EXHIBIT D

HEARING REPORT

Prepared Pursuant to Section 4-168(d) of the Connecticut General Statutes and Section 22a-3a-3(d)(5) of the Department of Environmental Protection Rules of Practice

Regarding the Amendment of Section 22a-174-20(k) of the Regulations of Connecticut State Agencies

Hearing Officer:
Kiernan J. Wholean

Date of Hearing: May 1, 2007

On February 26, 2007, the Commissioner of the Department of Environmental Protection (Commissioner and Department, respectively) signed a notice of intent to amend section 22a-174-20(k) of the Regulations of Connecticut State Agencies (R.C.S.A.). Pursuant to such notice, a public hearing was held on May 1, 2007, with the public comment period for the proposed amendment closing at 4:30 pm May 1, 2007. The proposed amendment is intended to reduce the emissions of volatile organic compounds (VOCs) from asphalt road paving operations occurring during the ozone season, May 1 through September 30 of each year. The reduction in emissions will assist Connecticut in meeting its obligations to come into compliance with the ambient air quality standard for ozone.

I. Hearing Report Content

As required by section 4-168(d) of the Connecticut General Statutes (C.G.S.), this report describes the amendment proposed for hearing; the principal reasons in support of the proposed amendment; the principal considerations presented in oral and written comments in opposition to the proposed amendment; all comments made and responses thereto regarding the proposed amendment; and the final wording of the proposal. Commenters are identified in Attachment 1.

This report also includes the federal standards analysis statement which was available at the hearing in accordance with C.G.S. section 22a-6(h). The statement is contained in Attachment 2.

II. Summary and Text of the Proposal

This proposal amends R.C.S.A. section 22a-174-20(k) to reduce emissions of VOCs resulting from road paving and maintenance activities using cutback and emulsified asphalts during the ozone season, May 1 through September 30. The emissions reductions result from a seasonal ban on the use of cutback asphalt and seasonal restrictions on the VOC content of emulsified asphalt.

The text of the amendment as proposed for hearing is contained in Attachment 3 to this report.

III. Principal Reasons in Support of the Proposal

The primary purpose of the proposed amendment to R.C.S.A. section 22a-174-20(k) is to reduce the emissions of VOC from road paving and maintenance activities during the time of year when violations of the national ambient air quality standard for ozone are most likely to occur. VOCs are a precursor to the formation of ozone, and Connecticut is obligated under the Clean Air Act to come into compliance with the 8-hour national ambient air quality standard for ozone. Adoption of this amendment will assist Connecticut with its ozone compliance obligations.

The Environmental Protection Agency (EPA) has developed control techniques guidelines for road paving. EPA's control techniques guidelines are developed for source categories based on significance of emissions and reasonability of establishing controls. Connecticut first adopted regulations for this source category in 1981 based on EPA's 1977 control techniques guideline "Control of Volatile Organic Compounds from use of Cutback Asphalt" [EPA-450/2-77-037].

No significant revisions to Connecticut's asphalt paving regulation have occurred since its adoption. Nevertheless, during the interval, significant improvements have been made in the development and use of emulsified asphalt, a substitute for cutback asphalt. The current regulation does not address emissions of VOC from emulsified asphalt as there was an expectation expressed in the control techniques guideline that emulsions would be formulated such that their substitution for cutback asphalt would result in nearly 100% reduction of VOC emissions. However, petroleum solvents, which emit VOCs, are often added to emulsified asphalts as a method to increase the cold weather workability of stockpiled maintenance mixes. Emulsified asphalts formulated to contain solvents now account for a greater portion of Connecticut's VOC emission inventory than do cutback asphalts.

Recognizing that this source category could reasonably produce further emissions reductions, and upon investigation of emission reduction strategies used elsewhere in the nation, Connecticut, together with the other states in the Ozone Transport Commission region recommended pursuit of emissions reduction strategies from this source category. Those emissions reduction strategies, based on EPA guidance and existing strategies used elsewhere in the region, take form in the proposed regulation.

IV. Principal Considerations in Opposition to the Proposal

Comments in opposition to moving the proposed amendment forward were based mainly on concern for costs that might be incurred by municipalities. Commenters were also concerned for the quality or availability of the compliant asphalt substitutes. Some commenting suggested delaying implementation of the amendment until more study could be conducted. No specific language revisions to the amendment were proposed during the comment period.

