Brief Project Description

As a part of the environmental investigations and cleanup plans under way at the Martin State Airport site, Lockheed Martin has conducted extensive surface water and sediment investigations in Frog Mortar Creek since 2004. Previous investigations of the surface water and sediment were conducted by the airport operator (Maryland Aviation Administration) in 1997. The area under investigation is adjacent to the part of the property known as the Dump Road Area. These areas are shown in Graphic #1 on page 3.

Based on the three-phased study submitted to the Maryland Department of the Environment (MDE) in 2009, remediation of sediment or surface water in Frog Mortar Creek was not anticipated. However, ongoing sampling of

Frequently Asked Questions

1. What are the contaminants found in Frog Mortar Creek and also found in the groundwater in the Dump Road Area?

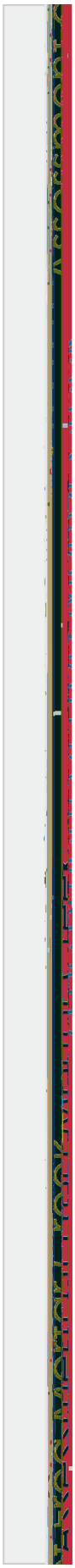
The primary contaminant in groundwater is trichloroethene, known as TCE, which breaks down and forms “daughter” byproducts. TCE and two such byproducts, cis-1,2-dichloroethene and vinyl chloride, are found in groundwater and in Frog Mortar Creek. Vinyl chloride is the þnal stage in the breakdown process before the contaminants become non-toxic. During this last stage, vinyl chloride is the most toxic of the compounds, so the vinyl chloride levels that regulators consider to be safe — or “allowable” — are extremely low.

2. What are the levels of these compounds that have been detected, and what levels are allowed as safe?

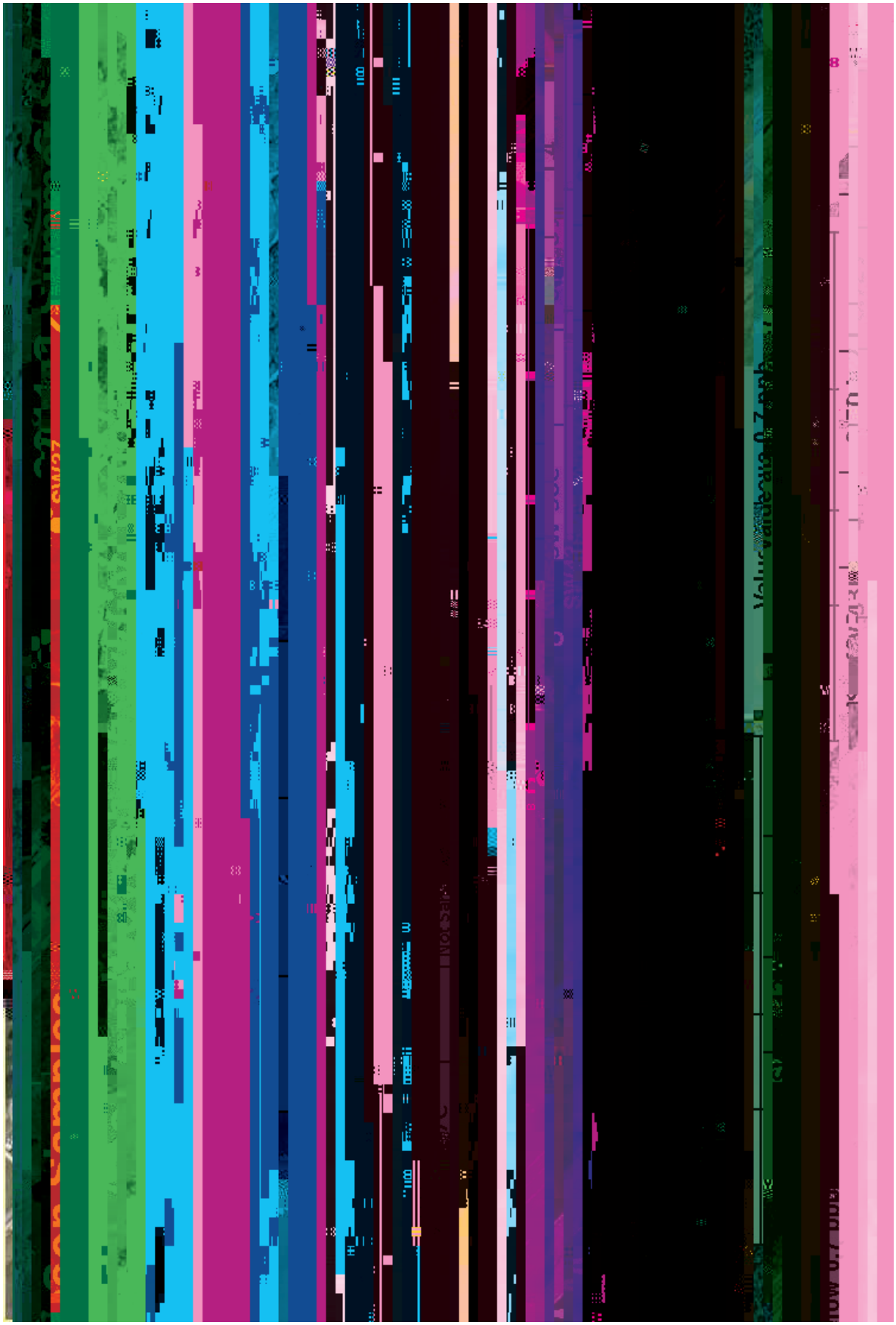
The levels of each of the three compounds have varied seasonally and between sampling locations. To date, the highest level of vinyl chloride has been 140 parts-per-billion (ppb), found adjacent to the Dump Road Area shoreline in March 2011, when swimming was unlikely due to the time of year. The highest observed summertime level of vinyl chloride has been 32 ppb, identiþed in July 2010. Because vinyl chloride is the most toxic of the three compounds being evaluated, its detection in Frog Mortar Creek triggered the development of risk-based screening levels designed to be protective of swimmers near the Dump Road Area shoreline. These swimming screening levels were derived to be conservative and protective of local residents who swim, or are assumed to be in the water, for four hours per day, 70 days per year, over the course of 30 years from childhood through adulthood. cis-1,2-Dichloroethene and TCE concentrations were below their swimming screening values of 300 ppb and 10 ppb, respectively, in all three 2011 swimming season rounds. The swimming screening level developed for vinyl chloride is 0.7 ppb. The average vinyl chloride concentration in June

