Memorandum

Foth Infrastructure & Environment, LLC

2121 Innovation Court, Suite 300
P.O. Box 5126 • De Pere, WI 54115-5126
(920) 497-2500 • Fax: (920) 497-8516
www.foth.com

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TO: Brian Van Straten and Greg Parins, Outagamie County Recycling & Solid Waste Department
Kyle Sargent, Outagamie County Corporation Counsel

CC: Jennefer Klennert and Chris Anderson, Foth Infrastructure & Infrastructure, LLC

FR: Jill Morris and Gabby Romenesko, Foth Infrastructure & Infrastructure, LLC

RE: Response to Odor Inquiries

On behalf of the Outagamie County Recycling & Solid Waste Department (OCRSWD), Foth Infrastructure & Environment, LLC (Foth) is responding to the following comments and questions from Mr. Jansen received on November 9, 2020 and November 11, 2020 via emails to the OCRSWD. The OCRSWD serves the communities of Brown, Outagamie, and Winnebago Counties providing solid waste and recycling services to local residents and businesses. OCRSWD is dedicated to providing the tri-county communities with exceptional materials management and educational services using safe and environmentally sound operational practices.

1. I would like to know why you did not initially find the items that were in violation of federal regulations during your own regular inspections, and they were only discovered when the DNR did their own testing. Seems to me this should have been caught sooner.

   Response: There has been no testing by Wisconsin Department of Natural Resources (WDNR) on site. Additionally, there has not been a violation in this regard. Surface Emissions Monitoring is conducted quarterly (four times per year). During OCRSWD's initial 3rd Quarter Surface Emissions Monitoring Testing event, there were methane readings above 500 parts per million (ppm). WDNR representatives, Michelle Farley and Tess Brester, were on site on for the 10-day and 30-day retest per 40 CFR 60.753(d) and Air Operation Permit No. 445012370P21. Since the initial Surface Emissions Monitoring resulted in an exceedance, the OCRSWD followed compliance requirements per § 60.755(c)4(i-v) and re-monitored within 10 days of the initial test. OCRSWD continued compliance steps per § 60.755(c)4(i-v) until satisfactory. Please note section § 60.755(c)4 where it states "As long as the specified

actions are taken stated in § 60.755(c)4(i-v), the exceedance is not a violation of the operational requirements of § 60.753(d)."

2. You were also in violation of not keeping records or documentation on your "Odor Control Program." What exactly is your odor control program and why was their no documentation. Was the program actually in effect.

   Response: Records for OCRSWD Odor Control Program are kept in accordance with our Operation Plan (Appendix D), Attachment 1. There are no federal requirements per 40 Code of Federal Regulations (CFR) 60 Subpart WWW or 40 CFR 63 Subpart AAAA for Odor Control Programs.

3. What actually has been done so far to correct the odor issues, and what is going to be done moving forward.

   Response: In order to control odor from municipal solid waste (MSW) decomposition, a daily cover is applied to the working area at the end of each working day. If weather conditions (high winds, high temperatures and humidity, etc.) exist which could exacerbate odors, the size and location of the active MSW area is adjusted to minimize potential for the odors to reach the property boundary. Intermediate cover is placed consisting of 12 inches of fine-grained soil material on areas of the waste as final or intermediate elevation grades are reached.

   In addition, a landfill gas collection and combustion system has been installed to control gas generated through decomposition. This system is operated continuously and monitored to demonstrate compliance with the United States Environmental Potential Agency (USEPA) 40 CFR s. 60.756 and 40 CFR 60.753, State Statue 285.65, and Wisconsin Administrative Code (Wis. Adm. Code) NR 440.75(4) and N 440.75(7).

   As waste is placed in the landfill and specific areas reach final elevations, a final cover system is installed in a phased approach. OCRSWD completed the installation of 14 acres of composite final cover system at the Northeast Landfill (NELF) in the summer of 2020 as part of the Final Cover Sequence 1 activities. The system meets the requirements of Wis. Adm. Code NR 504.07(1) through (8) by limiting the amount of percolation to the waste mass, providing a stable final surface for the re-establishment of vegetation, and providing adequate protection from climatic effects on the low permeability layers. Drawings detailing the components of the composite final cover system were approved by the WDNR on June 21, 2010.

   A vapor system was installed at the site to neutralize the odor from the landfill. The system operates starting at the southeast corner of the NELF extending north and west to create an envelope around the landfill waste mass. Based on Wisconsin's colder climate, the NCM Odor Control, Attachment 2, deploys a vapor delivery system through a chemical injection pump and blower configuration that blows pressurized air over a wick assembly housing that disperses the odor neutralizing agent through

the perforated pipe. The pipe holes are drilled in accordance with recommendations from the manufacturer to deliver a uniform air flow of the vaporized odor neutralizing chemical across the entire lineal footage of the delivery pipe. Approximately 55 gallons of odor control agent is used every six weeks. Two back-up 55-gallon barrels are on site in the Odor Control Building at all times.

The perforated pipe currently runs south to north approximately 1,050 feet along the east edge of the NELF and to the west along the north side of the NELF approximately 875 feet. Now that the NELF has received its partial final cover in 2020 and intermediate cover has been place on the top of Phase 1 and II, the system will be expanded to operate along the access road. The system will also be extended westward to the Phase II pump house location, with future additional expansion down to the end of Phase III of the NELF.

OCRSWD will continue to manage the odor control mitigation on a daily basis following the procedures detailed in the site Odor Control Plan included in the Plan of Operation approved by the WDNR on June 21, 2010.

4. Does someone monitor the gas system when the landfill is not operating, such as nights and weekends.

   Response: OCRSWD installed a Supervisory Control and Data Acquisition (SCADA) system that allows real time monitoring of the gas system including landfill gas flow, pressure, blowers and flare operation, and combustion temperature, in addition to alarm status. OCRSWD personnel have online access to this system which can be accessed anytime. OCRSWD will respond to the SCADA system alarms as necessary during nights and weekends.

5. What type of temporary cover do you use on the active site.

   Response: A minimum of 6 inches of soil or a WDNR-approved alternative daily cover (ADC) is applied to the working area at the end of each working day. The WDNR-approved materials for ADC include various materials but primarily a synthetic spray-on and paper mill sludge.

   Synthetic spray-on daily cover is used primarily to cover the active filling area at the end of each day. The material consists of Posi-Shell, a patented blend of clay binders, reinforcing fibers and polymers that, when mixed with water, produces a spray applied mortar that dries in the form of a thin durable stucco. Posi-Shell is not used during significant rain events or days when wind conditions prevent it from being applied in an even, consistent layer. A log is maintained on days when spray-on cover is used that identifies the amount of product used, the amount and type of liquid used to make up the batch, the area covered, and number of days it was covered by the batch.

Paper mill sludge has been used as ADC in all seasons and weather conditions. In general, the material performs well. The material is stockpiled daily next to the working face in the filling area. At the end of the day, the sludge is graded over the exposed slopes of the waste in a sufficient thickness (minimum 6 inches) to cover it. The material is stripped prior to additional filling. The stripped material is mixed with waste being placed that day.

6. Is a regular inspection of the cover material performed on the closed sites, how is it performed, and at what intervals.

   Response: The final cover at the closed West and East Landfills are monitored and maintained on a regular basis in accordance with the Plan of Operation approved by the WDNR on June 21, 2010. A qualified technician inspects the final cover by walking the complete area of the site making observations of the cover quality.

7. Have you ever done any offsite testing for Methane, Sulfides, Ammonia, or any other Non Methane Organic Compounds.

   Response: No off-site testing has been completed for gases.

8. What does the containment system on the original landfill site consist of. What types of material. Does it have a bottom and top membrane.

   Response: The design of the NELF site complies with the design criteria listed in s. NR 504.05, s. NR 504.06, 504.07, and s. NR 504.08 for a composite liner, leachate collection system, final cover, and miscellaneous components.