Due to the intensity of concern expressed by the municipalities, the Department attempted to gain a more in-depth understanding of the perspective of the municipalities even after closure of the comment period. Our understanding of that perspective yielded the changes to the proposal as recommended in this report.

V. Summary of Comments

All comments submitted are summarized below with the Department's responses. Commenters are identified by number in this section and are identified fully in Attachment 1 to this report. None of the commenters recommended specific language changes. When changes to the proposed text are indicated in response to comment, new text is in bold font and deleted text is in strikethrough font.

EPA submitted a letter dated April 5, 2007 recognizing that the proposed amendments are in keeping with the recommendations of the OTC and that adoption of this amendment will help Connecticut move toward attainment of the 8-hour ozone standard.

The following additional comments were received from the public.

1. Comment regarding the cost of the amendment to towns: Many of the comments expressed concern for additional costs that may be imposed on the towns as a result of the amendment. Commenters felt that increased costs would result from: the need to use clean stone when using emulsified asphalt; new recordkeeping requirements; and substituting hot mix asphalt for cold mix.

Commenters submitting this comment: 2,3,4,5,6,7,8,9,10,11,13,15,16,17,20,23,25,26,29,30.

Response: While many of the commenters cited the additional cost of using clean stone as a burden that would result from this proposal, none of them supplied any assessment of cost. Regardless of the asphalt used, it is the accepted best practice to use clean stone as aggregate. Regardless of this amendment, clean stone should be used as asphalt aggregate. We also note that we observe, through our surveys on asphalt use, that some Connecticut towns are already using asphalt, with aggregate, that complies with the proposal.

The recordkeeping requirements of the amendment simply require retaining the purchase records and work orders for paving activities together with the supplier's test or formulation data showing compliance with the amendment. These records are required to be retained for a period of five years so that they are available to the Department upon inspection. The amendment contains no reporting requirements. The recordkeeping requirements of the amendment are no more burdensome than the current procedures whereby the municipalities and State Department of Transportation (DOT) complete surveys on asphalt use which the Department issues under the authority of R.C.S.A. Section 22a-174-4(d).

Asphalts are available that would both comply with the proposal and do so at a cost that is comparable to use of cutback, or non-compliant, asphalt. These asphalts behave as well or better than their non-compliant counterparts. One exception, for cold patch, is noted. Cold patch is typically used to patch potholes in late winter and early spring. Because it is necessary to use cold patch at temperatures at and below freezing, it requires higher levels of distillate than the amendment would allow. However, the amendment does not apply outside the ozone season when cold patch is typically applied. Therefore, we expect no increased cost to result from this amendment.

2. Comment regarding emissions from asphalt: Some of the commenters felt that asphalt did not cause sufficient emissions to be of concern. Commenters felt that VOCs were bound up in the asphalt. Concern was also expressed for green house gas emissions that would result from hot mix asphalt that might be used to offset the effects of this amendment.

Commenters submitting this comment: 2,3,4,16,18,20,23,24,26,27,29,30.

Response: There are VOC emissions from these asphalt paving operations. According to Connecticut's inventory of emissions for 2002, the latest year which has been approved and quality assured by EPA, Connecticut emits 1.95 tons per summer day from cutback asphalt road paving and 2.57 tons per summer day from emulsified asphalt road paving. The anthropogenic VOC emissions for the 2002 base year inventory, as documented in Connecticut's 8-hour ozone attainment demonstration [July 10, 2007], amounted to 390.1 tons per day. The attainment demonstration control strategies project anthropogenic VOC emission reductions of 103.7 tons per summer day by 2009. The proposal is expected to reduce emissions from these asphalt paving operations by more than 90 percent. Therefore, these asphalt road paving emissions represent approximately 1.1 percent of the State's base year anthropogenic VOC emissions inventory and approximately four percent of the projected anthropogenic VOC emission reductions out to 2009. This level of inventory contribution and expected reduction is consistent with categories for other ozone control strategies being pursued in Connecticut.

We recognize that some of the VOC is bound up and will react with other constituents in the asphalt. While some of the VOC is bound up in the asphalt, VOCs will nevertheless tend to off-gas over an extended period of time. Additionally, because on formulation some of the VOC reacts with other constituents in the binder, we can expect that even over an extended period of time the asphalt may emit less than the total VOCs with which it is formulated.

