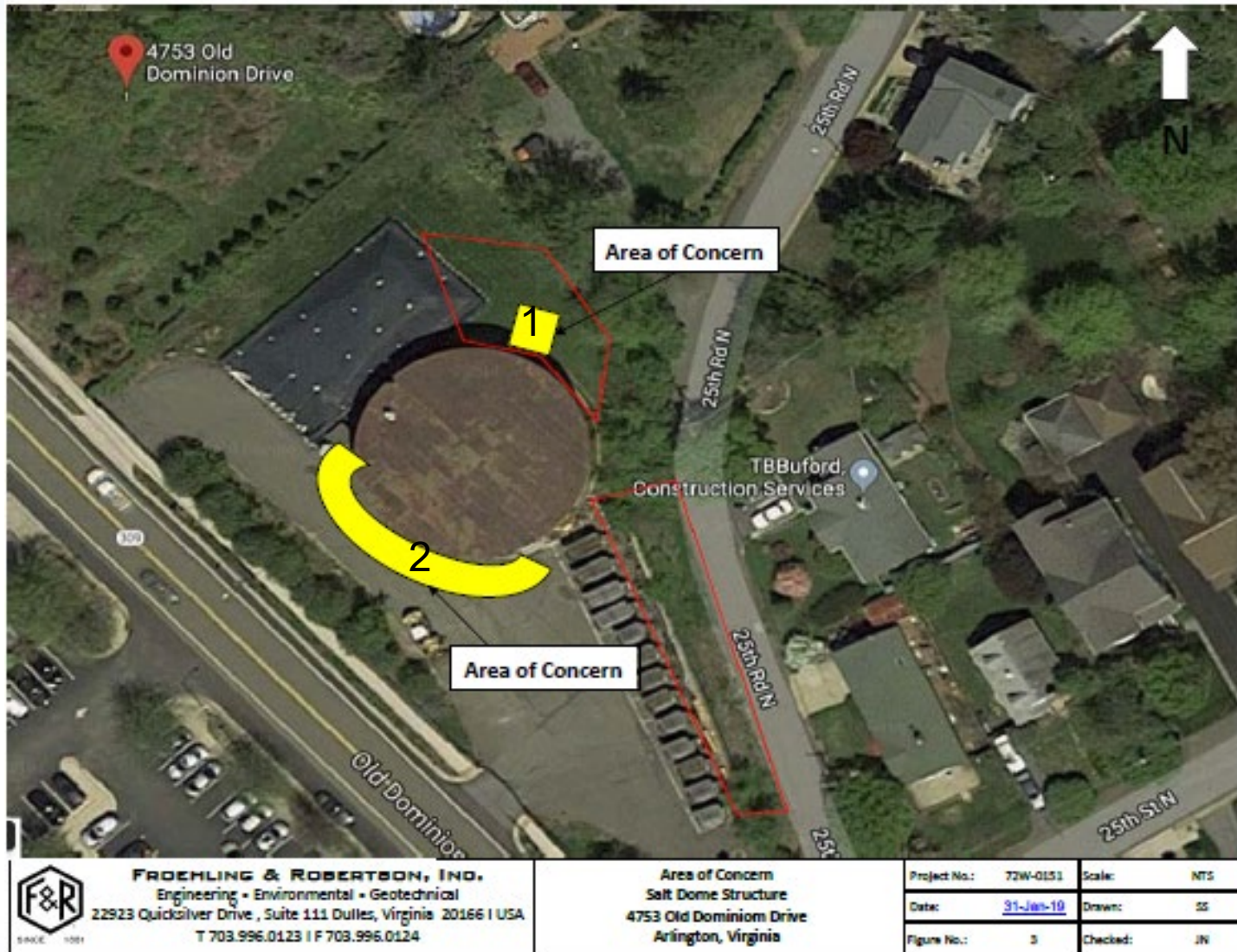
Lead Sampling 1/2/19



Lead Sampling 1/11/19



Area of Concern (AOC) in Yellow



Conclusion & Recommendations

- AOC #1:
 - the limited localized lead contaminated soil be removed and disposed of off-site.
 - Once the removal of the soil is complete, the two sample locations in the localized area should be re-sampled to confirm that lead concentration in the soil are below the VDEQ VRP Tier III Industrial screening level for lead.
 - Soil removal is complete and awaiting test results
- AOC #2:
 - Increase level may be a result of settled dust and debris from the demolition of the Salt Dome Structure, resulting in a higher concentration of lead observed.
 - Cleaning using High Efficiency Particulate Absolute (HEPA) vacuums and/or dry sweeping compound methods to minimize bulk material for disposal are recommended.
 - Cleaning has been completed.

Lead Sampling Results Pre & Post Demolition

Table 1: Analytical Results: Soil Sample Analytical Results

Sample I.D.	Sample Location	Lead by EPA Method 6020A	Units
Soil Sampling Event 01/02/2019			
VDEQ VRP Tier III Industrial Soil Screening Level		800	mg/kg
SS-1	Surrounding the Structure	190	mg/kg
SS-2	Surrounding the structure	610	mg/kg
SS-3	Surrounding the structure	430	mg/kg
SS-4	Surrounding the structure	12	mg/kg
VDEQ VRP Tier II Residential Soil Screening Level		270	mg/kg
SS-5	Along 25 th Road North	93	mg/kg
SS-6	Along 25 th Road North	15	mg/kg
SS-7	Along 25 th Road North	19	mg/kg
Soil Sampling Event 01/11/2019			
VDEQ VRP Tier III Industrial Soil Screening Level		800	mg/kg
SD-1	Surrounding the structure	850	mg/kg
SD-2	Surrounding the structure	140	mg/kg
SD-2	Surrounding the structure	170	mg/kg
SD-4	Surrounding the structure	270	mg/kg
SD-5	Surrounding the structure	290	mg/kg
SD-6	Surrounding the structure	27	mg/kg
SD-7	Surrounding the structure	44	mg/kg
SD-8	Surrounding the structure	1,300	mg/kg
SD-9	Surrounding the structure	61	mg/kg
VDEQ VRP Tier II Residential Soil Screening Level		270	mg/kg
SD-10	Along 25 th Road North	130	mg/kg
SD-11	Along 25 th Road North	150	mg/kg
SD-12	Along 25 th Road North	230	mg/kg
SD-13	Along 25 th Road North	150	mg/kg
SD-14	Along 25 th Road North	43	mg/kg
SD-15	Along 25 th Road North	35	mg/kg
SD-16	Along 25 th Road North	20	mg/kg
SD-17	Along 25 th Road North	14	mg/kg
SD-18	Along 25 th Road North	15	mg/kg

^{***} Bold indicates: concentration levels above the VDEQ VRP Tier III Industrial Soil Screening Level.