   The composite liner consists of a 4-foot thick compacted clay liner overlain by a 60-mil textured high density polyethylene (HDPE) geomembrane. This composite liner system functions as the primary containment system for the NELF site.

   The Leachate Management System for the NELF site includes a coarse aggregate drainage layer placed over the composite liner. Overlying the geomembrane and underlying the coarse aggregate layer is a cushioning layer of 12 ounces per square yard non-woven geotextile. The drainage layer directs leachate to collection trenches consisting of a 6-inch diameter, perforated SDR 11 HDPE pipe placed in a V-type trench.

   A final cover system consisting of, from top to bottom: 6 inches of topsoil, 30 inches of rooting zone material, a geocomposite drainage layer, geomembrane liner underlain by a 2-foot thick clay barrier layer is approved to be installed at the NELF site during each final cover sequence event. The site has 4 final cover sequences and the final cover sequence 1 was completed in the summer of 2020.

9. Are you treating your effluent, and if so how are you treating it.

Response: No effluent (leachate) is treated on site. The NELF leachate is routed to leachate extraction sumps constructed at the low points in the base grades. Submersible pumps extract leachate from the sumps and discharge it to a double-encased transfer pipe located along the perimeter berm. The leachate transfer pipe is directed it to an existing village of Little Chute sanitary manhole located in Holland Road then to the Heart of the Valley Treatment Plant.

The East Landfill leachate is also directly discharged to the village of Little Chute sanitary manhole and to the Heart of the Valley Treatment Plant. The West Landfill leachate is directly discharged to the city of Appleton Sanitary Sewer system and then to the city of Appleton Wastewater Treatment Plant.

10. How does utilizing the gas for the co-gen plant and the site buildings affect the amount of gas that is drawn from the collection wells

Response: The gas combusted and converted to electricity at the cogeneration (co-gen) facility is extracted from the landfill gas system. The gas system consists of a series of vertical and horizontal collection wells installed in the waste mass. These wells are connected via a network of header pipes that route landfill gas to the OCRSWD blowers. These blowers are associated with the enclosed flare system and are designed to apply vacuum to extract gas from the gas wells as necessary to remove the gas being generated by the waste mass. The gas collected is delivered to the co-gen plant whereas any excess gas not utilized by the co-gen plant is combusted in the enclosed flare.

11. What percentage of gas is used by the co-gen plant and site buildings and what percentage is burned.

Response: In 2019, 77% of the total landfill gas collected was combusted at the co-gen facility and 23% was combusted at the flares. This information is submitted semiannually to the USEPA as required by the CFR 40 part 51.

12. Are the flares supposed to be in constant operation, as I rarely see the one by the dog park operating.

Response: There are two flares on site. The flare visible from the dog park is a candlestick flare that is periodically operated to supplement the primary enclosed flare system. The candlestick flare is operated sometimes to collect gas from the West Landfill and western portion of the East Landfill due to lower gas production and poor gas quality in these sections. In 2019 the candlestick flare was only in operation approximately 170 days. Flares are in operation according to Air Operating Permit No. 445012370-P21, NSPS (40 CFR 60 Subpart WWW), NESHAP for MSW landfills (40 CFR 63 Subpart AAAA).

Semiannually, the Landfill reports the operating time of each of the flares per 40 CFR 63.10(d)(5)(i). During shutdown, when the flare is not operating, no gas is vented to the atmosphere through the flare stack and the landfill gas is collected and routed to the enclosed flare system.

13. How many tons of waste go into the landfill each day

    Response: According to the 2019 annual report submitted to the WDNR on April 30, 2020, a total of 724,501 tons of waste were disposed of in the NELF that year, which results in approximately 1,985 tons per day. Waste tonnage data is submitted on an annual basis to the WDNR in general conformance with the WDNR Plan of Operation Approval Letter and Chapter NR 500 of the Wis. Adm. Code.