This is, in part, why the proposal includes two alternative methods of compliance – by formulation and by test method. The option to comply based on formulation was selected at a low enough level, 0.1 percent by weight, to allow use of emulsified asphalt that is applied without VOC additives. The second method is based on a standardized test that is widely used to characterize the emissions from asphalt. We recognize that the test may overstate the short-term emissions characteristics of the asphalt. We also recognize that the two compliance methods are not equivalent. The compliance method using the standardized test is generally less stringent due to the detection limit of the test method. The formulation method may be less stringent in cases where the original asphalt base is less refined and so contains higher levels of distillate.

Emissions that might occur as a result of alternate use of hot mix asphalt are characteristically different and are regulated separately, but are not subject to this amendment.

3. Comment regarding the structure of the amendment: Some of the commenters expressed a preference for a rule that was formatted more closely to an earlier proposal by Ozone Transport Commission (OTC) that created distinct limits based on use.

Commenters submitting this comment: 9,16,24,30.

Response: In developing this rule the OTC investigated existing rules in other states. Many of states do have a rule structured such that asphalts for certain purposes are allowed distinct levels of distillate. At times during the OTC model rule development process these rules were discussed. However, other states, typically those with the more stringent limits, did not format their rules to distinguish VOC content by use. As the OTC adopted the most stringent existing state rule as its model, the format of our amendment more closely follows that State's format.

4. Comment recommending delayed implementation of the amendment: Some commenters recommended delayed implementation of the amendment to obtain more information and assess budgets.

Commenters submitting this comment: 4,5,8,25,30.

Response: The Department wishes to implement this amendment as soon as practicable to achieve the earliest possible emissions reductions and associated environmental benefits. The Department never intended to implement the amendment without having heard fully from all the stakeholders. During the rule development process, which spanned approximately one year, the Department engaged the comments of the Connecticut DOT and spoke with manufacturers and representatives from industry. During the public comment period and public hearing, it became clear that a significant number of towns and their contractors had concerns with the implementation of the amendment. Based on the general concern expressed by these parties, the Department allowed more time for the parties to articulate their concerns and make specific

recommendations for the amendment. The Department also sought further consultation with representatives from the Asphalt Emulsion Manufacturers Association and the Connecticut Transportation Institute and Advanced Pavement Lab. Through this consultation we believe that minor changes to the amendment, as stated in this document, will improve acceptability of the amendment for towns. While there is no significant cost associated with this amendment we acknowledge that for some of the smaller towns additional time would be helpful to allow them to use up current stockpiles and make any necessary contract language adjustments. Therefore, I am recommending that the effective date of the amendment be changed from January 1, 2008, as originally proposed, to January 1, 2009. Proposed section 22a-174-20(k)(2) should be changed as follows:

This subsection shall apply to any person who, on or after May 1, ~~2008~~ **2009**, stores, uses, solicits the use of, or applies asphalt for road paving, maintenance or repair.

5. Comment that the amendment would deprive users of better products. There was concern expressed that the amendment would prevent the use of cutback asphalt, which is claimed to be superior to emulsified asphalt. There were concerns that the amendment prevented the use of the asphalts that would allow the use of recycled stone. There was concern that emulsified asphalts that would be allowed were inferior to cutback or higher VOC emulsified asphalt.

Commenters submitting this comment: 2,4,7,8,9,10,11,15,17,20,21,22,23,24,26,27,28,29,30.

Response: The amendment does prohibit the ozone season use of cutback asphalt. Emulsified asphalts have been proven to perform at least as well as cutback asphalts for all purposes during the ozone season. We recognize that during the 1980's there were problems with emulsified asphalts. These problems resulted from poor formulation as well as inexperience by the applicators. Since that time there have been improvements in the technology and most applicators have become comfortable with the differences in application between cutback and emulsified asphalt. Additionally, asphalts that comply with this amendment have been in use and demonstrated to be successful.

6. Comment that some asphalt paving businesses would be hurt by this amendment. Some of the commenters felt that they would lose business to the hot mix asphalt pavers or otherwise go out of business. Some of the commenters felt it would affect their driveway paving business and prevent chip-sealing of driveways.

Commenters submitting this comment: 14,15,16,18,22,23,30.

