MOU NO. AMOU262

DUST PALLIATIVE / SOIL STABILIZER
MEMORANDUM OF UNDERSTANDING BETWEEN
THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION
AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION
for review of
Untreated or Treated Use of
DUST PALLIATIVES (on unpaved riding surfaces) and
SOIL STABILIZERS (on exposed slopes)

THIS Memorandum of Understanding (AMOU262) by and between the New York State Department of Environmental Conservation (in consultation with the New York State Department of Health - DOH), hereinafter referred to as DEC and the New York State Department of Transportation, hereinafter referred to as DOT.

Witnesseth

WHEREAS, to the extent allowed by the normal workload of available staff, DEC assists other state agencies, at their request, in the environmental review of products or proposed actions.

WHEREAS, DEC and DOT declare that it is to their mutual advantage for DEC to assist DOT in the review of dust palliatives and soil stabilizers for environmental compatibility prior to DOT's placement of those chemicals on their Approved Materials Lists.

WHEREAS, DOT and DEC have significant statutory and regulatory authority to accomplish the goals of the MOU, as reflected in Attachment 4.

WHEREAS, DEC agrees to review dust palliative and soil stabilizer applications for DOT pursuant to the Scope of Work in Attachment 1 and the Application Requirements in Attachment 2. The DEC and DOT project managers are represented in Attachment 3.

WHEREAS, for the purpose of this MOU a dust palliative is defined as a chemical or mixture of chemicals which is applied to unpaved riding surfaces for the purpose of reduction of dust generated by wind or vehicle traffic.

WHEREAS, for the purposes of this MOU a soil stabilizer is defined as a chemical or mixture of chemicals which is applied to any soil surface or mixed with the soil, mainly for the purpose of reduction of weather related erosion.

WHEREAS, at present, DEC shall only review those soil stabilizers which are classified in the DOT Approved Materials List 713-07, Class IV, Type B [containing polyacrylamide (PAM)].

WHEREAS, in the future, any additional soil stabilizer classification for DEC review shall be stated in Attachment 2, Section A of this MOU.
WHEREAS, this MOU does not supercede the need for applicators of chemicals to fully comply with all laws and regulations.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth herein, the parties agree as follows:

ARTICLE I: Term
This Memorandum of Understanding shall commence September 19, 2003 and shall remain in effect until September 19, 2018.

ARTICLE II: Scope of work and Application Requirements  Both DEC and DOT are in agreement with the attached Scope of Work (Attachment 1) and with the Application Requirements (Attachment 2).

ARTICLE III. Representations
The present DEC and DOT representatives responsible for the administration of this Memorandum of Understanding are listed in Attachment 3.

ARTICLE IV. Termination
This Memorandum of Understanding may be terminated by either party giving the other 30 days advanced written notice of such intent and the reasons thereof. Neither party shall enter into or otherwise create new obligations relative to this Memorandum of Understanding following receipt of such notice, without the written consent of the other party. Both parties agree to enter into good faith negotiations to resolve any differences and provide for an orderly closure of this Memorandum of Understanding if agreement cannot be reached.

ARTICLE V. Amendments
This Memorandum of Understanding, other than the attachments, cannot be amended unless agreed to expressly by both parties, subject to all applicable policy and guidance of the respective agencies. The Attachments may be amended with e-mail agreement between the DOT and DEC Project Managers, copied to the Contracts Unit of DEC.

ARTICLE VI. Executory Clause
In accordance with Section 41 of the State Finance Law, DEC shall have no liability under this Memorandum of Understanding to DOT or to anyone else.

In WITNESS WHEREOF, the individuals listed below are authorized to sign and execute this Memorandum of Understanding between their respective Executive Department Agencies, on the date appearing below their respective signatures.

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<tr>
<th>New York State Department of Environmental Conservation</th>
<th>New York State Department of Transportation</th>
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<th>Title: Director, Management &amp; Budget Services</th>
<th>Title: Chief Engineer</th>
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ATTACHMENT 1
SCOPE OF WORK

1. Prospective applicants that desire to place a dust palliative or soil stabilizer on the applicable DOT Approved Materials List shall first contact the DOT Dust Palliative/ Soil Stabilizer Project Manager (see Attachment 3) for a preliminary review of the usefulness of the product. Upon determining that a product is an effective candidate, DOT will send the prospective applicant a copy of this MOU, including all attachments.

2. Any applicant that has received a determination that their product is an effective candidate pursuant to Section 1 above shall thoroughly study and comply with the MOU Application Requirements (Attachment 2) and send 11 copies of the completed application¹ to the DEC Dust Palliative/ Soil Stabilizer Project Manager (see Attachment 3).

