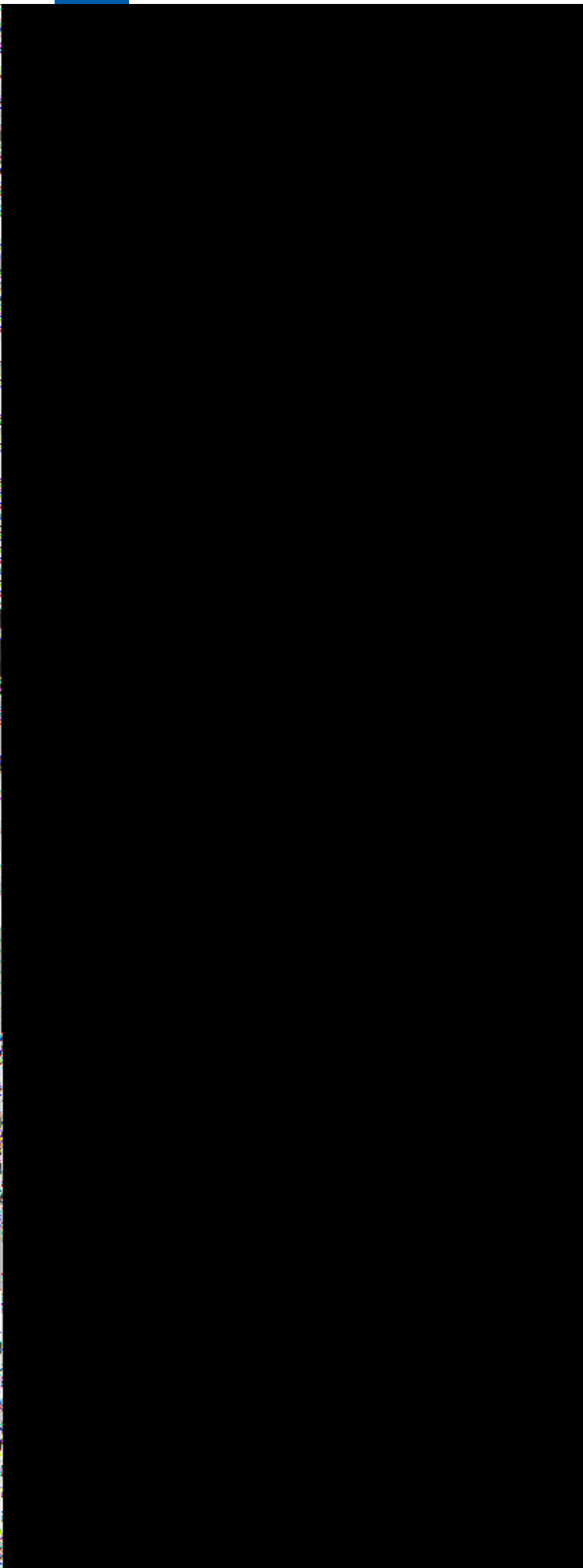
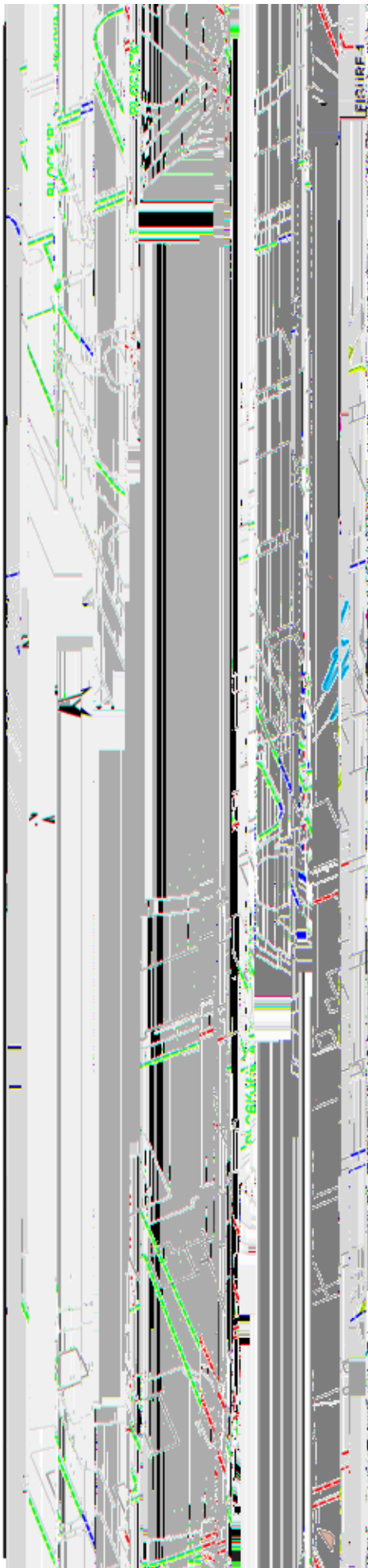