Response: None of the commenters submitted any specific information indicating what portion of their business would be affected by the proposal or how. We do not expect that the proposal will cause alternative use of hot mix asphalt. We expect that, during the ozone season, cutback

and non-compliant emulsified asphalt will be replaced by compliant emulsified asphalt without impact to the contractors. In meeting with some of the municipalities and their contractors after the close of the comment period, we discovered that there was some misunderstanding that the two compliance alternatives for emulsified asphalt simultaneously applied. They do not. Compliance by either of the compliance methods is acceptable. Additionally, commenters mistakenly understood that the amendment would affect non-road paving activities. While we expect that there might be some reductions in VOC content of asphalt used for non-road paving as a beneficial side effect of this amendment, there is no requirement for such reductions. Chip-sealing of roads is currently conducted in Connecticut with asphalt that complies with the proposal and such asphalt can be used just as well on driveways. However, as the amendment plainly does not apply to driveways, no change to the amendment is necessary.

7. **Comment that the ozone season restrictions on asphalt coincide with weather most conducive to paving:** Many of the commenters felt that the construction season in the state is already too short due to the weather, and that by placing additional restrictions on the use of pavements more severely restricts their ability to maintain and construct roads.

Commenters submitting this comment: 6,8,10,11,12,13,14,18,19,22,27,30.

Response: We understand that construction is seasonal but do not agree that the regulatory restrictions impact the time available for road paving activities. Regardless of VOC content, emulsified and cutback asphalts have similar usage restrictions during the warm weather that occurs during the ozone season when these products are regulated. The amendment does not prohibit the use of compliant or alternative products for paving. See the response to comment number six.

Additional Comments of the Hearing Officer

One aspect of the Department's rule development process is to consider existing rules in place in other states and regions throughout the country. The most stringent existing national rule that the Department found, and that most likely to yield the greatest emissions reductions feasible, was that of Delaware.

Delaware's rule [Section 34 of Regulation No. 24], which had been in place since 1993, prohibits the use of cutback asphalt during the ozone season. Two exceptions are allowed to this prohibition provided there is a Departmental approval through a revised state implementation plan. Delaware informed us that no such approvals had ever been granted. Therefore, with respect to cutback asphalt, our proposal is as stringent as Delaware's. Other regions of the country have rules which prohibit the use of cutback asphalt throughout the entire year unless it contains less than 0.5% VOC or less. While such a rule may be considered more stringent than our proposed rule, we do not believe it is necessary to regulate the paving industry outside of the ozone season, and, as explained in our response to comment 1 above, believe it appropriate to allow the use of VOC containing asphalt to temporarily fill potholes as necessary during the late winter and early

spring.

With respect to emulsified asphalt, Delaware's rule prohibits the ozone season use of emulsified asphalt "…that contains any volatile organic compound (VOC)." In developing our amendment and in speaking with individual manufacturers it was clear that "any" was a concern. This concern was not that the manufacturers could not formulate emulsified asphalts without adding solvent, but resulted from their level of confidence in the test method. Consequently, we spoke with the Delaware DOT laboratory officials responsible for conducting rule compliance testing.

While the laboratory officials characterized the test result as producing a "hairline of distillate", it was pointed out that the ASTM D-244 test method specified that the reading should be recorded to the nearest half milliliter. Therefore, we attempted to codify that interpretation of "any" into the proposal by using this minimum detection limit of the test. We believed that detection level to be reasonable and consistent with Delaware's rule. However, after the official comment period had ended, we solicited advice from the Asphalt Emulsion Manufacturers Association (AEMA) to help us understand the concerns of the Connecticut municipalities.

AEMA pointed out that the test also has errors of precision that result from the inherent inaccuracies of the analyst or lab. While Delaware conducts all its testing by a few individuals in a single state lab, that would not be the case in Connecticut. Therefore, we should incorporate further room in the standard for imprecision resulting from different labs and analysts. In their advice to us, the AEMA pointed out that most of the state DOT's considered a test result of three percent, or six milliliters, to be "solvent free." This level accounted for all errors in the test method. Indeed, many other existing rules in the country limit the use of emulsified asphalt to three percent by this test method either throughout the year or during the ozone season. This is also the level proposed for rule implementation by the Lake Michigan Air Directors Consortium (LADCO) for the states of Illinois, Indiana, Michigan, Ohio, and Wisconsin. Thus, in recognition that compliance testing will be conducted by various labs, revising the test method standard to 6.0 mL from the proposed 0.5 mL will recognize the precision of the method, yet yield compliance to maintain the intended air quality benefit.