14. How many tons of waste since its inception

    Response: The total waste accepted at the NELF since commencement of operations until December 2019 is 4,781,652 tons. The NELF is a regional landfill that accepts waste from Brown, Outagamie, and Winnebago Counties. These counties have an agreement (BOW agreement) to share landfill capacity providing long-term solid waste disposal capacity for area communities.

15. Do any of the loads that come in get inspected for hazardous waste

    Response: Random load inspections are conducted in accordance with the approved Plan of Operation for the NELF to detect wastes not specifically approved by OCRSWD for acceptance. Attachment 3 includes a blank Load Inspection Form used for the site.

    OCRSWD scale staff review loads in an effort to prevent hazardous materials from making it into the recycling or the landfill by asking customers if they have any at the scale, as well as through visual inspection. If something is spotted, scale staff inform the customer of the proper way to dispose of those items.

    OCRSWD serves as the Responsible Unit of Government, or RU, for the 32 municipalities in Outagamie County. The main focus of this program is to provide residents with an effective recycling program and to keep universal wastes out of the landfill and instead properly dispose of them. Collecting hazardous wastes also helps to keep these materials out of the recycling stream and the landfill.

    OCRSWD operates a Household Hazardous Waste Collection program for all residents of Outagamie County including all of the city of Appleton and city of New London. The program is offered twice per month in May through October of every year. Each collection has 60 appointments, so throughout a collection year 720 residents can properly dispose of their hazardous materials through this program. For residents that are unable to attend a collection event, they have the opportunity to

bring their materials to the Brown County Hazardous Waste Facility. Outagamie County has a contract with Brown County to accept residents' materials at little to no cost for the resident. Over the last three years, OCRSWD has collected 102,181 pounds of hazardous waste from nearly 2,200 residents.

16. What is being done to control odors at the active dump site

Response: Please see responses to question number 2 and question number 5.

17. How often is the daily dump site covered

Response: The NELF is an engineered and controlled landfill disposal system with a composite liner, leachate collection, and gas collection and extraction systems designed to protect the environment by containing and isolating waste.

The active work area is covered with a minimum of 6 inches of soil or an approved ADC at the end of each working day. The daily cell cover program consists of a blend of approved ADC products including paper mill sludge and ash products, along with an approved Alternative Spray on Cover called Posi-Shell. The Posi-Shell daily application mixture consists of one, 500-pound sack of the base Posi-shell mix – (Attachment 4) – along with 800 gallons of water with the addition of one, 50-pound Bag of Odor Shell – (Attachment 4). On Saturday two, 50-pound bags of Odor Shell are added to the daily cover application.

18. Is the daily trash being spread out or kept in a small area

Response: Waste is placed in accordance with landfill operation procedures. The active work area is covered with a minimum of 6 inches of soil or an ADC at the end of each working day. If weather conditions (high winds, high temperatures and humidity, etc.) exist which could exacerbate odors, the size and location of the active area is adjusted to minimize potential for the odors to reach the property boundary.

The typical daily working cell is constructed flat with an approximate area being 140 feet by 100 feet with all the lineal slopes being covered by the WDNR-approved ADC materials. The materials are worked up the slopes during the daily shift and once all waste is placed, the flat surface remaining is then covered with the PSA 2000 Posi-Shell applicator which is pulled behind a dozer over the flat surface. The application provides a uniform covering which is then compacted the following day to allow the next lift of waste to be placed. Once the lift reaches its final elevation, it is then covered with additional decking materials to allow safe and efficient truck routing to the next lift of waste.

19. How is run off handled

Response: Any water that comes into contact with the waste is managed as leachate in the leachate collection system. Surface water run-off from the intermediate exterior slopes and final cover areas are managed in the perimeter ditches as part of the surface water control plan. The perimeter ditches route the surface water runoff from the NELF to existing storm drains. The surface water control plan for the site also includes diversion berms, downslope discharge structures, culverts, existing storm sewer, and a sedimentation pond. This plan was approved by the WDNR on June 21, 2010.

