

DEQ's Northern Region Petroleum Program current understanding of the Robinson Terminal North – the former Washington Post paper depot. April 2016.

On October 26, 2015, the Northern Regional Office Petroleum Program received information in a Phase II Environmental Site Assessment indicating that a discharge of petroleum had occurred at the Robinson Terminal North (RTN) property on 500 and 501 North Union Street, the City of Alexandria. The information was provided as part of a bona fide prospective purchaser application made by the future developer of the property.

On November 17, 2015, DEQ issued pollution complaint number 2016-3090 and requested a site characterization report to assess the nature and extent of petroleum contaminants and determine what, if any, corrective action was necessary to prevent risks to human health and the environment from these contaminants. Investigations are planned by the developer over the coming months to assess the nature and extent of petroleum contaminants and to meet the requirements of DEQ's Voluntary Remediation Program.

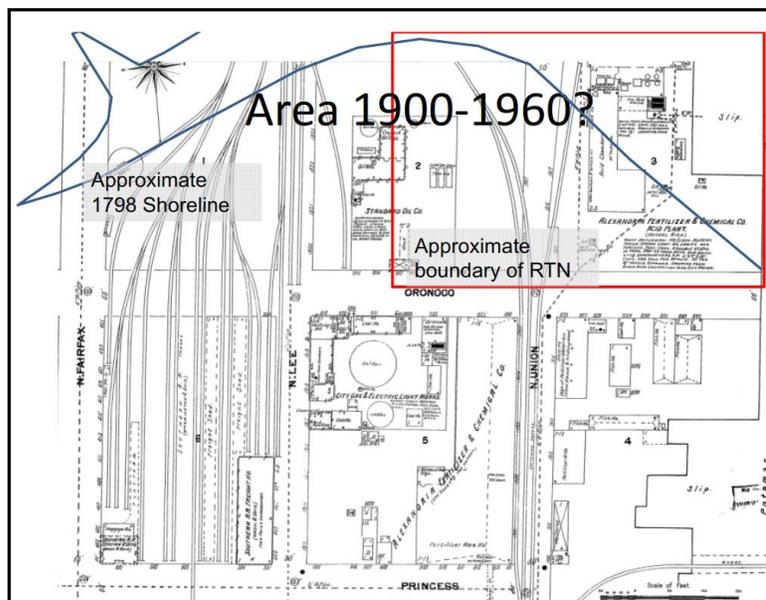


Detail from the 1863 Magnus "Bird's Eye View of Alexandria": the edge of RTN is highlighted

Site History

The information provided to the petroleum program indicates that the properties have had a long history of industrial and commercial use. From at least the early 1700s to the late 1800s the property is believed to have been the site of a number of warehouses and part of the Port of Alexandria. The eastern and northern part of the property was probably part of the Potomac and a creek (running down what is now Pendleton Road) until the late 1800s.

By the late 1800s the property was crossed by railway lines and had been developed as a sulfuric acid, fertilizer and pesticides factory, with the western part of the property used as a bulk oil storage depot. These uses continued until the 1960s. The existing warehouses are understood to have been constructed in 1968 (eastern warehouse) and 1976 (western warehouse).





The eastern warehouse had three diesel underground storage tanks (USTs) on site until their removal in March 2016. These USTs were the subject of a previous pollution complaint 2006-3131, which was closed in 2006 after a site characterization was completed and indicated no significant petroleum release had occurred.

USTs being removed in March 2016

Geology

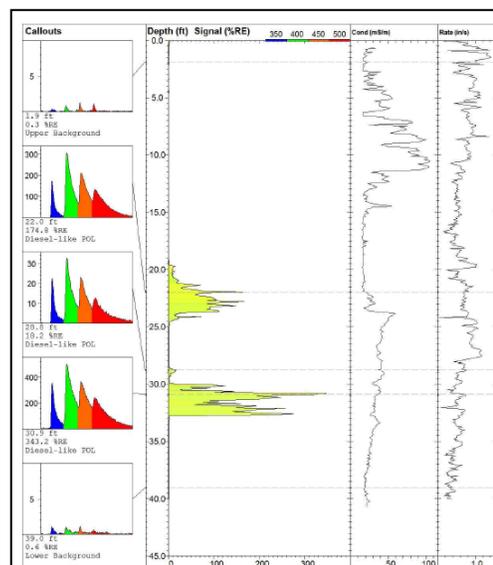
The site is underlain by backfill, Potomac River alluvium and the Potomac Formation clay. Subsurface investigations completed to date show backfill approximately 5 feet thick beneath the western area, increasing to between 15 and 20 feet in the areas near the Potomac. The fill is locally underlain by between 3 and 10 feet of alluvial clay. Beneath the clay (or directly beneath the fill where the clay is absent) is between 8 and 22 feet of alluvial sand. Gravel between 5 and 20 feet underlies the sand in three of six deep boreholes across the centre of the site. The alluvial sequence is underlain at 32 to 47 feet by stiff Potomac Formation clays. Groundwater is between 10 feet (at the western, higher side of the site) to 5 feet deep and is likely to flow through the alluvium toward the Potomac. Preferential flow may follow buried river channel features, such as those represented by the deep gravel, and old creek beds.

Petroleum Program contaminants of concern

Petroleum contaminants of concern may be present as a result of bulk storage from the early 1900s to the 1960s, diesel fuel storage from the 1960s to the present, and, potentially, from the use of fuel oil as an energy source during operation of the chemical plant. Petroleum, if present in the subsurface, poses a potential threat of oil discharges to the Potomac River, and, if unabated during development, a potential threat to future occupiers of the property. Characterization of the nature and extent of petroleum is therefore necessary.

Proposed Investigation

The developer is proposing to complete a range of further investigation activities, starting with completing an enhanced site assessment using laser induced fluorescence (LIF), membrane interface probes (MIPs), and electron capture detection technology. These insitu test methods allow the distribution of petroleum and other contaminants to be mapped both horizontally and vertically to within inches of precision. These tests will be supplemented by soil and water testing, with sample locations determined by the results of the *in-situ* survey. The data will eventually allow for the development of a 3D image of the contamination in the subsurface beneath the Robinson North Terminal. Additional testing will also be carried out to meet the requirements of DEQ's Voluntary Remediation Program.



Example of an LIF probe showing petroleum

The results of the investigation will be reviewed to determine whether any ongoing risks from the petroleum contamination exist. The focus of the analysis will be on the risk to the Potomac River water quality and on the long term health of future occupants of the property. Actions to address risks posed by non-petroleum contaminants will be addressed by other regulatory programs, as appropriate.

Future activities

The initial investigation of the petroleum contaminants is expected to be completed by September 2016. If the initial investigation indicates remedial action is necessary for the petroleum, DEQ's Petroleum Program will request a Corrective Action Plan (CAP). The CAP would be public noticed and available for public comment for thirty days before approval.

DEQ understands that the site buildings will be demolished in the coming months and the area proposed for future construction raised out of the flood plain. DEQ understands the existing concrete slab beneath the buildings will be left in place until full site development begins. Once appropriate permissions are granted for the development by the City of Alexandria excavation activities can then begin to allow the construction of the new building underground parking and foundations. Permissions for development and the timeline for the demolition and construction activities, as well as any changes, are outside of the DEQ authority or involvement and are separate from DEQ requirements for further investigation or corrective action.