



STATE OF DELAWARE

**DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL**

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OFFICE OF THE
SECRETARY

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Secretary's Order to Cease and Desist

Issued Pursuant to 7 Del. C. § 6018

ORDER NO. 2012-WH-0020

***PERSONALLY SERVED BY
AN ENVIRONMENTAL CRIMES
UNIT OFFICER***

Issued To:

Mr. Michael P. Davidson, Owner & President
Mike Davidson Enterprises, LLC
3051 Willow Grove Road
Camden, DE 19934

Registered Agent:

National Corporate Research, LTD.
615 S. DuPont Highway
Dover, Delaware 19901

This is to notify Mike Davidson Enterprises, LLC ("Respondent") that the Secretary of the Delaware Department of Natural Resources and Environmental Control ("Department") has found Respondent in violation of Resource Recovery Facility Permit SW-09/03 ("permit"), issued November 6, 2009. The Department, as set forth below, has determined that Respondent has failed to fulfill the sampling and analysis requirements of the permit. For these reasons, the Department performed its own sampling and analysis of various waste and materials generated by the Respondent's processing of construction and demolition waste ("C&D") to determine compliance with the analytical and performance criteria of the permit. When the Department conducted the sample collection event on May 17, 2012, Respondent was offered the opportunity to split samples with the Department, but Respondent declined the offer. The analytical results (attached) reveal that the mulch being offered by Respondent for sale or use, either as Alternate Daily Cover ("ADC") or as mulch for residential and commercial use, substantially exceeds the permit limits for arsenic and also exceeds the permit limit for chromium.

BACKGROUND

The Secretary of the Department is responsible for the protection of the public health and safety, and the health of organisms and the environment from the effects of the improper,

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inadequate, or unsound management of solid wastes, by establishing a program of regulation over the storage, transportation, handling and disposal of solid wastes, and to assure the safe and adequate management of solid wastes within the State of Delaware, pursuant to the authority set forth in 7 *Del. C.* Chapter 60.

Respondent operates a construction and demolition waste recycling facility (Resource Recovery Facility) located at 3051 Willow Grove Road, Camden, Delaware 19934, Tax Parcel NM-00-11600-01-0700-00001.

The Department conducted multiple compliance assessments at Respondent's facility between January 14, 2010 and the issuance of this Order. The compliance assessments revealed multiple violations of Respondent's permit and Delaware's *Regulations Governing Solid Waste*, including but not limited to failure to fulfill the sampling and analysis requirements of the permit.

SPECIFICALLY

The Department has found Respondent in violation of its permit. These violations relate to Respondent's failure to comply with the following specific conditions of its permit:

I. Condition III.H of Permit SW-09/03 issued November 6, 2009 states:

H. Sampling and Analysis

1. Sampling and analysis for C&D mulch product for the Alternate Daily Cover (ADC) market:

Three 500 ml mulch product grab samples will be taken at random and thoroughly mixed together to make each composite sample. Frequency of composite ADC mulch product sampling will be:

- a. A composite sample will be taken on the initial day of grinding operation, and every grinding day thereafter until the analytical and performance criteria in Table 1 are achieved. The collected composite sample on the initial day of grinding ("day 1" sample) must also be analyzed using the Toxic Characteristic Leaching Procedure (TCLP) given in EPA method SW846. The mulch product sample must pass the TCLP test and must not exhibit a Resource Recovery and Conservation Act (RCRA) characteristic. When the analytical and performance criteria are achieved, sampling frequency will be reduced from daily to:*
- b. One grinding day each week, for at least three consecutive weeks; and one grinding day each week thereafter until the analytical and performance criteria in Table 1 are achieved. After three weeks, or as soon thereafter as the analytical and performance criteria are achieved, sampling frequency will be reduced from weekly to:*
- c. One grinding day a month for two consecutive months, and one grinding day each month thereafter until the analytical and performance criteria in Table 1 are achieved. After two months, or as soon thereafter as the analytical and performance criteria are achieved, sampling frequency will be reduced from monthly to:*

d. Quarterly. This is the minimum sampling frequency.

Each composite ADC mulch product sample will be analyzed for the analytical parameters, and compared to the analytical and performance criteria, listed below in the third column of Table 1. ADC mulch product from each sampling day will be stored at the facility until analytical results have been received and the analytical and performance criteria in Table 1 have been achieved.