Therefore, Section 22a-174-20(k)(3)(A)(ii)(b) of the proposal should be revised as follows:

<u>The asphalt, as applied, produces not greater than ~~0.5~~ **6.0** milliliter of oil distillate by distillation as tested by ASTM Method D 244 or AASHTO Method T 59.</u>

After the close of the comment period, one of the manufacturers, citing the possibility of combustion, expressed concern for having to store the non-compliant asphalt in a closed container during the ozone season. Acting on their concern and believing the cost associated with explosion proof enclosed containers to be high, I recommend striking the language regarding closed container storage. Furthermore, after speaking with a representative of the Connecticut Transportation Institute and Advanced Pavement Lab there would already be a

disincentive, due to limited shelf life, for towns to stockpile non-compliant asphalt over the summer. Therefore the Department should revise section 22a-174-20(k)(3)(B) as follows:

> Any person who stores asphalt during the period of time from October 1 through April 30, may continue to store such asphalt during May 1 through September 30 ~~provided that the asphalt is stored in a closed container~~.

Additionally, consistent with the response to comment 4, to allow the municipalities to adjust to the proposal, the Department should delay the effective date of the amendment by one year to January 1, 2009.

VI. Final Text of Proposal

The final text of the proposal, inclusive of the changes recommended in this report, is located at Attachment 4 to this report.

VII. Conclusion

Based upon the comments submitted by interested parties and addressed in this Hearing Report, I recommend the final proposed amendment, as contained in Attachment 4 to this report, be submitted by the Commissioner for approval by the Attorney General and the Legislative Regulations Review Committee. Based upon the same considerations, I also recommend that upon promulgation the amendment be submitted to EPA as revision to the State Implementation Plan in satisfaction of 40 CFR 51.104 and as a control measure in support of Connecticut's plan to attain and maintain the national ambient air quality standard for ozone.

/s/ Kiernan J. Wholean 04DEC07

Kiernan J. Wholean
Hearing Officer

Date

Attachment 1
List of Commenters

[a]Denotes commenters who submitted written comments

[b]Denotes commenters who testified at the public hearing

1. Anne Arnold[a]
   Manager, Air Quality Planning Unit
   United States Environmental Protection Agency
   Region 1
   1 Congress Street, Suite 1100
   Boston, Massachusetts 02114-2023

2. Representative George M. Wilber, 63rd District[a]
   Assistant Majority Leader
   House of Representatives
   Legislative Office Building, Room 4024
   Hartford, Connecticut, 06106-1591

3. Roy E. Cavanaugh, P.E.[a]
   Public Works Director
   Town of Watertown
   Public Works Department
   51 Depot Street, Suite 203
   Watertown, Connecticut 06795

4. Edward L. Nagy, P.E.[a,b]
   Director of Public Works
   Town of Easton
   15 Westport Road
   Easton, Connecticut 06612

5. Edward B. St. John[a]
   First Selectman
   Town of Middlebury
   1212 Whittemore Road, P.O. Box 392
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6. Donald Foyer, Sr.[a]
   Crew Chief
   Town of Orange
   Highway Department
   308 Lambert Road
   Orange, Connecticut 06477

7. John A. Riggio[a]
   President
   New Haven Middlesex County Public Works Association
   866 Boston Post Road
   Westbrook, Connecticut 06498

8. Bart Russell[a,b]
   Executive Director
   Connecticut Council of Small Towns
   1245 Farmington Avenue, 101
   West Hartford, Connecticut 06107

9. Kachina Walsh-Weaver[a]
   Senior Legislative Associate
   Connecticut Conference of Municipalities
   900 Chapel Street, 9th Floor
   New Haven, Connecticut 06510

10. William Baxter[a]
    Chairman
    Litchfield Hills Council of Elected Officials
    42 North Street
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    and

    Richard Sears[a]
    Chairman
    Northwestern Connecticut Council of Governments
    17 Sackett Hill Road
    Warren, Connecticut 06754

11. Dean Zanardi[a]
    A. A. Zanardi Co., Inc.
    P.O. Box 220
    62 Railroad Ave.
    Chester, Connecticut 06412

12. Joseph V. Fragale[a]
    J. Fragale & Sons, Inc.
    2904 Winsted Road
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    Torrington, Connecticut 06790

