



MARYLAND DEPARTMENT OF THE ENVIRONMENT

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Field Observation Report

Per your (Herbert Meade) request, I recently took the opportunity to strive to evaluate the complaint received by your office (OCP) with regard to the possible airborne discharge of fuels by aircraft utilizing the Carroll County Municipal Airport located just north of Westminster.

I received your referral by e-mail late on WED15AUG07

I contacted Mrs. Mary Kowalski, via telephone, the morning of THU16AUG07 to discuss the nature, basis and background of the complaint. It was during this conversation that she indicated it was her belief, that aircraft (primarily jets) were "dumping fuel" while approaching the airport from either direction. She indicated that she lived northwest of the airport and was experiencing the problem, but that the problem was more prevalent in a residential neighborhood, southeast of the airport called "Autumn Ridge" and gave me the name address and phone number for a resident of that development who would act as a point of contact and point out the symptoms. The concerns were primarily related to staining on dwelling roofs and the sidewalks that surrounded those dwellings.

We also decided during this conversation, that due to the rain that was falling as we spoke, any attempt at the evaluation of her complaint on this day would be futile.

Every effort humanly possible was made to respond on FRI17AUG07, but multiple response request in other jurisdictions, of a more acute nature, necessitated putting of the evaluation one more day.

At 1200hrs. on SAT18AUG07, I arrived in front of the dwelling designated as the point of contact in the Autumn Ridge development. The neighborhood is all single family dwellings with incorporated garages, each enclosing and estimated 1500 to 2,000 square feet of living space, on parcels of land that would appear to average approximately 10,000 square feet.

The poc address is located on Snowfall Way not far from Bonfire Court (ADC12G13CL & ADC19G1CL) To the west and northwest of most of the residences along Snowfall Way, is a common use green area for the residents. To the north east and east is a cornfield. Beyond the common green area and on the way to the landing field is undeveloped and developed commercial property. The airport itself resides on the opposite side of MD route 97 from the autumn ridge development. (ADC12E11CL)

Initially, I walked around the poc address and adjacent addresses and looked at roofs. The use of binoculars made visualizing the roof surfaces, shingles and stains much easier. Not all the roofs had stains. Those that did were interspersed with those that didn't with no apparent pattern or continuity that would suggest the cause of the stains came from above. If the source came from an aircraft moving above, one would not reasonably expect the intermittent skipping of roofs and that more roofs than not, were without stains that could be visualized. The stains themselves seemed dry, very dull with diffuse, difficult to discern edges, which is the opposite if the shiny, almost wet looking stains with clearly defined edges that have been observed in previous cases. Some of the dwelling shingles also show signs of lateral distortion. The edges of some of the shingles had lifted and curved creating the impression that they had somehow gotten longer, or expanded lengthwise. This could be attributable to petroleum swelling or just temperature expansion



After some time inspecting roof surfaces from the ground, I spent quite a bit more time walking in and beyond the common green space to the rear of the dwellings and the partially developed commercial property beyond, looking for signs of "petroleum Distillate Induced Distress" (pDID or DID) in the surrounding flora. There's an abundance of trees and shrubbery of varying age and size, deciduous and evergreen, in the common green area breaking up a great deal of grass. The partially developed commercial property is primarily grass, bordered by trees to the northeast and east. Cornfields can be seen to the east. The expected dead topping or dead siding of trees and shrubs, along with the dead spotting of well rooted grass, nor any other sign of pDID, could not be observed. Special attention was paid to the evergreens because they are the least likely to hide the dead spots that occur as a result of pDID. No vegetative distress of any kind, beyond some slight browning that is attributable to ground thicket or our present lack of rain could be observed.

All of this was also true for the area around the Westminster Community Pond and the facilities and areas at Corporate Center Court, which were inspected on the way to the airport.

Prior to arrival at the airport, I was informed by MEMA that Mrs. Kowalski wished to speak with me. During my telephone conversation with Mrs. Kowalski, she expressed her concern that I was not approaching this assessment in the manner that she desired. She was informed that the assessment would progress in a manner that I determined was appropriate to circumstance. She also retracted her earlier statement that the area around her dwelling, northwest of the airport was affected by fuel dumping.

