

**PAVEMENT COATINGS
TECHNOLOGY COUNCIL**



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June 20, 2011

Mr. Steve Levy, County Executive
H. Lee Dennison Building
100 Veterans Memorial Highway
P.O. Box 6100
Hauppauge, NY 11788-0099
Email: county.executive@suffolkcountyny.gov

Mr. Christopher Kent, Chief Deputy County Executive
H. Lee Dennison Building
100 Veterans Memorial Highway
P.O. Box 6100
Hauppauge, NY 11788-0099
Email: Christopher.Kent@suffolkcountyny.gov

Mr. Yves Michel, Commissioner, Economic Development and Workforce Housing
H. Lee Dennison Building
100 Veterans Memorial Highway
P.O. Box 6100
Hauppauge, NY 11788-0099
Email: yves.michel@suffolkcountyny.gov

Subject: Introductory Resolution Number 1162-2011

Dear Mr. Levy, Mr. Kent and Mr. Michel;

I write to you today as the Executive Director of the Pavement Coatings Technology Council (“Council”), the members of which manufacture or supply materials needed to manufacture pavement sealers and other pavement products. Council members are concerned that, for reasons that are unclear, the Suffolk County Legislature rushed to pass a local law to ban the sale and use of refined tar-based pavement sealer in Suffolk County. The Council commends you for holding a hearing on this legislation before deciding whether to sign it. As you will see reflected in the Council’s written comments, below, in its hurry to pass the bill, the Legislature voted in favor of a bill that is full of incorrect and misleading statements, presented as facts. As responsible corporate citizens, members of the Council have asked themselves questions about possible environmental and health impacts of its products, and has funded research to help

2308 Mount Vernon Avenue, Suite 134
Alexandria Virginia 22301

Phone: +1 (703) 299-8470
Fax: +1 (703) 842-8850
alehuray@pavementcouncil.org

answer those questions. The Council has been given little opportunity to communicate the findings of this scientific and engineering research to Suffolk County, and thanks you for the opportunity to submit written comments.

As explained in the comments below, the only impacts of a ban on the sale and use of refined tar-based pavement sealers will be adverse effects on dozens of small businesses in Suffolk County, resulting in lost jobs and lost tax revenue. I plan to attend the Public Hearing on Wednesday June 22 and will be happy to expand on this topic in my remarks and respond to any questions you may have.

In the meantime, please don't hesitate to contact me if you should need additional information.

Yours truly,



Anne P. LeHuray, Ph.D.
Executive Director

Attachments

1. GENERAL COMMENTS

1.1 Section 1 (Legislative Intent) of Introductory Resolution Number 1162-2011 entitled A LOCAL LAW TO BAN THE SALE AND USE OF COAL TAR SEALERS IN SUFFOLK COUNTY contains numerous incorrect and misleading statements of findings by the Suffolk County Legislature.

Section 1 (Legislative Intent) of the legislation Introductory Resolution Number 1162-2011 entitled A LOCAL LAW TO BAN THE SALE AND USE OF COAL TAR SEALERS IN SUFFOLK COUNTY (hereinafter, "IR 1162; included as Attachment 1 to these Comments) contains numerous errors and misleading statements of findings by the Suffolk County Legislature (hereinafter, "Legislature") detailed in SPECIFIC COMMENTS, below. IR 1162 was passed by the Legislature on June 7, 2011 (see Attachment 2).



The overall theme of IR 1162 Section 1 is to present a series of findings of the Legislature, many of which are incorrect and/or misleading, and for which no documentation has been made available. Indeed, the only background documentation available to the public is a wholly inadequate Financial Impact Statement and a copy of the then-proposed bill dated March 2, 2011 (as Laid on the Table on March 8, 2011) as well as a one page document titled *Memorandum of Counsel to the Legislature Pursuant to Rule 26* concerning the scope, effective date and enforcement of the law. Both the Financial Impact Statement and Background Documents are included as Attachments 3 and 4, respectively, to these comments.

The Pavement Coatings Technology Council is not aware of any hearings, documents, investigations or other proceedings or activities on which the Legislature based the scientific findings listed in Section 1 of IR 1162. Attachments 5, 6 and 7 contain documents in support of specific comments detailed in Part 2 of these comments, below.