3. DEC shall:
   (a) determine if further information or testing is required to enable evaluation of the environmental compatibility² of the dust palliative or soil stabilizer³; 
   (b) send to DOT a determination of environmental compatibility and (as appropriate) a list of any conditions necessary for the environmentally compatible use of each product.

4. DOT will use the DEC determination of environmental compatibility and all conditions for use of the product, along with the DOT assessment of product effectiveness, to determine the suitability of each product for inclusion in the “Approved Materials List.” DOT will send its final determination (with all conditions attached) to the applicant, copying DEC. The “Approved Materials List” document (or an associated document which will always be distributed with or attached to the “Approved Materials List”) will prominently include all environmental conditions specified by DEC.

¹The application must be either in the order of, or indexed to Attachment 2 of this MOU (Application Requirements).

²“Environmental compatibility” does not include determination of health effects to workers who apply the chemicals. That determination is the responsibility of federal OSHA and the NYS Department of Labor.

³If an applicant can sufficiently demonstrate that significant damage to their company would occur if the ingredients or processes related to their product are divulged outside of DEC or DOH, they may request confidentiality by means of a non-disclosure agreement. The mechanism for assuring confidentiality will be the DEC Trade Secret regulations, found at section 616.7 of Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6NYCRR 616) - pursuant to Public Officers Law §87 and §89(5) and pertinent sections of the State Environmental Conservation Law.
5. DOT will post all approvals and conditions on its website addresses.
ATTACHMENT 2
APPLICATION REQUIREMENTS, APPLICABILITY, AND VARIANCES

A. APPLICABILITY

**NOTE**: Presently, DEC is reviewing:
1. all dust palliatives for unpaved riding surfaces
2. soil stabilizers for exposed slopes, as follows:
   those soil stabilizers which are classified in the DOT Approved Materials List 713-07, Class IV, Type B [containing polyacrylamide (PAM)].
   (a). Soil stabilizers containing PAM will be considered to be potentially environmentally compatible and will be reviewed subject to this MOU, only under the condition that the manufacturer certifies that:
   i. the product is anionic;
   ii. the product contains less than 0.05% of the parent acrylamide monomer.

   (b). Soil stabilizers containing PAM which do not meet the above conditions are considered not to be environmentally compatible.

Future new classes of soil stabilizers may also require environmental review.

Bonded Fiber Matrix soil stabilizers, listed as Class IV, Type A on the DOT Approved Materials List, are considered to be environmentally compatible and therefore do not require DEC review.

B. VARIANCES

The applicant may make a written request for a variance from any of the following Application Requirements. This variance request must include a detailed explanation why the information cannot be provided, or is not relevant to the product. DEC will then determine if the review can proceed without the information.

C. APPLICATION REQUIREMENTS

To facilitate review, all information and requested variances must be presented (or referenced in a summary sheet accompanying the information) in the order and nomenclature of the following requirements:
1. Composition
2. Testing Certification
3. Application
4. Hazards
5. Physical and Chemical Properties
6. Toxicity
7. Atmospheric Concentrations
8. Water Concentrations
9. **Graph of Setting Time**
10. **Additional Information**

Following are the details of each requirement:

1. **Composition**
   Subject to Trade Secret Regulations (6NYCRR616), if so formally requested by companies (see Attachment 1), the application must include:

   (a). (if the product is a soil stabilizer containing PAM), the applicable certification pursuant to Attachment 2, Section A.2.(a)(above);

   (b). specific generic name, CAS (Chemical Abstract Service) number, and formula for each chemical constituent of the product, including any additives (used, for example, to facilitate application or to prevent caking);

   (c). maximum possible concentration of each constituent given in (b) above. These may total more than 100%;

   (d). a statement of the variability of the information in (b) and (c) above, among various batches of the product;

   (e). a description, in the format of (b) and (c) above, of any contaminants which have been found in the product;

   (f). a description of measures used to prevent contamination of the product; and

   (g). a statement of whether or not the product contains any wastes (solid, liquid or gas) as defined in 6NYCRR Part 360, and a complete description of any such wastes, in the format of (b) and (c) above.

2. **Testing Certification**
   Any and all testing conducted to fulfill the requirements of this MOU (either direct or through a search of scientific literature) must:

   (a). be signed by the person responsible for the testing and his supervisor, both of whom will be legally responsible for the veracity of the testing; and

   (b). include a complete description of the methodology used.

3. **Application**
   The Application must include detailed information regarding the application of the product, including:
(a). a copy of the actual instructions provided to the applicators;
(b). appropriate uses;

(c). method of application;

(d). application rates;

(e). smallest required time interval between applications, assuming climatological
and any other conditions representative of that portion of New York State that
requires the most frequent application;

(f). limitations of product usage (such as incompatibility with certain soils);

(g). handling precautions and protective measures; and

(h). clean-up procedures (container disposal, on-site hygiene, etc.).