13. Thomas M. Wright[a]

Excavating Contractor
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14. Joel Judd[a]
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Judd Construction, Inc.
23 Route 39 North
Sherman, Connecticut 06784

15. David Pope[a]
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65 Knight Street
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16. Joseph Wildermuth[a,b]
Vice President
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17. George H. Stone[a]
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18. Teague S. R. Moyer[a]
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19. B Construction[a]
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20. H. M. Neal[a,b]
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147 North Plains Industrial Road
Wallingford, Connecticut 06492

21. George D. Neal[a]
President
Seymour Sealing Services, Inc.

147 North Plains Industrial Road
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22. Robert Dibble[a]
Robert J. Dibble, Inc.
P.O. Box 455
Old Saybrook, Connecticut 06475

23. John E. Healey, Jr. [a]
President
City Point Construction Co., Inc.
35 Fresh Meadow Road
West Haven, Connecticut 06516

24. Mark Gabriel[a,b]
Vice-President
New England Emulsions Corp.
201 Lowland Street
Holliston, Massachusetts 01746

25. Matthew J. Gill, Jr.[a]
President

and

Karen J. Hudson Desrosiers [b]
The Hudson Companies
89 Ship Street
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26. Martin J. Comer, P.E. [a,b]
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1112 Farmington Ave.
Farmington, Connecticut 06032

27. Paul C. Crotta III[a]
President
Mesa Excavation & Paving, Inc.
181 Schaffer Road
Bethany, Connecticut 06524

28. Wade Cole[b]
First Selectman
Town Hall
22 South Road

Hartland, Connecticut 06027

29. Jack Travers[b]
First Selectman
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7 Sackett Hill Road
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30. Doug Jones[b]
The Gorman Group
The Cady Company, Inc.
446 State Highway 161
Amsterdam, New York 12010

Attachment 2

Federal Standards Analysis

Federal Standards Analysis Pursuant to Section 22a-6(h) of the General Statutes

Pursuant to the provisions of section 22a-6(h) of the Connecticut General Statutes (C.G.S.), the Commissioner of the Department of Environmental Protection (the Department) is authorized to adopt regulations pertaining to activities for which the federal government has adopted standards or procedures. At the time of public notice, the Commissioner must distinguish clearly all provisions of a proposed regulation that differ from ***applicable*** federal standards or procedures (*i.e.*, federal standards and procedures that apply to ***the same persons*** under the proposed state regulation). The Commissioner must distinguish any such provisions either on the face of such proposed regulation or through supplemental documentation accompanying the proposed regulation. In addition, the Commissioner must provide an explanation for all such provisions in the regulation-making record required under Title 4, Chapter 54 of the C.G.S. and make such explanation publicly available at the time of the notice of public hearing required under C.G.S. section 4-168.

In accordance with the requirements of C.G.S. section 22a-6(h), the following statement is entered into the public administrative record in the matter of the proposed adoption of section 22a-174-20(k) of the Regulations of Connecticut State Agencies:

With respect to R.C.S.A. section 22a-174-20(k) – Restrictions on VOC emissions from cutback and emulsified asphalt, there are no applicable federal environmental standards placed on asphalt paving operations. Hence, the provisions of section 22a-6(h) of the Connecticut General Statutes do not apply.

27MAR07
Date

/s/ Kiernan J. Wholean
Kiernan J. Wholean
Bureau of Air Management

Attachment 3

Text of Proposed Regulations

DRAFT FOR HEARING AND NOTICE

Subsection (k) of Section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

Effective: January 1, 2008

(k) Restrictions on VOC emissions from cutback and emulsified asphalt.

[(k)](1) **Definitions.** For the purposes of [as used in] this subsection:

(A) "Asphalt" means a dark brown [cementitious material which is solid, semisolid, or liquid in consistency and in which the predominating constituents are bitumens which] to black solid, liquid or semisolid cementitious material composed primarily of bitumens that occur in nature [as such] or [which] are obtained as residue in refining petroleum.

["Class 8 Bituminous Concrete" means material specified as Class 8 Bituminous Concrete in the most current version of the state of Connecticut, Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction".

"Cutback Asphalt" means asphalt which has been liquefied by blending with more than seven percent "organic compounds" by volume as determined by American Society for Testing and Materials' Distillation Test D-244.