20. How is dust handled

Response: OCRSWD implements a Dust Control Plan; approved by the WDNR on June 21, 2010; the OCRSWD utilizes specific dust monitoring and suppression activities to minimize the potential for dust generation during landfill operational activities. These activities include the application of a dust suppressant and water to access and haul roads during warm weather using water trucks. At the active working face, OCRSWD will spray waste materials with water or leachate to control dust. OCRSWD will also reduce the allowable speed limit of vehicular traffic in areas where dust control measures are less effective. In addition, following completion of construction activities, exposed soil is vegetated to prevent dust generation and when weather is not suitable for permanent or temporary seeding, wood mulch is added on bare soil areas. Road grading is also performed on an as-needed basis to remove fines from the surface of the gravel access road to minimize the potential for dust generation.

In regards to filling operations, during high winds from a southerly or westerly direction, operations take place in the most protected area in each phase to minimize dust blowing east toward the residential areas. Filling operations are conducted under controlled conditions when winds are from the northerly or easterly directions. Furthermore, if wind speeds in any direction exceed 45 mph, consideration will be given to suspending operations.

21. How are odors and dust handled at the transfer station

Response: The transfer station has a Dust Control System installed to mitigate dust. The dust control system is installed in the transfer station facility, separate from the fire suppression system, and is utilized on the various material prior to shredding, immediately after shredding, and during loading of the shredded materials as necessary to reduce dust. The dust control system includes a portable hose and nozzle that is used to directly reduce dust associated with the shredding activities. The building ventilation system includes four separate vertical fans to manage building air exchange. No MSW Municipal Solid Waste is currently being accepted at the transfer station as it is direct hauled to the landfill so there is not a need for additional odor control measures.

It should be noted, however, that the larger Material Recovery Facility just southeast of the transfer station deploys an NCM Odor Control System to neutralize any malodorous odors that may be created from the acceptance and processing of recyclables.

Attachments:

Attachment 1 – Operations Plan, Appendix D
Attachment 2 – NCM Odor Delivery System
Attachment 3 – Random Hazardous Waste Inspection Form
Attachment 4 – Alternative Daily Cover Program Materials

Attachment 1

Operations Plan, Appendix D

Report

Dust, Litter, and Odor Control Plan for the Outagamie County Northeast Area 6 Landfill

Scope I.D.: 007O001

Outagamie County Department of Solid Waste
Appleton, Wisconsin

December 2009

Dust, Litter, and Odor Control Plan
Outagamie County Northeast Area 6 Landfill

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Attachments

1. Introduction

This document provides a detailed discussion of the specific actions to be taken during construction and waste disposal activities associated with the Outagamie County Northeast Area 6 Landfill (NELF) to reduce fugitive dust emissions, blown litter, and odors. It also assigns the responsibility for controlling dust emissions, blown litter, and odors to specific personnel, and it outlines the documentation procedures that will be used to show compliance with this plan.

Fugitive dust emissions, measured as total suspended particulate (TSP) matter, are regulated by the United States Environmental Protection Agency (USEPA) under the Clean Air Act (CAA). The Wisconsin Department of Natural Resources (WDNR) under the authority of the USEPA enforces the secondary TSP standard (i.e., 150 micrograms per cubic meter [$\mu g/m^3$]). Dust control procedures are put in place to maintain compliance with the standard.

Monitoring of TSP occurs daily by making visual observations of fugitive dust at the landfill. Based on these observations, dust generation is controlled by using dust control measures (e.g., wetting with water those surfaces that produce dust).

Provisions of NR 506.07(1) (c) require that blown litter be recovered and disposed in the active area of the landfill by the close of each day's landfill activities. Due to the proximity of the landfill to US Highway 41, particular concern is expressed in condition #7 of the feasibility approval for the landfill which requires a discussion of the measures to be taken to ensure that dust or blowing litter will not cause safety problems for motorists traveling on US Highway 41.