**Addendum to Citizens' Guide
Proposed soil cleanup plans for additional
Tax Blocks for Lockheed Martin's
Middle River Complex**



Winter 2013-2014

Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland



BLOCK G consists of approximately 13 acres and two Recognized Environmental Conditions (RECs): REC 11, which was where a former sewage treatment plant and wind tunnel and vibration test buildings were located; and REC 12, which is the southern portion of Parking Lot No. 3. The rest of Parking Lot No. 3 is also included in Block G. Lockheed Martin proposes that Block G soil be cleaned up to standards for *industrial* use. See *Figures 5-1 and 5-2*.

BLOCK H consists of nearly 8 acres. The block is now and has been historically used as an employee parking lot. Lockheed Martin proposes that Block H soil be cleaned up to standards for *industrial* use. See *Figure 6*.

What is the nature and extent of soil contamination in the tax blocks?

The soils in the tax blocks at the Middle River Complex are contaminated mainly with polycyclic aromatic hydrocarbons (PAHs). The PAHs are found in varying concentrations throughout the soil. The source of the contaminated soil appears to be fill used for grading when the Middle River Complex expanded in the 1930s and 1940s. (Fill is soil and other materials used to create or build-up land areas.) Some metals are scattered throughout the Complex; their concentrations are above Maryland Department of the Environment screening levels in only a few places.

What are polycyclic aromatic hydrocarbons?

Polycyclic aromatic hydrocarbons (PAHs) are semi-volatile organic chemicals that originate from both man-made and natural sources. (A semi-volatile organic compound has a boiling point higher than water but may still vaporize when exposed to temperatures above room temperature.) PAHs are created when products like coal, oil, gas, wood and garbage are burned incompletely, and are found in the resulting residue. Asphalt pavement is a common source of PAHs, among many other petroleum product-related sources. PAHs can break down over time and some PAHs are considered carcinogenic.

Where are polycyclic aromatic hydrocarbons (PAHs) located in the tax blocks?

Because PAHs were introduced to the blocks primarily in fill, they al

The PCBs found in Block E are Aroclor-1254 and Aroclor-1260. No one is exposed at this time, since the public is restricted from access and there is no current industrial worker exposure. Such an exposure would result in unacceptable risk.

Do I need to be concerned about other contaminants identified in the tax blocks?

Mercury, arsenic and hexavalent chromium were found in the soil in Block D at levels that are considered safe for a site limited to industrial use.

Arsenic and hexavalent chromium were detected in the Block D panhandle. These contaminants will be removed to a lower level of concentration, which will permit safe recreational use.

Arsenic was also found in Block G, mainly near REC 11, the location of the former sewage treatment plant, wind tunnel and vibration test buildings, and will be removed.

Concentrations of trichlorobenzene (1,2,4-TCB) were found more than two feet below the surface of the ground near two soil borings in Block E. Trichlorobenzene is a solvent and is typically associated with PCBs used in electrical equipment. Because it is located more than two feet below the ground surface it does not contribute significantly to a risk for direct contact for typical industrial workers.