"Medium-Curing Cutback Asphalt" means the material which meets the specifications of the American Society for Testing and Materials Designation D 2028.

"Penetrating Prime Coat" means an application of low-viscosity liquid asphalt to an absorbent surface which is used to prepare an untreated base prior to the application of an asphalt surface.]

(B) "Cutback asphalt" means asphalt that has been liquefied by blending with a diluent of petroleum solvents or any other diluent that contains VOC.

(C) "Emulsified asphalt" means an emulsion of asphalt and water that contains a small amount of an emulsifying agent; it is a heterogeneous system containing two normally immiscible phases (asphalt and water) in which the water forms the continuous phase of the emulsion, and minute globules of asphalt form the discontinuous phase.

[(k)(2) After October 1, 1985 no "person" shall store, use or apply cutback asphalt during the months of June, July, August and September unless less than five percent (5%) of the total solvent contained in such cutback asphalt evaporates at a temperature up to and including five hundred degrees Fahrenheit (500°F) as determined by ASTM Method D-402, except that:

(A) Medium-Curing Cutback Asphalt may be used solely as a penetrating prime coat for aggregate bases prior to paving.

(B) Medium-Curing Cutback Asphalt may be used for the manufacture of materials for long-period storage or stockpiling of patching mixes used in pavement maintenance.

(C) Class 8 Bituminous Concrete may be used at any time for surface treatments under one inch, for crack filling, relief joints, minor leveling or pothole patching.]

(2) Applicability.

This subsection shall apply to any person who, on or after May 1, 2008, stores, uses, solicits the use of, or applies asphalt for road paving, maintenance or repair.

(3) Standards.

(A) Except with prior written approval of the Commissioner and the Administrator as provided in subdivision (4) of this subsection, during the period from May 1 through September 30 of any calendar year, no person shall use or apply:

(i) Cutback asphalt; or

(ii) Emulsified asphalt, unless:

(a) The asphalt, as applied, was formulated to contain not greater than 0.1% VOC by weight, or

(b) The asphalt, as applied, produces not greater than 0.5 milliliter of oil distillate by distillation as tested by ASTM Method D 244 or AASHTO Method T 59.

(B) Any person who stores asphalt during the period of time from October 1 through April 30, may continue to store such asphalt during May 1 through September 30 provided that the asphalt is stored in a closed container.

(4) Exceptions.

(A) Requests to use or apply cutback asphalt or emulsified asphalt that does not comply with subdivision (3) of this subsection may be allowed upon obtaining approval from the Commissioner and the Administrator.

(B) Any request made for an approval under this subdivision shall be made in writing to the Commissioner and the Administrator and shall include, at a minimum, the following information:

(i) The scope of the activity,

(ii) An assessment of alternative materials and procedures,

(iii) Quantification of the amount of VOC that would be emitted as a result of such activity,

(iv) The dates during which the activity will occur, and

(v) A demonstration that the activity is necessary to occur during the period commencing on May 1 and ending after September 30.

(5) Recordkeeping.

(A) Any person subject to this subsection shall:

(i) Maintain records of test, formulation, and usage data, and any other information necessary for the Commissioner to determine compliance with the requirements of this subsection,

(ii) Maintain all records required pursuant to this subsection in a readily accessible location in Connecticut for a minimum of five (5) years, and

(iii) Provide records made pursuant to this subsection to the Commissioner within thirty (30) days of a request to provide such records.

(B) Any person who has obtained an exception pursuant to subdivision (4) of this subsection shall maintain copies of the request, all supporting materials and the written approval of the Commissioner.

Statement of purpose: This subsection is revised to further reduce emissions of volatile organic compounds from asphalt paving through the application of a Reasonably Available Control Technology (RACT) update and to clarify the requirements of the subsection. The emissions reductions associated with these revisions will support Connecticut's effort to attain the national ambient air quality standard for 8-hour ozone and Connecticut's RACT State Implementation Plan.

Attachment 4

Final Text of Regulations

DRAFT FOR HEARING REPORT

Subsection (k) of Section 22a-174-20 of the Regulations of Connecticut State Agencies is amended to read as follows:

(k) Restrictions on VOC emissions from cutback and emulsified asphalt.

[(k)](1) **Definitions.** For the purposes of [as used in] this subsection:

(A) "Asphalt" means a dark brown [cementitious material which is solid, semisolid, or liquid in consistency and in which the predominating constituents are bitumens which] to black solid, liquid or semisolid cementitious material composed primarily of bitumens that occur in nature [as such] or [which] are obtained as residue in refining petroleum.

