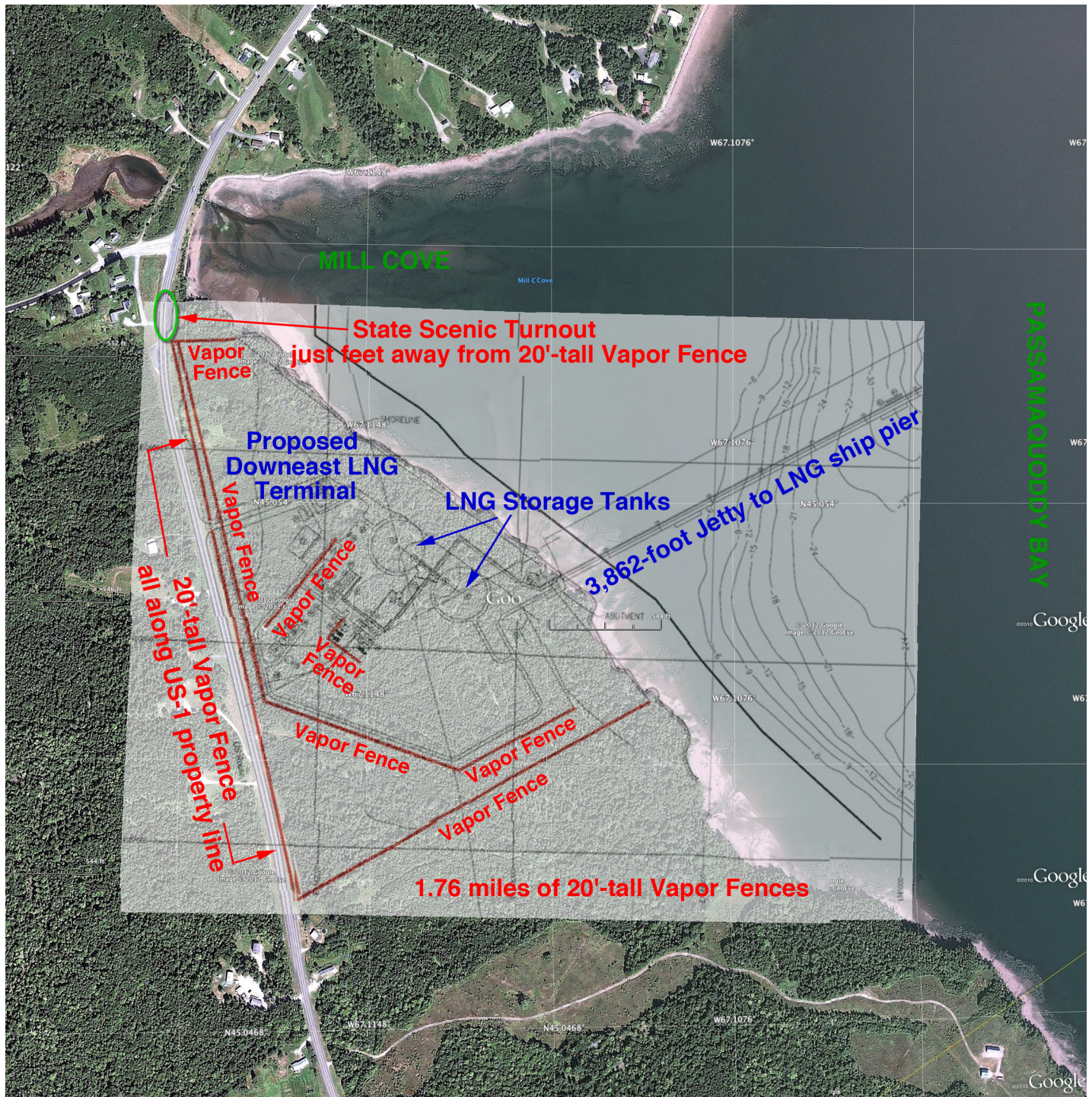


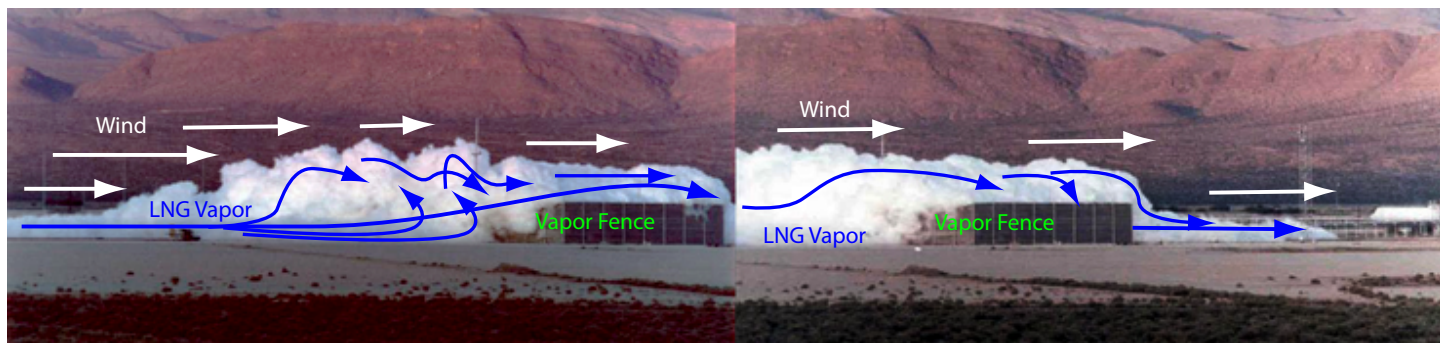
Downeast LNG Proposes 1.76 Miles of 20'-tall Vapor Fences to Prevent LNG Vapor from Escaping Terminal Property Because Terminal Site Is Too Small



Downeast LNG's 2012 May 23 report to FERC indicates LNG vapor from a release would hug the ground, pour over the long inner fence, and accumulate along the outer vapor fence at the US-1 property line.

Image Sources: Downeast LNG plot plan was taken from their 2012 May 23 filing to the FERC docket, and then superimposed over a composite Google Earth image of the Robbinston location. All large colored text and arrows were added by Save Passamaquoddy Bay.

1987 US Department of Transportation Falcon Vapor Barrier Tests



Images Source: 1987 US Department of Transportation Falcon Vapor Barrier Tests. Text, directional arrows, and generalized interpretation of vapor turbulence were added by Save Passamaquoddy Bay.

LNG was released at the left of the left photograph. LNG vapor, at around $-260^{\circ}\text{F}/-160^{\circ}\text{C}$, hugs the ground, and is driven by the wind. When it encounters the vapor fence, the vapor accumulates, piling onto itself, until it spills over the vapor fence. Then, because the vapor is very cold and heavier than air, the vapor drops back to the ground and continues to be blown downwind along the ground.