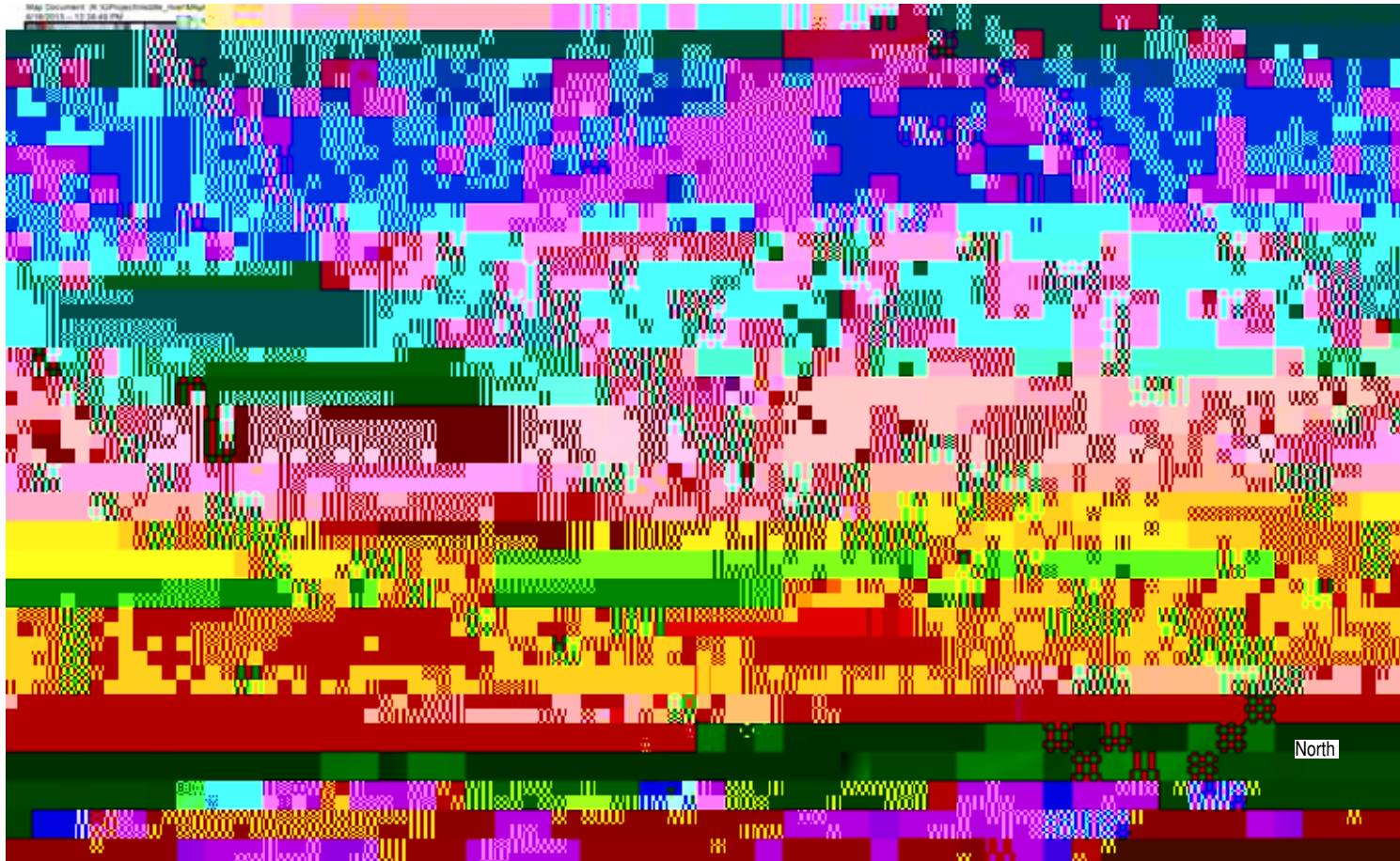
All these contaminants are below the surface of the soil and are not carried off site by wind or water runoff.

While average remaining concentrations will be considered safe for industrial workers, any future use or redevelopment of Blocks D, E, G, and H may require further cleanup.