["Class 8 Bituminous Concrete" means material specified as Class 8 Bituminous Concrete in the most current version of the state of Connecticut, Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction".

"Cutback Asphalt" means asphalt which has been liquefied by blending with more than seven percent "organic compounds" by volume as determined by American Society for Testing and Materials' Distillation Test D-244.

"Medium-Curing Cutback Asphalt" means the material which meets the specifications of the American Society for Testing and Materials Designation D 2028.

"Penetrating Prime Coat" means an application of low-viscosity liquid asphalt to an absorbent surface which is used to prepare an untreated base prior to the application of an asphalt surface.]

(B) "Cutback asphalt" means asphalt that has been liquefied by blending with a diluent of petroleum solvents or any other diluent that contains VOC.

(C) "Emulsified asphalt" means an emulsion of asphalt and water that contains a small amount of an emulsifying agent; it is a heterogeneous system containing two normally immiscible phases (asphalt and water) in which the water forms the continuous phase of the emulsion, and minute globules of asphalt form the discontinuous phase.

[(k)(2) After October 1, 1985 no "person" shall store, use or apply cutback asphalt during the months of June, July, August and September unless less than five percent (5%) of the total solvent contained in such cutback asphalt evaporates at a temperature up to and including five hundred degrees Fahrenheit (500°F) as determined by ASTM Method D-402, except that:

(A) Medium-Curing Cutback Asphalt may be used solely as a penetrating prime coat for aggregate bases prior to paving.

(B) Medium-Curing Cutback Asphalt may be used for the manufacture of materials for long-period storage or stockpiling of patching mixes used in pavement maintenance.

(C) Class 8 Bituminous Concrete may be used at any time for surface treatments under one inch, for crack filling, relief joints, minor leveling or pothole patching.]

(2) Applicability.

This subsection shall apply to any person who, on or after May 1, 2009, stores, uses, solicits the use of, or applies asphalt for road paving, maintenance or repair.

(3) Standards.

(A) Except with prior written approval of the Commissioner and the Administrator as provided in subdivision (4) of this subsection, during the period from May 1 through September 30 of any calendar year, no person shall use or apply:

(i) Cutback asphalt; or

(ii) Emulsified asphalt, unless:

(a) The asphalt, as applied, was formulated to contain not greater than 0.1% VOC by weight, or

(b) The asphalt, as applied, produces not greater than 6.0 milliliter of oil distillate by distillation as tested by ASTM Method D 244 or AASHTO Method T 59.

(B) Any person who stores asphalt during the period of time from October 1 through April 30, may continue to store such asphalt during May 1 through September 30.

(4) Exceptions.

(A) Requests to use or apply cutback asphalt or emulsified asphalt that does not comply with subdivision (3) of this subsection may be allowed upon obtaining approval from the Commissioner and the Administrator.

(B) Any request made for an approval under this subdivision shall be made in writing to the Commissioner and the Administrator and shall include, at a minimum, the following information:

(i) The scope of the activity,

(ii) An assessment of alternative materials and procedures,

(iii) Quantification of the amount of VOC that would be emitted as a result of such activity,

(iv) The dates during which the activity will occur, and

(v) A demonstration that the activity is necessary to occur during the period commencing on May 1 and ending after September 30.

(5) Recordkeeping.

(A) Any person subject to this subsection shall:

(i) Maintain records of test, formulation, and usage data, and any other information necessary for the Commissioner to determine compliance with the requirements of this subsection,

(ii) Maintain all records required pursuant to this subsection in a readily accessible location in Connecticut for a minimum of five (5) years, and

(iii) Provide records made pursuant to this subsection to the Commissioner within thirty (30) days of a request to provide such records.

(B) Any person who has obtained an exception pursuant to subdivision (4) of this subsection shall maintain copies of the request, all supporting materials and the written approval of the Commissioner.

Statement of purpose: This subsection is revised to further reduce emissions of volatile organic compounds from asphalt paving through the application of a Reasonably Available Control Technology (RACT) update and to clarify the requirements of the subsection. The emissions reductions associated with these revisions will support Connecticut's effort to attain the national ambient air quality standard for 8-hour ozone and Connecticut's RACT State Implementation Plan.