1.2 The only impact of a ban on the sale and use of refined tar-based pavement sealer in Suffolk County would be to hurt small businesses, resulting in lost jobs and tax revenue with no environmental or health benefit

1.2.1 WHAT DOES THE SCIENCE SAY ABOUT REFINED TAR-BASED SEALERS AS A SOURCE OF PAHS IN THE ENVIRONMENT?

Federal and city government scientists based in Austin, TX say that RTS is the dominant source of PAHs in the environment, and have developed mathematical models to try to prove their point. However, actual data do not support the claim. Here's what the data show:

- Samples taken before and 2.5 yrs after the ban in Austin, TX show no discernable change in amount or sources of PAHs entering sediments – if sealers were an important source of PAHs, some change would have been expected especially in the intermittent and engineered streams of Austin, TX (see Attachment 6);
- Studies indicate that particles of refined tar-based sealer are not very mobile in the environment and are not very available to aquatic organisms (see Attachment 6);
- An evaluation of PAH fingerprints (“environmental forensics”) shows that refined tar-based sealers are not an important source of PAHs in sediments in general (see Attachment 8)



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- The forensics evaluation of actual data demonstrates clearly that refined tar-based sealers are not a source at all of PAHs in many of the localities identified by the USGS' mathematical models (see Attachment 8).

Further, there is NO credible evidence that links refined tar-based pavement sealers to PAHs in sediments or in airborne particles, except immediately adjacent to sealed surfaces. Originally, the Austin, Texas based scientists tried to use ratios of actual PAH data to suggest a link between PAHs in sediments and refined tar-based sealer. As more data became available, however, the ratio method became less supportive of a link. It appears as though proponents of the hypothesis that most PAHs in sediments can be traced to sealers have abandoned traditional forensic techniques, which are based on actual data, in favor of a novel and unproven mathematical model.

One way to prove that the model is yielding credible results would be to find consistency between actual data and modeled data. But the model results are inconsistent with both the authors' own previous results and with obtained by using accepted PAH forensic methods with actual data.

Overall, results of in depth forensic evaluations of PAH data from throughout the US do not support claims regarding the importance of refined tar-based sealers as a source of PAHs in the environment.

1.2.2 DATA COLLECTED IN SUFFOLK COUNTY WATERS FOR MANY YEARS INDICATE THAT SUFFOLK COUNTY WATER BODIES ARE NOT ADVERSELY IMPACTED BY PAHs FROM ANY SOURCE.

Attachment 5 contains a listing of all water bodies in the Southern Long Island Watershed that are listed as impaired on the Section 303(d) list required by the US Clean Water Act. None of the 85 impaired water bodies listed is impaired because of elevated levels of PAHs (or, by extension, refined tar-based sealers). Of the 85 303(d) listed water bodies in the Southern Long Island Watershed, impairment control documents have yet to be submitted to or approved by the US Environmental Protection Agency for 77. Diverting resources towards a non-existent problem will not help Suffolk County address causes of impairment that have been identified in the Section 303(d) listing.

1.2.3 DOZENS OF SMALL BUSINESSES IN SUFFOLK COUNTY – INCLUDING AN IMPORTANT LOCAL MANUFACTURER – WILL BE HARMED BY A BAN ON THE SALE AND USE OF REFINED TAR-BASED SEALER



Attachment 3 purports to be a Financial Impact Statement, apparently prepared at the behest of the Legislature by the County's Budget Review Office. One of the questions asked on the Financial Impact Statement is as follows:

Total Estimated Financial Impact on Suffolk County's economy including the impact on goods or services, economic development, small business activity, employment opportunities and overall business activity:

The response is as follows:

Indeterminate, but minimal. There are numerous same cost alternatives to the use of coal tar sealant and the two major retail home improvement companies in the county ceased sales of coal tar based sealant in 2007.

It seems clear that the Budget Review Office put little effort into determining the actual economic impacts of a ban on the sale and use of refined tar-based sealers in Suffolk County.