Selecting The Best Clean Up Alternative

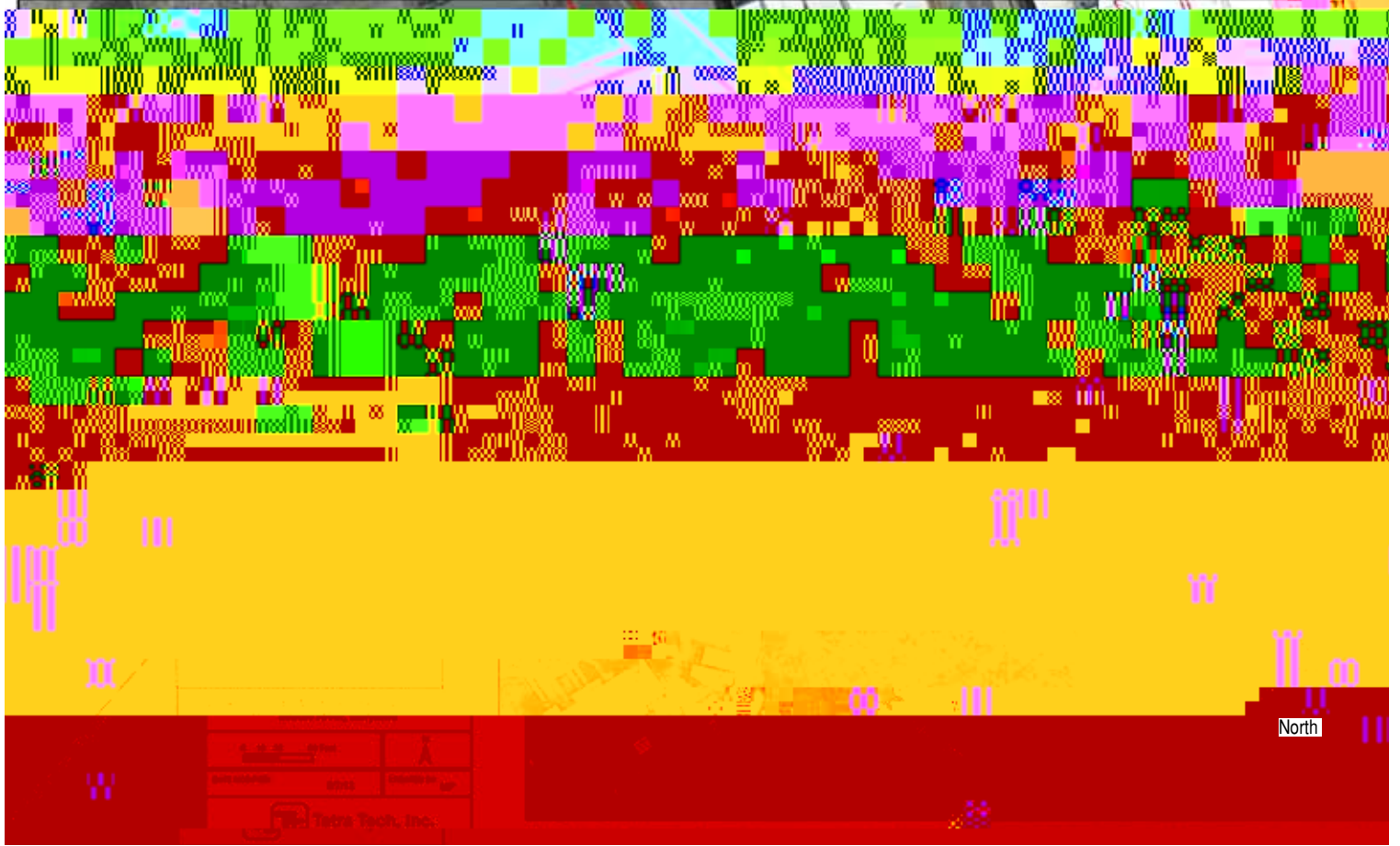
How did Lockheed Martin come up with cleanup alternatives?

Lockheed Martin first developed alternatives alone or in combination in broad categories: take no action (this was considered only for purposes of comparison); remove contaminated soil; implement land use controls to limit access to contaminants; contain the contaminants in place; and treat the contaminants in place. Multiple alternatives were considered for each block, and are spelled out in the Soil Remedial Action Plans. These are available on line at <http://www.lockheedmartin.com/middleriver> and in hard copy at the Essex Public

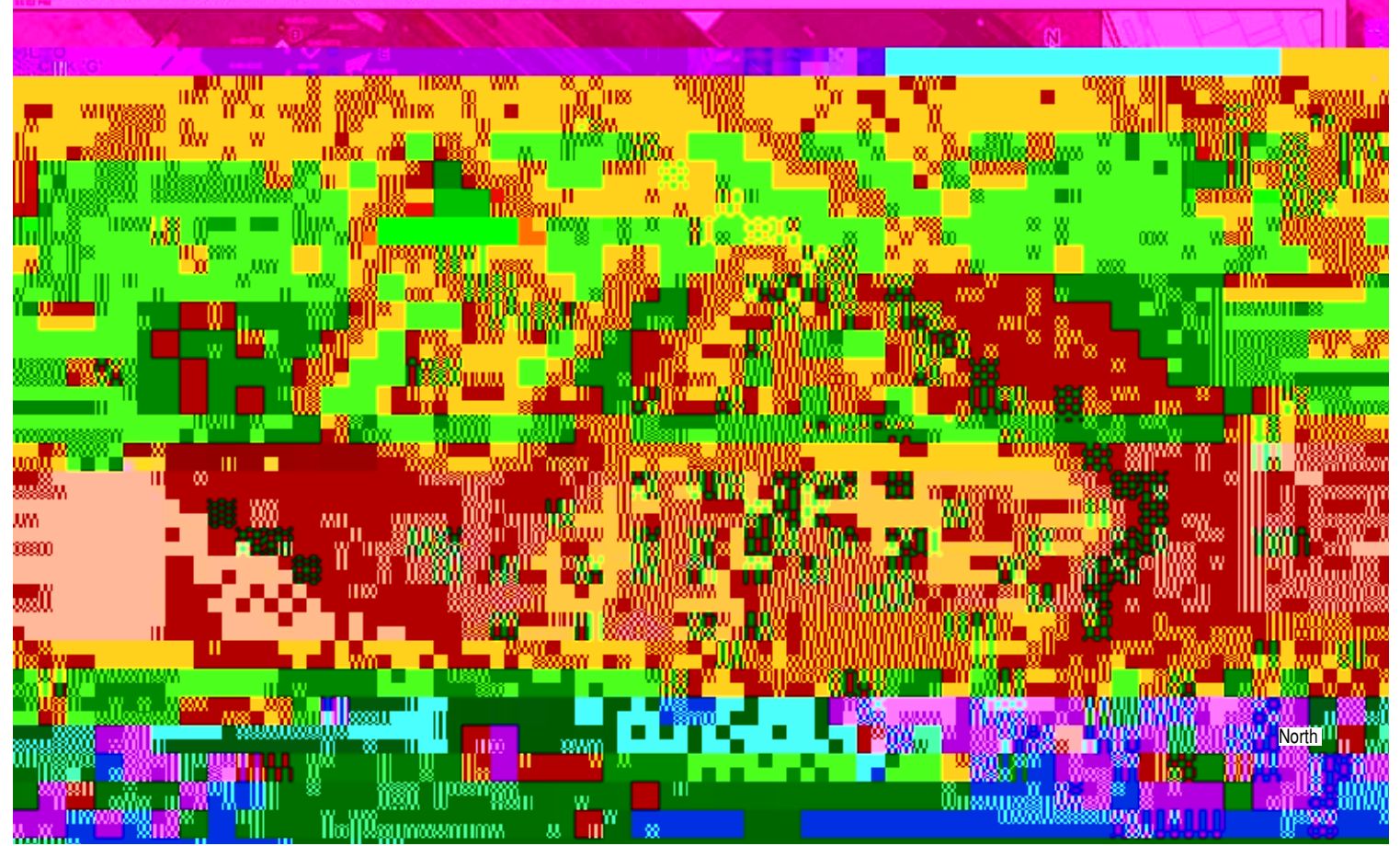


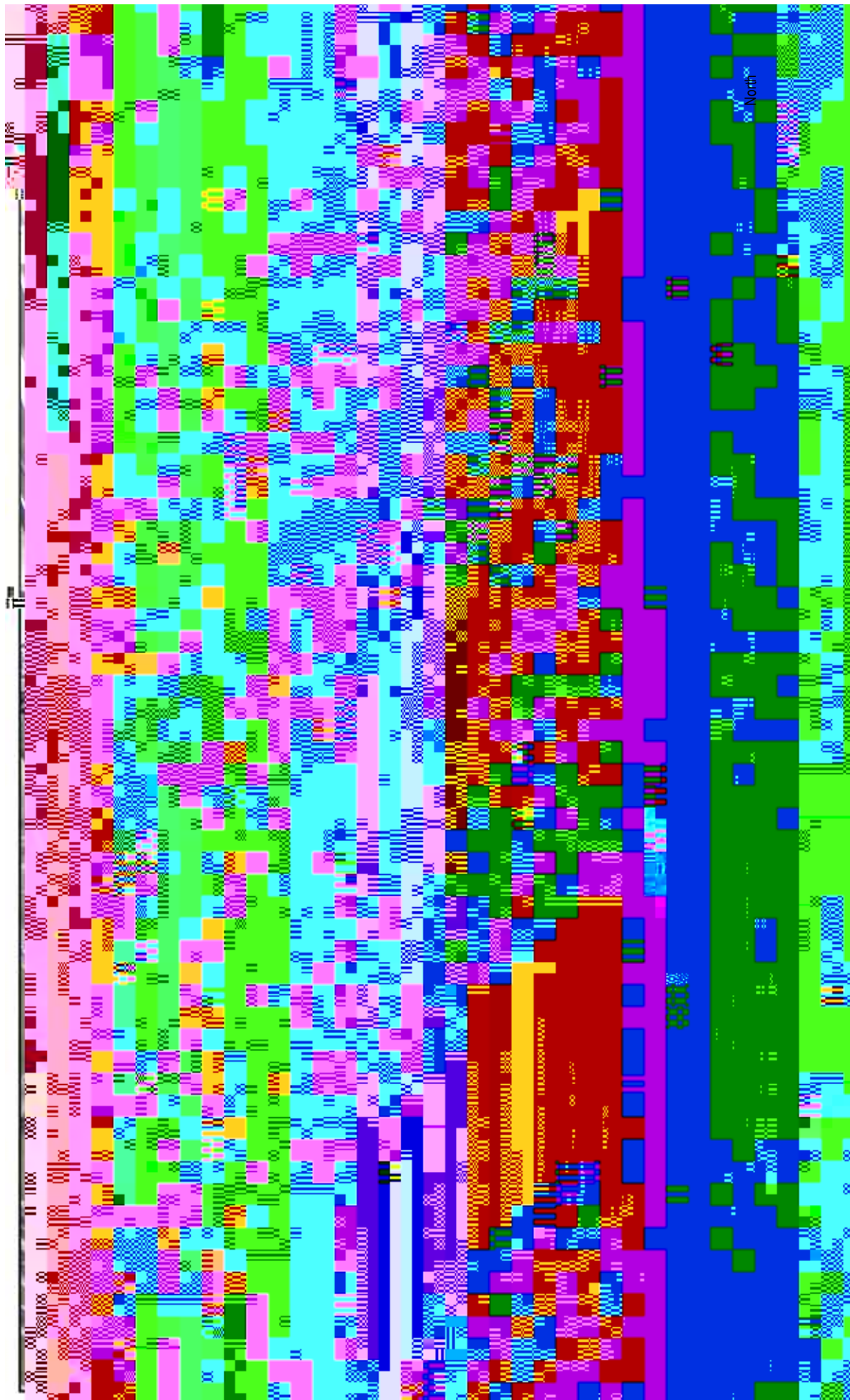


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remedial activities will be restored with asphalt, gravel, or stabilizing vegetation. Restoration procedures will be detailed in remedial design documents that will be prepared prior to implementation.

Will soil excavation require permits?