If, at any time, Davidson's monthly or quarterly ADC mulch product sample fails to achieve any criteria listed in Table 1, the facility will review operating procedures and take steps to correct the problem. Additionally, Davidson's must return to step "b" of section III.H.1, the sampling analysis plan listed above for weekly sampling of the mulch product.

Table 1: Analytical and Performance Criteria for ADC Mulch Product:

Analytical Parameter	Analytical Method	Performance Criteria for ADC mulch product (Results must be)
Percent Moisture	ASTM D2974	Minimum 20 %
Percent Inert	ASTM D2974 Method C	Minimum 65%
Particle Size	Modified ASTM D422	90% must pass through 2" screen
PCB's	EPA Method 8082	Must not be in excess of 3 ppm
Asbestos	PLM Dispersion Staining per 40CFR763	Must contain <1%
Arsenic	In accordance with EPA SW846	< 11 mg/kg
Barium	In accordance with EPA SW846	< 14,000 mg/kg
Cadmium	In accordance with EPA SW846	< 100 mg/kg
Copper	In accordance with EPA SW846	< 8,200 mg/kg
Chromium	In accordance with EPA SW846	< 610 mg/kg
Lead	In accordance with EPA SW846	< 1,000 mg/kg
Mercury	In accordance with EPA SW846	< 610 mg/kg
Selenium	In accordance with EPA SW846	< 1,000 mg/kg
Silver	In accordance with EPA SW846	< 1,000 mg/kg

2. Sampling and analysis for C&D mulch product for residential/commercial use:

a. Phase 1 – Daily Sampling:

- i. At the end of each grinding day, all the material ground into mulch during that day will be placed in a single pile. From this pile, five (5), 500 ml grab samples will be randomly collected from different locations within the pile.
- ii. The five (5), 500 ml grab samples will be mixed together to produce one (1) composite sample that will be analyzed for the analytical parameters listed in Table 2. In addition, the collected composite sample on the initial day of grinding (1 sample) must also be analyzed using the TCLP given in

EPA method SW846. The mulch product sample must pass the TCLP test and must not exhibit any RCRA characteristic.

- iii. The pile must remain separate from any other mulch product piles and cannot be processed or sold until the sampling analysis results meets the analytical requirements specified in Table 2. If the results indicate that the mulch does not meet the requirements in Table 2 then the mulch product cannot be used for residential/commercial mulch.*
- iv. Phase 1 will be conducted for the first five (5) days that C&D wood waste is ground into mulch product. Once Davidson's receives the analytical results from the 5 composite mulch product samples and the samples meet all of the analytical requirements listed in Table 2 then Davidson's can proceed to the "Phase 2 – Weekly Sampling" plan. If any of the samples fail to meet the analytical requirements listed in Table 2 then Davidson's will 1) notify SHWMB, 2) modify operating procedures to ensure that material resulting in sample analysis failure are removed prior to grinding and 3) remain at the "Phase 1 – Daily Sampling" plan until 5 consecutive days of samples can meet the analytical requirements.*

b. Phase 2 – Weekly Sampling:

- i. At the end of each grinding week, all the material ground during that week will be placed in a single pile. From this pile, five (5), 500 ml grab samples will be randomly collected from different locations within the pile.*
- ii. The five (5), 500 ml grab samples will be mixed together to produce one (1) composite sample that will be analyzed for the analytical parameters listed in Table 2.*
- iii. The pile will remain separate from any other mulch product piles and cannot be processed or sold until the sampling analysis results meet the analytical requirements specified in Table 2. If the results indicate that the mulch does not meet the requirements in Table 2 then the mulch product cannot be used for residential/commercial mulch.*
- iv. Phase 2 will be conducted for at least three (3) consecutive weeks. Once Davidson's receives the analytical results from the three (3) weekly mulch product samples and the samples meet all of the analytical requirements listed in Table 2, then Davidson's can proceed to the "Phase 3 – Monthly Sampling" plan. If any of the samples fail to meet the analytical requirements listed in Table 2 then Davidson's will 1) notify the SHWMB, 2) modify operating procedures to ensure that material resulting in sampling analysis failure are removed prior to grinding and 3) must return to the "Phase 1 – Daily Sampling" plan.*

c. Phase 3 – Monthly Sampling:

- i. At the end of each grinding month, all the material ground during that month will be placed in a single pile. From that pile, ten (10), 500 ml*

grab samples will be randomly collected from different locations within the pile.