4. **Hazards**

With regard to storage and possible spillage of the product, the Application must
include a description of its:

(a). flammability;

(b). potential for explosion;

(c). handling precautions and protective measures;

(d). emergency and first aid instructions; and

(e). procedures for clean-up and amelioration of impacts.

5. **Physical and Chemical Properties**

The Application must include the physical and chemical properties of the product
(including thresholds, as applicable and available) which affect its transport into
the environment, as a function of variables such as temperature, pressure and
friction (from vehicles, etc.), solar radiation, humidity, precipitation, wind, etc.,
including, but not limited, to the following:

(a). persistence, stability and chemical reactivity; degradation pathways, rates
and products;

(b). the names of any substance(s) which may be physically or chemically
affected by contact with the product, and the consequences of such
contact;

c. vapor pressure;

d. leachability, solubility (in fresh water and sea water), octanol water partition coefficient (Kow), soil/water partition coefficient (if available), volatility and transport mechanics in the environment;

e. bioconcentration potential, either as a bioconcentration factor derived from animal tests or estimated from the octanol water partition coefficient (Kow); and

f. organoleptic (taste and odor) properties in water and air.

6. **Toxicity**

For each chemical constituent listed in requirement #1, the Application must include all available data on acute and chronic toxicity (such as mutagenicity, teratogenicity and carcinogenicity) and phytoxicity, as those factors potentially impact:

- human health upon ingestion, respiration and dermal contact;
- representative species of aquatic, amphibian, and terrestrial animals; and
- representative species of vegetation.

Toxicity tests must be conducted by standard methods referred by USEPA (U.S. Environmental Protection Agency) or ASTM (American Society for Testing and Materials) - preferably the latest methods. The “flow-through” methods must be used unless it is shown that “static” methods are adequate (i.e., low toxicity and high concentration; low volatility; high persistence).

Examples of acceptable testing procedures are:

a. **Human Health**

   Acute and chronic mammalian test data to infer effects on human health due to ingestion, respiration and contact.

b. **Aquatic and Amphibian Animals**

   Acute toxicity tests on representative New York State aquatic and amphibian animals, conducted according to the most recent methods. For example, the methods required at the time of the 2003 re-issuance of this MOU are:

   i. **Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms** Fifth
(c). **Terrestrial Animals**
Toxicity to representative New York State terrestrial animals, based on:

i. LC and LD 50's to bird species following standard test procedures;

ii. Pathological studies; and

iii. Long-term feeding studies to discern chronic and bioaccumulative effects. If this level of testing is not available for representative wildlife species, submit any available test data for experimental animals (such as mice, rats, guinea pigs, etc.).

(d). **Vegetation**
Studies of short and long-term phytotoxic effects on representative New York State species of vegetation.

7. **Atmospheric Concentrations**
Based on the results of tests in requirement #6 above, for each chemical constituent which exhibits potentially significant (as determined by DEC) toxicity, such as mutagenicity, teratogenicity, carcinogenicity, or combinations thereof; estimated or monitored maximum ground level off-facility atmospheric concentrations, beginning at the time of application and commencing during use of the facility, for averaging times of 24, 48 and 72 hours (or as otherwise required by DEC), and for application conditions as stated in response to requirement #3.

(a). Estimated concentrations must be determined with computer models and a diffusion analysis acceptable to DEC; or

(b). Monitored concentrations must be determined with the use of appropriate sampling devices which measure both volatiles and particulates (as applicable). Samples must be taken at a minimum of three sampling locations during the month of July or August for three 72-hour sampling periods with greater than 80% possible sunshine and no precipitation for at
least the first 24 hours, as measured by the nearest National Weather Service Station. At a minimum, sampling locations must be at representative sites which are located:

i. one meter upwind;

ii. one meter downwind; and

iii. ten meters downwind of the prevailing wind direction.

8. **Water Concentrations**
   Based on the results of tests in 6 above, for each chemical constituent which exhibits potentially significant (as determined by DEC) toxicity, such as mutagenicity, teratogenicity, carcinogenicity or combination thereof, DEC may require estimated maximum surface water and groundwater concentrations (based on an analysis acceptable to DEC) for application conditions as stated in response to requirement #3.

9. **Graph of Setting Time**
   The Application must include a graph which shows the time necessary, at various temperatures, for the product to dry (set) sufficiently to minimize its transport from the application area following a precipitation event.