particularly during the swimming and boating season, while plans to treat onsite groundwater become þnalized and implemented, and until the resulting reduction in surface water contaminants is established as anticipated.

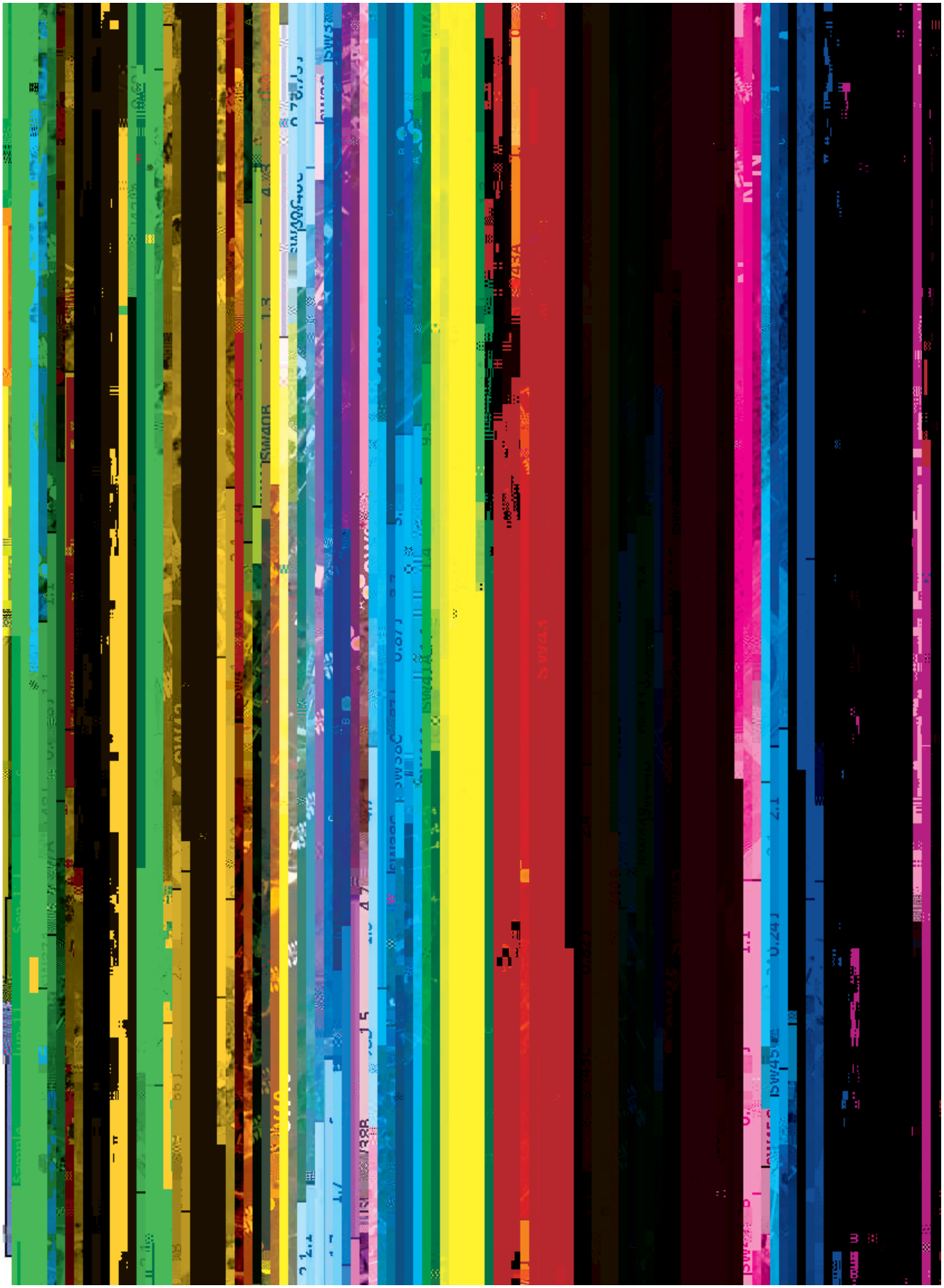
Graphic #2:



Graphic #3:



Graphic #4:



Graphic #5: