DRAFT LETTER TO MEMBERS OF ILL ASPHALT PAVEMENT ASSOCIATION AND ILLINOIS ASSOCIATION OF AGGREGATE PRODUCERS

July 16, 2018

Re: Utilization of Mineral Fines from HMA Production

IAPA AND IAAP Members

As you know, we have been engaged in discussions with the Illinois Environmental Protection Agency ("IEPA") concerning the utilization of mineral fines, retrieved from baghouses at natural gas fired asphalt plants, at the asphalt plant or quarry company for certain beneficial applications. The discussions occurred as a result of a Notice of Violation ("VN") the IEPA had issued to one of our member companies, claiming such material constituted waste and could only be accepted at a permitted landfill.

The Illinois Asphalt Pavement Association ("IAPA"), as well as the Illinois Association of Aggregate Producers ("IAAP"), intervened on behalf of the members of our respective associations asserting to the IEPA that the mineral fines are not waste when used in appropriate applications and in an environmentally responsible manner. Ultimately, the enforcement action was resolved through a Compliance Commitment Agreement ("CCA") which required that the company utilize the mineral fines in accordance with a Material Management Plan developed by our counsel, Brown, Hay & Stephens, LLP.

With this resolution, IEPA Bureau of Land has tacitly sanctioned a model that similar facilities could follow. While individual circumstances will vary, we believe that IAAP or IAPA members who adopt a similar approach at their facilities will not be considered to be unlawfully accepting waste, provided the process is properly documented using a Material Management Plan customized to individual site conditions. Accordingly, we asked our counsel to develop a template containing the key provisions of the Material Management Plan that was approved by IEPA in the context of the above-referenced VN. That template is enclosed with this letter (an electronic copy is available under the member's only section of each association's website), as is a copy of the supporting analytical data the IEPA found acceptable for purposes of use consistent with the Material Management Plan developed for the facility that was the subject of the VN.

We have shared the template with IEPA. While IEPA is not able to approve the template due to the unique circumstances of each site and plan, the Material Management Plan template was developed to contain all known material provisions necessary to demonstrate the appropriate use and handling of mineral fines produced from hot mix asphalt production. However, IEPA suggested that if any member has site specific considerations that are not addressed by this general approach they could contact John Richardson, Chief of IEPA's Bureau of Land Compliance Unit in Springfield, to discuss.

Please feel free to contact use if you have any questions.

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Illinois Asphalt Pavement Association

Dan Eichholz
Executive Director
Illinois Association of Aggregate Producers

MATERIAL MANAGEMENT PLAN
Mineral Filler Fines

I. BACKGROUND

A. This Material Management Plan is designed to provide standard operating procedures for the handling and uses of mineral fines after capture in the baghouse at the [INSERT NAME OF THE SOURCE ASPHALT PLANT, AND INCLUDE ANY SUBSIDIARY NAMES, ETC.].

B. [INSERT NAME OF ASPHALT PLANT] produces asphalt in a drum mix asphalt plant that has a baghouse for control of particulate emissions. The baghouse captures dust from the aggregate that is used in the production process.

C. The mineral fines are primarily used by reintroduction into mixtures being produced at the asphalt plant. The amount of the dust/fines needed in the asphalt production is dependent upon Illinois Department of Transportation (IDOT), Illinois Tollway, other public agencies, or private specifications for the applicable project and may vary. During calendar year XXXX, approximately XX% of this mineral dust/fines was reintroduced for asphalt production, leaving approximately XX% (XXXX tons) for other uses. A SENTENCE LIKE THIS EXAMPLE IS RECOMMENDED.

D. [INSERT COMPANY NAME OF ASPHALT PLANT AND/OR QUARRY COMPANY] has determined that the excess mineral fines would provide valuable soil stabilization for certain interior roadways, driving areas and fill areas. The purpose of soil stabilization in these areas is to improve soil shear strength, drainage, and resistance to disturbance due to weather and traffic. Mineral fines may also be used to stabilize muddy areas to allow or improve truck access to soil fill locations.

The excess baghouse fines from the hot mix asphalt facilities contain significant percentages of carbonate aggregates (aggregates produced at carbonate rock quarries or at gravel pits rich in carbonate gravel). Carbonate rocks generally are limestone, dolomitic limestone, and/or dolomite. Limestone is predominately calcium carbonate. Dolomite consists of significant proportions of both calcium carbonate and magnesium carbonate, and is predominantly magnesium carbonate. Commercially produced lime or quicklime is commonly used on construction sites to dry up mud and stabilize the soil. Such stabilization improves unstable soil by drying, altering (lowering) plasticity index, and strengthening the soil.

While baghouse fines produced at hot mix asphalt plants are not classified as lime or quicklime, these fines appear to behave in a similar manner as lime when mixed into unstable areas that are wet and contain significant amounts of fine grained soils (*e.g.* clay and/or silt).

[COMPANY NAME] has not performed controlled studies to determine specific percentages of baghouse fines to add based on soil types present in areas to be stabilized. [COMPANY NAME]'s knowledge of the usefulness of the fines for this purpose is based on its considerable experience in the construction industry and its observations of its real-world use of the fines for this purpose. [COMPANY NAME]'s experience is that areas stabilized with baghouse fines appear drier, less moisture sensitive, and stronger.

NOTE: PARAGRAPHS IN THIS SECTION SHOULD BE TAILORED TO ANY SPECIFIC CIRCUMSTANCES AT THE FACILITY THAT ARE SOMEWHAT DISTINCT FROM ABOVE OR IN ADDITION TO ABOVE – BUT WE RECOMMEND THAT THE SUBSTANTATIVE PORTIONS OF THE ABOVE BE INCLUDED.

II. MANAGEMENT OF FINES AT THE ASPHALT PLANT

A. Mineral fines from the baghouse are metered out through a weigh auger to the enclosed [XX-ton] mineral silo, then the amounts needed in asphalt production are metered into the mix-drum through a weigh pod and auger.

B. Mineral fines captured in the baghouse in excess of the amounts needed to meet specifications for the finished asphalt products remain stored in the mineral silo. The excess mineral fines are occasionally loaded into covered semi-trailers for delivery as soil stabilization material. Each load contains about [10 cubic yards] of mineral fines. During the production season, approximately [one load per day is generated].

C. Loadout to the dump truck is to be overseen by an asphalt plant employee who will then complete a load ticket in triplicate. The load ticket form includes: the date and time; weight of mineral fines loaded; confirmation that the load contains only mineral fines; location of the delivery; confirmation that the truck was properly covered before departure; some identification of the truck; and, the signature of the employee overseeing the loadout. One copy is retained at the asphalt plant and two copies provided to the driver.

III. MANAGEMENT OF FINES AT QUARRY

A. Trucks delivering mineral fines from offsite will be examined by an employee of the quarry to confirm it matches the load ticket. At this point the load ticket must have the driver's signature and the signature of the quarry employee inspecting the load prior to being directed to the dump area. The quarry employee is to direct the truck driver to the location for the load to be placed and verify that it is actually placed where directed. Prior to the truck departure, the quarry employee is to again sign both copies of the load ticket from the driver, return one copy to the driver and retain one copy at the quarry.

B. Unloading of the mineral fines from the trucks will be conducted so that the height the material it is dropped from does not cause dust to become airborne. This will be achieved by dumping the material into existing piles of soil or fines versus onto the adjacent ground. [OPTIONAL: The attached Figure 1 provides a visual example of this practice.] If reducing the drop height while unloading is not possible or does not sufficiently reduce fugitive emissions, the material will be wetted.

C. The incoming mineral fines may be immediately mixed into existing unstable areas and/or incorporated into other fill soil being placed in these unstable areas to help provide a road or driving base.

D. Should the mineral fines not be mixed into unstable areas upon arrival, the material will be temporarily stockpiled. These temporary stockpiles will be covered or watered to limit becoming airborne. If piles of uncontaminated soil are present, any stockpile of mineral fines will be placed such that the soil piles will provide some shielding of the fines from any wind. [OPTIONAL: The attached Figure 2 provides a visual example of this practice.]

Mineral fine stockpiles will be inspected weekly to determine if further watering or covering is necessary. Records of the weekly inspections will be kept at the quarry. The amount of mineral fines needed to stabilize areas will be assessed prior to delivery in order to limit the mineral fines stockpiled at the site to an amount that can be covered with a tarp, other appropriate covering, or can be maintained through operational controls (e.g. watering).

Stockpiled material must be incorporated into interior roadways or driving areas within 90 days of being stockpiled at the quarry. If it is determined that the amount of mineral fines stockpiled at the facility is greater than the amount that can be used within 90 days, the material will be directed offsite to a facility that is allowed to accept the material.

The mineral fines stockpiled at any time will not exceed a volume of 1,000 cubic yards nor cover an area greater than 0.5 acre. All stockpiling of the material will be done at elevations below the grade of the surrounding properties.

