-------- Original message --------
From: Dana Simpson
Date: 5/9/23 7:10 PM (GMT-05:00)
To: pb.admin@effinghamnh.net
Subject: Meena Gas Station

Dear Planning Board,

Much discussion has occurred over Meena's proposed gas station on Route 25 in Effingham. Because the proposed station is in a Groundwater Protection District, I reviewed the existing information on this site as a retired environmental consultant with over 30 years of experience. During those years, I have overseen more than 800 hazardous waste sites and my fair share of gasoline stations.

I started my review with the files on record at the NH DES. What I found was that the property of the proposed station was a former gasoline station that initially had three underground storage tanks installed in 1991. The tanks were 8 feet in diameter and covered with three feet of fill. Because groundwater is approximately 10 feet or less below surface grades, the tanks were strapped to concrete slabs to prevent them from heaving during high groundwater. The tanks were double-walled steel tanks with interstitial monitoring, cathodic protection, double-lined piping with leak detection, spill containment buckets at each fill port, and overflow protection. Tank testing and annual inspections were performed to ensure tightness. Except for some minor deficiencies, the tanks and piping passed all testing and inspections. However, despite all these precautions and meeting state requirements, a release occurred and was only encountered when the tanks were removed in 2015.

Evidence of contamination was documented in the tank closure report that was submitted to the NH DES after the tanks were removed. The report indicated that seven soil samples were screened for volatile organic compounds (VOCs) reflective of petroleum hydrocarbons. VOCs were detected in the headspace of the samples collected beneath each of the tanks at concentrations ranging from 68 to 156 part per million by volume (ppmv), and at a concentration of 239 ppmv in a sample collected from beneath the east fuel dispenser. No screening data were provided for the west fuel dispenser.

Because the levels did not exceed the project specific action level of 400 ppmv, none of the impacted soil was excavated. There was no reference to how the project specific action level was established, However, in Massachusetts, VOC headspace levels exceeding 100 ppmv in soils would have required a 72-hour MA DEP notification and approval for Immediate Response Actions, and a risk assessment to demonstrate that no significant risk to human health and the environment was achieved. Unfortunately, no such response actions were conducted at this site.

After reviewing the tank closure report, the NH DES required an Initial Stie Characterization to further assess site conditions. The assessment involved the

installation of four soil borings/monitoring wells to assess impacts to soil and groundwater. Two of the wells were placed hydrologically upgradient of the USTs and fuel dispensers and obviously showed no evidence of a release. The third well was placed so far to one side that it would likely detect only a massive release from the tanks or fuel dispensers. Only one well was placed downgradient of the tanks, but it too was placed upgradient of the fuel dispenser where contamination was the highest. In the absence of any significant contamination detected in the samples collected from the borings and wells, the DES required no further action. However, the number and locations of the borings/wells for adequately assessing site conditions appear to be minimal .

When the new tanks were installed, the impacted soils were undoubtedly excavated and transported off site. However, I found no Bills of Lading or Uniform Hazardous Manifests documenting the transportation of the excavated soils or test results that the licensed receiving facility would have required.

In my 30+ years as an environmental consultant, I can't remember ever seeing a gasoline station without some level of contamination in the soil or groundwater. The gas station at this site was no different, and there is nothing I have seen or heard that would make the proposed gas station any different. While precautionary measures may reduce the risk of a release, accidents still happen, and systems eventually fail. This is why Effingham's Groundwater Protection Ordinance prohibits the operation of a gas station in a groundwater protection district.

My professional license required that I held human health paramount in all of my decisions. I hope that the town will do the same to protect our aquifer which we depend on for our drinking water and is vital to our economy. I respectfully urge you to deny the Meena, LLC application.

Sincerely,

Dana Simpson, LSP-retired