Only a competitor trying to increase business using a product that many consider inferior or perhaps an agenda-driven anti-coal activist would state that "***There are numerous same cost alternatives to the use of coal tar sealant.***" To parse that sentence:

numerous: There is only one widely used alternative, and that is asphalt-based product. Acrylic and latex-based products make up a vanishingly small percentage of the market, mostly in specialty applications, and must be considered experimental as an alternative to refined tar-based sealer.

same cost: Asphalt-based sealer is a petroleum product, subject to the same price swings as all other petroleum-based products. Asphalt-based sealers are made from the same refined petroleum fraction as diesel fuel. Refiners must make a choice: if diesel fuel is in short supply, the base material for manufacture of sealers will be made in even shorter supply, resulting in dramatic price increases in excess even of the price of gas at the pump. And, of course, 70% or so of the petroleum used in the US is imported and thus subject to geopolitical risks.

Acrylic- and latex-based sealers are, at all times, much more expensive (by several hundred percent) than either asphalt- or refined tar-based sealers. That is because both asphalt- and refined tar-based sealers are made from raw materials that only require refining. Acrylics and latex products must be synthesized via complex chemical processes, requiring



complicated ingredients and more sophisticated plant and equipment than refineries.

In contrast, refined tar-based sealer is predominantly made from by-products of domestic steel production using domestic coal. One result is that costs and supplies are relatively stable.

alternatives: Only refined tar-based sealers are manufactured to an ASTM (American Society of Testing Materials) standard, resulting in consistent, predictable physicochemical properties and product performance. None of the alternatives, including asphalt-based sealer, is manufactured to a standard, which can result in a wide variability in the chemistry, physical properties and resulting performance of asphalt-based products.

A ban on the sale and use of refined tar-based sealers has now been in effect in Austin, Texas for over five years, since January 1, 2006. Not only have PAH levels not been reduced in Austin sediments (see Attachment 5), but business has suffered. Even before the recession, the largest sealcoat contractor in the Austin area reported that business dropped off sharply for all types of pavement sealers. It has been reported that the principle supplier of asphalt-based sealcoat materials in the vicinity of White Bear Lake, Minnesota – which instituted a ban effective July 1, 2009 – similarly experience a sharp drop in pavement sealing work in general that has yet to rebound. That an adverse impact has been reported by companies in the business of asphalt-based sealers as well as refined tar-based sealers is perhaps explainable by the difference in performance between the two products. An architect/developer in Springfield, Missouri, told the Springfield City Council that, given a choice, he would not use the asphalt-based product again because of performance differences. He also testified that, using the refined tar-based product to protect his parking lots has extended pavement life in some of his projects to as long as 30 years.

Numerous small contractors in localities that have instituted a ban seem to have gone out of business or have struggled to continue, in part by employing fewer workers.

Suffolk County should be prepared for similar impacts: loss of business, loss of jobs

2. SPECIFIC COMMENTS



2.1 Comments on Incorrect and/or Misleading Statements in IR 1162, Section 1. Legislative Intent

Comments that follow on Section 1 of IR 1162 refer to the bill as posted on the Suffolk County Legislature's web site: <http://legis.suffolkcountyny.gov/resos2011/i1162-11.pdf>, downloaded on June 15, 2011 and included in these comments as Attachment 1.

2.1.1 PARAGRAPH 3:

This Legislature further determines that coal tar sealer is a waste product from steel manufacturing which is used to protect pavement and asphalt against water damage and cracking.

Comment:

This paragraph contains incorrect and/or misleading statements or concepts, discussed individually below.

2.1.1(a) The statement "*coal tar sealer is a waste product from steel manufacturing*" is incorrect. Coal tar is a by-product of steel manufacturing, and is not in any definition of the word, as "waste product."

2.1.1(b) The statement "*coal tar sealer is a waste product from steel manufacturing which is used to protect pavement and asphalt against water damage and cracking*" is both incorrect and misleading. The implication of the statement is that the material used to protect pavements is crude coal tar. On the contrary crude coal tar is refined into a number of different fractions, one of which (RT 12) is used in the sealer manufacturing process. Refined tar-based pavement sealers (colloquially referred to as "coal tar-based sealers") are manufactured using refined coal tar, specialty clay and clay-like materials blended into an emulsion. At the time of application, the emulsion is mixed with sand. It is correct that sealers are used to protect pavement and asphalt against water damage and cracking. Unlike asphalt-based sealers, refined tar-based sealers also protect against degradation of pavements caused by leaks and spills of petroleum-based products.