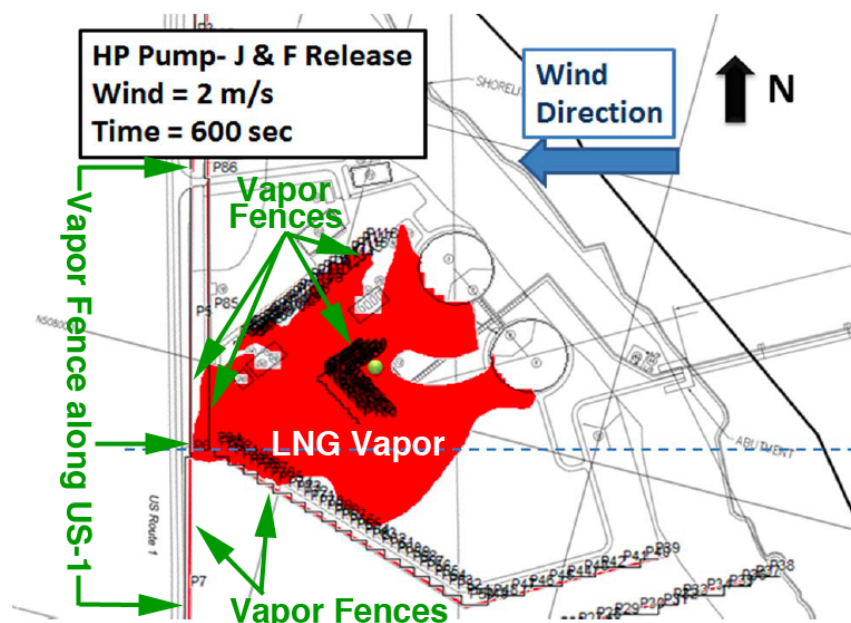


Figure 49. Contour plot of $\frac{1}{2}$ -LFL cloud showing the maximum cloud extent at 600 seconds for the HP pump jetting and flashing release scenario. The green dot indicates the location of the release. The black arrow indicates model north. The dotted blue line indicates the location of the vertical cross-section shown in the next image.

Image Source: "Downeast LNG: Vapor Dispersion Exclusion Zone Analysis" filed to the FERC docket, Accession No. 20120523-5172(27299081). Large green and white text, and green arrows were added by Save Passamaquoddy Bay.

Downeast LNG's 2012 May 23 vapor dispersion modeling report to FERC indicates (see figure at left) that in the event of a release, vapor would spill over the inner long vapor fence, blow along the ground, and then accumulate at the vapor fence adjacent to highway US-1.

The required modeling only includes results for a 10-minute LNG release; however, time and the principles of physics do not stop after that 10 minutes. Vapor would likely continue to pile up onto itself at the outer vapor fence, and might spill over that vapor fence onto highway US-1, presenting a serious hazard to the public.