The plan will also outline specific procedures for retrieving any litter which escapes from the landfill into the highway right of way.

2. Dust Control

2.1 Dust Generating Activities

Dust can be generated by a number of on-site activities, including landfill construction, waste disposal activities, vehicular traffic, and soil erosion when high winds occur over bare soil areas. Each of these sources of TSP is discussed in this section. Dust control procedures are discussed in Section 2.2.

2.1.1 Landfill Construction and Waste Disposal

During landfill construction, dirt roads are used to haul soil from borrow pits to the landfill areas under construction. The hauling of soil along the haul roads can produce fugitive dust. In addition, while placing and grading soils, dust can be generated. The primary means to control dust generated during construction will be through the application of water to haul roads, limiting the number of haul roads, and controlling the maximum speed of vehicles on haul roads.

2.1.2 Vehicular Traffic

During daily landfill operations (i.e., waste hauling and filling), the primary source of fugitive dust is from trucks and heavy equipment moving through the landfill, and truck traffic or regrading operations along the gravel access and haul roads.

2.1.3 High Winds

High winds may result in the generation of fugitive dust from exposed soil and access roads. Vegetation effectively eliminates dust generation due to wind erosion of soil. Windy conditions could also cause litter to be blown from the landfill.

Attachment 1 contains monthly wind roses for the closest monitoring station, located at Austin Straubel Airport, Green Bay, Wisconsin. A wind rose can be used to graphically depict the dominant transport direction for winds for a broad area. However, the effects of terrain, local variabilities and other factors may result in the wind rose not being truly representative of the actual wind conditions at a particular site. The wind rose does provide the best information regarding percentage of time direction(s) and wind speeds associated with site wind.

The wind rose in Attachment 1 is for the months of April through November. This is the time period when we anticipate construction activities to most likely occur and dust generation to be of the most concern. In review of Attachment 1 we can make the generalizations regarding wind speed and direction presented in Table 2-1. From Table 2-1 we can surmise the following:

- Average wind speed is about 9.8 mph;
- About 5.8% of the days will be calm (~1 to 2 days per month);
- The dominant wind directions are from the south-southwest to west; and
- South-southwest to west winds exceed 12 mph more frequently than north-northwest winds.

Table 2-1
Summary of Wind Rose Data
Green Bay, WI

Month	Average Wind Speed (mph)	~% Calm Wind	Dominant Wind Directions (%/directions)	% Wind Greater Than 12 mph/directions
April	11.3	2.8%	~33%/E,NNE ~26%/W,SSW	~14%/E,NNE ~12%/W,SSW
May	10.3	5.5%	~30%/E,NNE ~29%/W,SSW	~10%/E,NNE ~9%/W,SSW
June	9.5	5.7%	~22%/E,NNE ~34%/W,SSW	~5%/E,NNE ~10%/W,SSW
July	8.6	8.0%	~15%/W,NNW ~34%/W,SSW	~3%/W,NNW ~9%/W,SSW
August	8.5	8.5%	~15%/W,NNW ~36%/W,SSW	~3%/W,NNW ~8%/W,SSW
September	9.2	6.7%	~16%/W,NNW ~36%/W,SSW	~3%/W,NNW ~9%/W,SSW
October	10.1	5.2%	~21%/W,NNW ~37%/W,SSW	~6%/W,NNW ~10%/W,SSW
November	10.7	4.1%	~22%/W,NNW ~38%/W,SSW	~7%/W,NNW ~15%/W,SSW

Notes:
mph – miles per hour and % calm winds rounded to the nearest tenth

Prepared by: MJP1
Checked by: MRS

The wind directions of greatest concern are from the southeast to southwest which would blow across Highway 41 or from the west which blow toward the residential area to the east of Holland Road. The south-southwest winds are of most concern and are predominant during the time period mentioned above. Diligent dust monitoring and dust and litter control procedures will be implemented during all times at the landfill, especially the time period described above.

If wind speeds in any direction exceed 45 mph, consideration will be given to suspending operations.