2.1.2 PARAGRAPH 4:

This Legislature finds that parking lot sealers made with a coal tar base contain large quantities of polycyclic aromatic hydrocarbons ("PAHs"), a known carcinogen.



Comment:

This paragraph contains incorrect statements. The US Department of Health and Human Services just released its 12th Report on Carcinogens, which is the official United States list of substances that are known or are potential carcinogens. No PAHs are listed as “Known Human Carcinogens.” Fifteen individual PAHs are listed as “Reasonably Anticipated to be Human Carcinogens.”

Refined tar-based pavement sealers are a mixture of materials, some of which are individual PAHs. That said, carcinogenicity designations of materials that contain mixtures of substances such as pavement sealers are based on scientific evaluations of the actual product, not of possible or theoretical individual ingredients. The Pavement Coatings Technology Council is not aware of any evidence that refined tar-based sealers is in any way associated with cancer among the most highly exposed group of individuals – that is, those who have worked in the industry for decades.

2.1.3 PARAGRAPH 5:

This Legislature determines that PAHs are known to cause asthma and other ailments in children exposed to high concentrations of the chemical.

Comment:

This paragraph is misleading and of no apparent relevance. The Pavement Coatings Technology Council is not aware of any evidence that refined tar-based sealers is in any way associated with asthma or other ailments in children or any other population group.

2.1.4 PARAGRAPH 6:

This Legislature also finds that PAHs are present in high amounts in many waterways, as it can seep into groundwater and nearby waterways and enter the run-off stream from coal tar sealed asphalt. Animals exposed to PAHs in water, including frogs and insects, have shown stunted growth, with most dying shortly after exposure to high concentrations of the chemicals.

Comment:

This paragraph contains a compendium of highly inaccurate statements concerning the science of PAHs in the environment.



2.1.4(a) PAHs may be, as stated in Paragraph 6, “***present in high amounts in many waterways,***” but have not been documented at levels sufficient to warrant any action in any Suffolk County waterways that are subject to the US Clean Water Act. Under section 303(d) of the Clean Water Act, states, territories, and authorized tribes are required to develop lists of impaired waters. These are waters that are too polluted or otherwise degraded to meet the water quality standards set by states, territories, or authorized tribes. The law requires that these jurisdictions establish priority rankings for waters on the lists and develop TMDLs for these waters. A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards. Section 303(d) Impaired Waters for the Long Island Watershed for reporting year 2008 are shown in Attachment 5 to these comments.

The total number of Section 303(d) listed-water bodies in the southern Long Island watershed in reporting year 2008 was 85. Of these, 77 had yet to have TMDL documents submitted by Long Island government agencies or approved by the US Environmental Protection Agency. And, of the 85, NOT ONE southern Long Island water body was listed as impaired because of PAH contamination.

2.1.4(b) Throughout the United States, PAHs are rarely a cause of impairment of a Section 303(d) listed water body because PAHs are virtually insoluble in water. In finding that “***it [PAHs] can seep into groundwater and nearby waterways,***” the Legislature has reached a conclusion inconsistent with the well understood and long-established physicochemical properties of PAHs. Particles of refined tar-based sealers are known to occur in sediments immediately adjacent to sealed surfaces, but have been shown to be relatively immobile. Neither sealer particles nor any PAHs derived from sealers enter surface water except via highly localized sediment transport. As for groundwater, it is a virtual scientific impossibility that refined tar-based sealers have any impact whatsoever. To summarize, the Legislature has made a finding that can not withstand scientific scrutiny.

2.1.4(c) “ ***and enter the run-off stream from coal tar sealed asphalt.***” Particles of refined tar-based sealer may be found immediately adjacent to sealed surfaces, but such particles have not been found to be routinely transported far from their point of origin. Appropriate Best Management Practices have been shown to control particle transport into adjacent soil and sediments, thereby minimizing the contribution of refined tar-based sealer materials in run-off.