Upon arrival at the Airport, I was allowed to inspect the grassy areas prior to both ends of the runway approaches for pDID and could observe nothing out of the ordinary. I had the opportunity to interview a representative of airport management, a flight instructor, two pilots and the gentleman who actually operates the fuel truck that fills the jets when requested. They indicated that the need to jettison fuel was related to an aircraft's ability to take off at a weight that exceeded its certified landing weight. This is a status normally associated with military and larger commercial aircraft. They further indicated that none of the two jet and three turbo-prop aircraft that are based at this airport have the ability to jettison fuel. They went on to say that the jettisoning of fuel is an emergency procedure only, and that the airport hasn't had a declared emergency in several years. They admitted that there are visiting jet aircraft whose ability to jettison fuel is unknown, but they also theorized that discharging jet fuel into the 190 MPH slip stream of an approaching aircraft, would almost certainly cause immediate dispersion, dissipation and evaporation, and the probability of fuel hitting the ground was virtually non-existent

I also learned that because these aircraft had much higher approach and landing speeds, they were using instruments to line up on the runway from a far greater distance than the smaller, gasoline powered aircraft I was observing in operation during my visit. Based on this fact, I deduced that if the roof stains were attributable to aircraft losing fuel, dwellings in areas outside the two flight paths approaching the runway would not be stained.

I drove to and through the residential neighborhoods:

South of Route 140 and west of Route 31. (centerADC19B3CL)

Route 31, Main Street and Route 27 (centerADC19F6CL)

West of Sullivan Rd. (centerADC19J1CL)

In all of these locations, I could observe some houses with similar stains and lateral distortion of the shingles with no discernable patterns or pDID to vegetation.

Not being able to reasonably assign any value to the possibility of winds, blowing perpendicular to the approach path, having the potential to carry jettisoned fuel to these areas, I then drove to the town of Manchester, approximately ten miles northeast of the airport (centerADC14D1CL) where I could also observe houses with similar stains and lateral distortion of the shingles with no discernable patterns or pDID to vegetation.

Upon return to Westminster, I presented to Mrs. Nancy Frick, the poc for Autumn Ridge. We had a long discussion and I explained all of my previous observations with regard to the unexplained roof staining. I informed her that based on all of my observations that there was no reason to believe or conclude that these stains were a result of the airborne discharge of jet fuel and, nowhere did I visualize any circumstance or condition that gave me the remotest inclination to sample for petroleum products. Mrs. Frick then took me for a walk from her dwelling, up the street to Bonfire Court and down Bonfire Court. All along the way she was pointing out some charcoal colored staining on the sidewalks, indicating that they had been there for at least two years.



As we walked, I expressed to her that it was my observation that the stains were dry in appearance, not wet like an oil stain. They were propagated in a manner and direction that was consistent with the direction of the flow of cascading water during a rain event, following only the grade of the concrete which was at times in opposition to the predictable splash or spatter patterns one would expect from a passing aircraft. I also pointed out to her that the presence of the charcoal colored stains on the sidewalks were uniformly, consistently and without exception interrupted by driveway ramps and parking pads, as well as sidewalk blocks that were not original to the development. Everywhere there was concrete, original to the development, that was intended for pedestrian traffic only, one could discern some charcoal colored dry staining. Wherever the concrete was intended for vehicular traffic or was replaced subsequent to the original installation the stains did not exist.

I ask that she consider the possibility of two different grades or qualities of concrete being used when the development was built. One lesser quality intended only for sidewalks and pedestrians, the other, better quality concrete intended for driveway ramps and pads, and that the staining was a result of a filler or undesirable contaminate incorporated into the aggregate that constituted the original sidewalk concrete that was not present in the driveway or newer concrete.

In conclusion, as hard as I tried, I could make no observation that remotely suggested the recent deposition of any form of petroleum oil, from any source, at any location I visited.

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