If other [QUARRY COMPANY NAME] quarry sites need similar soil stabilization, those fines may be sent to such other quarries that produce the same virgin materials for use as a soil stabilization agent. If at any time the need for soil stabilization material exceeds the amount of these fines available, other materials available at the quarry (*e.g.,* overburden or non-specification aggregates) will be used.

NOTE: YOUR SITE-SPECIFIC FACTS MAY WARRANT CHANGES, BUT BE CAUTIONED THAT THE IEPA DESIRES RESTRICTIONS SIMILAR TO THESE SO THAT THE MATERIAL IS NOT CONSIDERED WASTE OR CCDD.]

E. All handling, use and stockpiling of mineral fines will be conducted in a manner to assure compliance with the facility air permit ([I.D. No. XXXXXXXX, Application No. XXXXXXXXX]), especially as relates to fugitive particulate matter emissions. [HERE INSERT THE QUARRY'S IEPA AIR PERMIT NUMBER AND IDENTIFIER.]

IV. OTHER RECORDKEEPING PRACTICES

A. The copies of the load tickets retained at both the asphalt plant and the quarry locations are to be maintained in files on a month-by-month basis.

B. Employees at each location are to compare load tickets at a minimum on a monthly basis for accuracy and that all loads are accounted for. Any discrepancies must be investigated and resolved, with a record of such actions retained at each location.

C. The following records will be maintained on-site and available upon request:

1. **OPTIONAL:** Depiction of unloading procedure, as described in Section III.B. See Figure 1.
2. **OPTIONAL:** Depiction of Typical Material Fines Stockpile Area, as described in Section III.D. See Figure 2.
3. Site map that shows locations utilized for the management or use of mineral fines, See Figure 3 (or Figure 1, if above described depictions are not included) ***SUGGESTION: USE PRINTOUT FROM GOOGLE EARTH AND MARK ACCORDINGLY.***
4. Laboratory analytical report for the mineral fines. A copy of the report for the asphalt plant is attached as Table 1. ***NOTE: ANALYSIS SHOULD INCLUDE METHODOLOGY OF LAB TESTING. AN ANALYTICAL SAMPLE THAT WAS APPROVED BY IEPA IN THE CONTEXT OF A COMPLIANCE COMMITMENT AGREEMENT IS ATTACHED.***

Table 1
Analytical Testing Results
Soil Sample Collected on MMMM DD, YYYY
Project: ANYWHERE, IL
Analytical Testing Performed by: XYZ CO.

Testing Constituent	Analytical Results [1,2]	CCDD Limits [3]	Testing Constituent	Analytical Results [1,2]	CCDD Limits [3]
Acetone	<0.100	25.0	1,2-Dichloropropane	<0.005	0.03
Benzene	0.0066	0.03	Cis-1,3-Dichloropropene	<0.004	0.005
Bromodichloromethane (Dichlorobromomethane)	<0.005	0.6	Trans-1,3-Dichloropropene	<0.004	0.005
Bromoform	<0.005	0.8	Ethylbenzene	<0.005	13.0
Bromomethane (Methyl Bromide)	<0.010	*N/A*	2-Hexanone (Methyl-Butyl-Ketone)	<0.010	*N/A*
2-Butanone (Methyl-Ethyl-Ketone)	<0.100	*N/A*	Methyl-Tert-Butyl-Ether (MTBE)	<0.005	0.32
Carbon Disulfide	<0.005	9.0	4-Methyl-2-Pentanone (Methyl-Isobutyl-Ketone)	<0.010	*N/A*
Carbon Tetrachloride	<0.005	0.07	Methylene Chloride (Dichloromethane)	<0.020	0.02
Chlorobenzene (Monochlorobenzene)	<0.005	1.0	Styrene	<0.005	4.0
Chlorodibromomethane (Dibromochloromethane)	<0.005	0.4	1,1,2,2-Tetrachloroethane	<0.005	1.0
Chloroethane (Ethyl Chloride)	<0.010	*N/A*	Tetrachloroethene (Perchloroethylene)	<0.005	0.06
Chloroform	<0.005	0.3	Toluene	<0.005	12.0
Chloromethane	<0.010	*N/A*	1,1,1-Trichloroethane	<0.005	2.0
1,1-Dichloroethane	<0.005	23.0	1,1,2-Trichloroethane	<0.005	0.02
1,2-Dichloroethane (Ethylene Dichloride)	<0.005	0.02	Trichloroethene	<0.005	0.06
1,1-Dichloroethene	<0.005	0.06	Vinyl Acetate	<0.010	10.0
Cis-1,2-Dichloroethene	<0.005	0.4	Vinyl Chloride	<0.010	0.1
Trans-1,2-Dichloroethene	<0.005	0.7	Xylene (Total)	<0.050	5.6

1 - Analytical testing results expressed in parts-per-million (ppm) concentrations.