10. **Additional Information**
    The Application must include any additional information (either offered by the applicant or requested by DEC) which will aid in the evaluation of the environmental compatibility of the product.
ATTACHMENT 3
REPRESENTATION AND WEB SITE ADDRESSES

A. REPRESENTATIVES
Following are the authorized representatives who will be responsible for the administration of this Memorandum of Understanding:

**For DEC**
Dust Palliative/ Soil Stabilizer Project Manager
New York State Department of Environmental Conservation (DEC)
Division of Environmental Permits
625 Broadway
Albany, NY 12233-1750
tel. (518) 402-9167, fax (518) 402-9168
**Attention:** Carlos Montes, tel. (518) 402-9476, email [clmontes@gw.dec.state.ny.us](mailto:clmontes@gw.dec.state.ny.us)

**For DOT**
Dust Palliative/ Soil Stabilizer Project Manager
New York State Department of Transportation
State Campus, Building 7, Room 102
1220 Washington Avenue
Albany, NY 12232
**Attention:** Mr. Donald Dwyer, tel. (518) 457-4724, fax (518)457-0282, e-mail [DDWYER@dot.state.ny.us](mailto:DDWYER@dot.state.ny.us)

B. DOT WEB SITE ADDRESSES

1. **For Dust Palliatives:**
   
   [http://www.dot.state.ny.us/tech_serv/geo/dust.html](http://www.dot.state.ny.us/tech_serv/geo/dust.html)

   and

   [http://www.dot.state.ny.us/tech_serv/mat/alme/pages/x54_1.html](http://www.dot.state.ny.us/tech_serv/mat/alme/pages/x54_1.html)

   OR

   ✦ go to the DOT Home Page:
   
   [www.dot.state.ny.us](http://www.dot.state.ny.us)

   ✦ Click on the drop-down arrow that is labeled "NYSDOT Departments (Select One)", and select Materials, Soils and Transportation Research.

   ✦ Click "Geotechnical Engineering Bureau"

   ✦ Click "Dust Palliatives". This page gives you the Application Instructions and Conditions for Use of the approved dust palliatives, as well as for calcium chloride.

   ✦ From this page, click on the hotlink "Approved List" to get to the Approved List of dust palliatives, including company addresses.

2. **For Soil Stabilizers:**
   
   [http://www.dot.state.ny.us/tech_serv/mat/alme/pages/570-1.html#k](http://www.dot.state.ny.us/tech_serv/mat/alme/pages/570-1.html#k)

   OR
go to the DOT Home Page: www.dot.state.ny.us

Click on the drop-down arrow that is labeled "NYSDOT Departments (Select One)", and select Materials, Soils and Transportation Research.

Click "Materials Bureau"

Click "Materials and Equipment"

Scroll down and click "Landscape Products"

Click "Erosion Control Products"

Click on L to go to the Approved Materials List of soil stabilizers covered by this MOU (Class IV, Type B). **Please Note: The original list may require modification and the addition of Conditions for Treated or Untreated Use of these products.**
A. DOT Regulations

DOT Surveillance and Enforcement Measures:

The control of materials used on DOT projects is governed in general by various subsections of Section 100, General Provisions, of Standard Specifications. The various subsections include:

- 104, Scope of Work
- 105, Control of Work
- 106, Control of Material
- 107, Legal Relations and Responsibility to Public.

Further, the DOT Manual for Uniform Record Keeping on Highway Contracts (MURK) instructs the Project Engineer on proper material control procedures and documentation.

B. DEC Regulations

Although DEC does not have a permit process for the use of dust palliatives or soil stabilizers, prospective applicants for specific projects are responsible for compliance with the Environmental Conservation Law (ECL). The ECL includes general prohibitions against environmental pollution and may require permits for specific projects where dust palliatives or soil stabilizers are proposed. Prospective applicants for specific projects should contact and apply to the appropriate DEC regional office, which has updated information and application forms. Detailed Information and downloadable forms are also available at the DEC website at www.dec.state.ny.us

Applicable laws and regulations presently include:

(a). 6NYCRR 700-703 Classification of Standards of (Water) Quality and Purity, pursuant to ECL Article 17 Water Pollution Control

(b). ECL 11-0503 prohibitions against stream pollution

(c). 6NYCRR 200 General Provisions and 6NYCRR 211 General Prohibitions (Air Quality), pursuant to ECL 3-0301, 19-0301 and 19-0303

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4 pursuant to Highway Law, Sections 10 and 11; and Transportation Law, Sections 10 and 14
(d). 6NYCRR 663 Freshwater Wetlands Permit Requirements, pursuant to ECL Article 24 (also ECL Article 71 Title 23)

(e). 6NYCRR 661 Tidal Wetlands Land Use Regulations, pursuant to ECL 1-0101, 3-0301 and 25-0302

(f). If materials contain “solid” waste products (which can be solid, liquid or gas as defined in 6NYCRR Part 360), 6NYCRR 360 and 364 (pursuant to ECL Article 27 Title 9) may apply.

(g). Although Section 173 of Article 12 of the Navigation Law (which must be read using the definitions contained in Section 172) is a DOT law, it is administered by DEC. It prohibits the discharge of petroleum, unless allowed (in small quantities) in a discharge permit.