2.1.4(d) *Animals exposed to PAHs in water, including frogs and insects, have shown stunted growth, with most dying shortly after exposure to high concentrations of the chemicals.* This finding is unreferenced, but is suspected to arise from experiments conducted by an employee of the City of Austin, Texas in which biota from local streams were exposed in a laboratory to known lethal doses of PAHs. The experiments only validate the maxim “The dose makes the poison” – even water can be lethal if the dose and exposure route are unpropitious. These experiments do not reflect any conditions known anywhere on Planet Earth and constitute fearmongering by anti-coal activists.

2.1.5 PARAGRAPH 7:

This Legislature further finds that PAHs from coal tar asphalt sealers not only wear off with friction, but also evaporate into the atmosphere, which allows them to enter the air and combine with household dust.

Comment:

This finding is without scientific merit. As with any paving material (concrete, asphalt, tar-based), sealers may experience some frictional wear over time. Refined tar-based sealer particles would predominantly be confined to soils and sediments immediately adjacent to sealed surfaces, as the particles are relatively heavy and not readily transported. Most varieties of pavement emit minor amounts of volatile materials immediately after initial application – in the case of refined tar-based sealers, the lost volatile is predominantly water during the curing process, as other sealer components are not particularly volatile. Levels of emissions of non-aqueous compounds during the curing process are expected to be much lower than any concentration that might cause a health concern.

2.1.6 PARAGRAPH 8:

This Legislature also determines that ground floor residential spaces located near coal tar sealed parking lots have been tested for PAHs and have pollution levels twenty five times higher than those with parking lots coated with other sealers.

Comment:

The Legislature seems to have reached this determination based on a single study undertaken in a dusty, semi-arid Texas city for which the federal agency involved has yet to produce requested supporting data (via a federal Freedom of



Information Act request). A preliminary analysis of such data as is available suggests that the authors made claims of risk based on concentrations that do not warrant health-based concerns.

2.1.7 PARAGRAPH 9:

This Legislature further determines that drainage ditches near some coal tar sealed lots have also been found to have higher PAH levels than found at toxic waste sites and severely polluted waterways.

Comment:

The basis for this determination is wholly unclear and the claims about toxic waste sites and polluted waterways are wholly warranted. If the source of this information is the discredited studies conducted by City of Austin and US Geological Survey scientists in Austin, TX, the Legislature should have felt obligated to consider the follow-up study in Austin (see Attachment 6) and the findings of a US Agency for Toxic Substances and Disease Registry studies (Attachment 7) Public Health Consultation undertaken in Austin. The Public Health Consultation and testing undertaken by the Texas Department of Environmental Quality resulted in the State of Texas taking no action in support of the City of Austin's ban on refined tar-based sealers.

2.1.8 PARAGRAPH 10:

This Legislature finds that, in recognition of the dangers posed by coal tar sealers, Lowes and Home Depot have discontinued the sale of such products at their stores nationwide.

Comment:

The Pavement Coatings Technology Council is aware of no adverse health outcomes among the most highly exposed population – those who have been engaged in sealcoating for decades. The Pavement Coatings Technology Council is further unaware of any independent risk assessment conducted by either Lowes or Home Depot.

2.1.9 PARAGRAPH 11:

This Legislature determines that municipalities throughout the nation, including many in Texas and Minnesota, have banned the sale and use of coal tar sealers in their jurisdictions.



Comment:

The determination of the legislature is incorrect. The paragraph can be corrected to read as follows:

“...municipalities throughout the nation, consisting of one city in Texas (Austin) and several cash-strapped cities in Minnesota that were promised tens of thousands of dollars each in return for banning undiluted refined tar-based sealers in their jurisdictions.”

2.1.10 PARAGRAPH 12:

This Legislature also finds that asphalt and latex based sealants are safe alternatives to coal tar sealers and do not contain any PAHs.

Comment:

The Legislature has again reached a finding without scientific merit. Asphalt is a petroleum product, typically derived from the same refinery fraction as diesel fuel. Asphalt, like any petroleum derivative, contains PAHs. The basis for the statement that latex-based sealers as well as asphalt-based sealers are “safe alternatives” is unclear, as the Pavement Coatings Technology Council is unaware of any data or hazard or risk assessment conducted by the Legislature or any other authoritative entity supporting the statement that “asphalt and latex-based sealants are safe.”