2 - Analytical testing results compared to the Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material (35 IAC 1100 - Subpart F).

3 - N/A indicates that a CCDD objective has not been established for this testing constituent.

Table 1
Analytical Testing Results
Soil Sample Collected on MMMM DD, YYYY
Project: ANYWHERE, IL
Analytical Testing Performed by: XYZ CO.

Testing Constituent	Analytical Results [1,2]	CCDD Limits [3]	Testing Constituent	Analytical Results [1,2]	CCDD Limits [3]
Acenaphthene	<0.330	570.0	Diethyl Phthalate	<0.330	*N/A*
Acenaphthylene	<0.330	*N/A*	Dimethyl Phthalate	<0.330	*N/A*
Anthracene	<0.330	12,000.0	Di-n-Butyl Phthalate	<0.330	*N/A*
Benzidine	<0.330	*N/A*	2,4-Dinitrotoluene	<0.250	0.250
Benzo(a)anthracene	<0.330	1.8	2,6-Dinitrotoluene	<0.26	0.260
Benzo(a)pyrene	<0.090	2.1	Fluoranthene	<0.330	3,100.0
Benzo(b)fluoranthene	<0.330	2.1	Fluorene	<0.330	560.0
Benzo(k)fluoranthene	<0.330	9.0	Hexachlorobenzene	<0.330	0.4
Benzo(ghi)perylene	<0.330	*N/A*	Hexachlorobutadine	<0.330	*N/A*
Benzyl Alcohol	<0.330	*N/A*	Hexachlorocyclopentadiene	<0.330	1.1
Bis(2-Chloroethoxy) Methane	<0.330	*N/A*	Hexachloroethane	<0.330	0.5
Bis(2-Chlorethyl) Ether	<0.330	0.66	Indeno(123-cd)pyrene	<0.330	1.6
Bis(2-Chloroisopropyl) Ether	<0.330	*N/A*	Isophorone	<0.330	8.0
4-Bromophenyl Phenyl Ether	<0.330	*N/A*	2-Methylnaphthalene	<0.330	*N/A*
Butyl Benzyl Phthalate	<0.330	930.0	Naphthalene	<0.330	1.8
Carbazole	<0.330	0.6	2-Nitroaniline	<1.600	*N/A*
4-Chloroaniline	<0.330	0.7	3-Nitroaniline	<1.600	*N/A*
2-Chloronaphthalene	<0.330	*N/A*	4-Nitroaniline	<1.600	*N/A*
4-Chlorophenyl Phenyl Ether	<0.330	*N/A*	Nitrobenzene	<0.260	*N/A*
Chrysene	<0.330	88.0	n-Nitrosodi-n-Propylamine	<0.090	*N/A*
DiBenzo(ah)anthracene	<0.090	0.42	n-Nitrosodimethylamine	<0.330	*N/A*
Dibenzofuran	<0.330	*N/A*	n-Nitrosodiphenylamine	<0.330	*N/A*
1,2-Dichlorobenzene	<0.330	17.0	Phenanthrene	<0.330	*N/A*
1,3 Dichlorobenzene	<0.330	*N/A*	Pyrene	<0.330	2,300.0
1,4-Dichlorobenzene	<0.330	2.0	Pyridine	<0.330	*N/A*
3,3-Dichlorobenzene	<0.660	1.3	1,2,4-Trichlorobenzene	<0.330	5.0

1 - Analytical testing results expressed in parts-per-million (ppm) concentrations.

2 - Analytical testing results compared to the Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material (35 IAC 1100 - Subpart F).

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Table 1
Analytical Testing Results
Soil Sample Collected on MMMM DD, YYYY
Project: ANYWHERE, IL
Analytical Testing Performed by: XYZ CO.

Testing Constituent	Analytical Results [1,2]	CCDD Limits [3]	Testing Constituent	Analytical Results [1,2]	CCDD Limits [3]
Arsenic	2.3	13.0			
Barium	10.4	1,500.0			
Cadmium	< 0.5	5.2			
Chromium	4.0	21.0			
Lead	4.1	107.0			
Selenium	< 1.0	1.3			
Silver	< 0.2	4.4			
Mercury	< 0.05	0.1			

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