- ii. The ten (10), 500 ml grab samples will be mixed together to produce 1 composite sample that will be analyzed for the analytical parameters listed in Table 2. In addition, once a year, one (1) of the collected composite sample must also be analyzed using the TCLP given in EPA method SW846. The mulch product sample must pass the TCLP test and must not exhibit any RCRA characteristic.*
- iii. The pile will remain separated from any other mulch product pile and cannot be processed or sold until the sampling analysis results meet the analytical requirements specified in Table 2. If the mulch does not meet the requirements listed in Table 2, then the mulch product cannot be used for residential/commercial mulch.*
- iv. If any of the samples fail to meet the sampling requirements listed in Table 2, then Davidson's will 1) notify the SHWMB 2) modify operating procedures to ensure that material resulting in sampling analysis failure are removed prior to grinding and 3) return to the "Phase 2 – Weekly Sampling" plan.*

Any mulch that does not meet the analytical requirements listed in Table 2 can be used for ADC if and only if, the samples meet the analytical requirements listed in Table 1. If the mulch does not meet the ADC requirements listed in Table 1, then the mulch must be disposed of properly.

Table 2: Analytical and Performance Criteria for Residential/Commercial Mulch Product:

<i>Analytical Parameter</i>	<i>Analytical Method</i>	<i>Requirements for Residential/Commercial mulch product (Results must be)</i>
<i>PCBs</i>	<i>EPA Method 8082</i>	<i>Must be non-detect</i>
<i>Asbestos</i>	<i>PLM Dispersion Staining (40 CFR 763)</i>	<i>Must contain < 1%</i>
<i>Arsenic</i>	<i>In accordance with EPA SW846</i>	<i><11 mg/kg</i>
<i>Barium</i>	<i>In accordance with EPA SW846</i>	<i><550 mg/kg</i>
<i>Cadmium</i>	<i>In accordance with EPA SW846</i>	<i><4 mg/kg</i>
<i>Copper</i>	<i>In accordance with EPA SW846</i>	<i><310 mg/kg</i>
<i>Chromium</i>	<i>In accordance with EPA SW846</i>	<i><35 mg/kg</i>
<i>Lead</i>	<i>In accordance with EPA SW846</i>	<i><400 mg/kg</i>
<i>Mercury</i>	<i>In accordance with EPA SW846</i>	<i><10 mg/kg</i>
<i>Selenium</i>	<i>In accordance with EPA SW846</i>	<i><26 mg/kg</i>
<i>Silver</i>	<i>In accordance with EPA SW846</i>	<i><39 mg/kg</i>

- 3. The DNREC retains the right to collect composite samples of the ADC mulch product and/or residential/commercial mulch product, on a quarterly basis, to be analyzed for the analytical parameters in Table 1. Davidson's shall bear the expense of all samples obtained and analyzed by the DNREC. Davidson's and the DNREC retain the right to split samples for separate analysis.*

Respondent failed to comply with the required sampling frequency, analytical and performance criteria. Analysis of the samples collected by the Department on May 17, 2012 reveals that arsenic and chromium fail to achieve the analytical and performance criteria necessary by exceeding the concentrations specified in the permit. Failing to conduct the required sampling, and selling or providing mulch that fails to achieve the criteria specified in the permit are **violations of permit condition III.H.**

ORDER

IT IS HERBY ORDERED, based on the foregoing findings and pursuant to the authority vested in the Secretary by 7 Del. C., § 6018, that Respondent:

1. Cease and desist selling, and providing for use, any and all ADC or residential and commercial mulch;
2. Cease and desist any grinding and any processing of wood waste into mulch;
3. Identify and permanently remove from the facility, via proper disposal, the sources of contamination causing violations of the permitted analytical and performance criteria; and
4. Provide documentation to the Department indicating that the mulch failing the analytical and performance criteria has been properly disposed within 30 days of the date of this Order, which shall include proof of hauling and proof of receipt by an appropriate facility.

Nothing in this order shall be deemed to stop or in any way preclude, any additional enforcement action for these or any other violations, including administrative and civil penalties for each day of violation, or an action for the recovery of Department costs expended in abating this violation.

Date: 6/8/2012



Collin P. O'Mara, Secretary
Department of Natural Resources
and Environmental Control

cc: Ralph K. Durstein III, Deputy Attorney General
Marjorie A. Crofts, Director, WHS
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SHWMS File