2.2 Dust Control Procedures

This section describes the specific dust monitoring and suppression activities that will be taken by the landfill operator and construction contractor(s) to minimize the potential for dust generation at the NELF during landfill construction and landfill operational activities. Procedures for control of wind blown litter will also be discussed.

The dust and litter control procedures discussed below include:

- dust suppressants and watering which are used primarily during warm weather;
- limiting vehicle speed;

- revegetation of areas where construction and/or borrow soil excavation is completed;
- temporary mulching of disturbed areas prone to wind erosion;
- road grading to remove fines;
- constructing roads of coarse, open graded aggregate with very low fines content;
- Positioning of portable litter control devices as needed; and
- Diverting landfill operations to an alternative area to preclude wind blown litter.

2.2.1 Dust Suppressant Application Guidelines for Landfill Roads

The application of a dust suppressant and water to access roads and haul roads during warm weather can prevent significant dust generation if road conditions are properly monitored. An example of dust suppressant is a magnesium chloride solution which reduces dust generation by cementing together the dust-sized surficial road material. The dust suppressant can generally be rejuvenated for approximately six months by adding water, after which, reapplication of the dust suppressant may be necessary.

The dust suppressant should be applied on the necessary portions of the access roads and haul roads to prevent dust generation. Dust suppressants are intended for use within the confines of a road bed or a specifically designated soil area. Application and maintenance procedures will comply with manufacturers' recommendations. The following discussion is an example of a procedure to be followed for the application of a specific dust control product (Dustgard^{TM}).

The manufacturer, Daffinson, recommends Dustgard^{TM} be applied at a rate of 0.5 gallon per square yard in two 0.25 gallon per square yard applications. The surface should be prewatered to a depth of three to four inches prior to application to aid even penetration. This basic rate should provide dust control for approximately six months before reapplication is required. Dustgard^{TM} should be reapplied before the first treatment is completely used up, to prevent the loss of fine-grained soil particles.

2.2.2 Watering

If dust generation is observed, then the Landfill Operations Manager is responsible for deciding if watering should occur to suppress dust. Watering should be completed as soon as possible, but within no more than one hour from when it is observed to be dusty. The road will be wetted with water using a watering truck. Water for wetting the roads will be obtained from the on-site sedimentation pond and/or hydrants located on site.

The Landfill Operator or the construction contractor is responsible for properly maintaining their watering trucks. If the watering truck is out of service, a back-up water truck will be obtained from one of two possible sources, which include:

- An off-site truck vendor.
- A local contractor and construction equipment rental vendor.

The construction contractor(s) are responsible for providing and maintaining their own water truck.

2.2.3 Dust Suppression During Waste Excavation/Disposal

Waste materials are expected to be moist. Therefore, actual dust emissions during the disposal process are expected to be insignificant. However, as an extra measure to maintain the moisture content of the material, water or leachate will be sprayed on the active excavation face when dusty conditions are apparent.

2.2.4 Vehicle Speed Limits

During dry periods, the amount of dust generated by vehicular traffic is proportional to the speed and weight of the vehicles traveling over the road or open soil area. In those areas where dust control measures are ineffective, the Landfill Operations Manager will reduce the allowable speed limit of vehicular traffic within the affected area. The Landfill Operations Manager will adjust the vehicle speed limit as needed. As a "rule of thumb" a vehicle speed limit of no greater than 15 miles per hour is recommended.

2.2.5 Vegetation

Following completion of construction activities, exposed soil will be vegetated to prevent dust generation. Vegetation will be established by hydroseeding or other means. Once vegetation begins to grow, any spots not vegetated will be reseeded to provide complete coverage.

For those soil areas not associated with contracted construction activities, the Outagamie County Landfill Operations Manager will coordinate the establishment of vegetation of any bare soil areas on a semiannual basis. Revegetation can be accomplished by hydroseeding or other means to establish perennial grass species.

2.2.6 Mulch

Outagamie County occasionally has on-hand wood mulch produced by grinding wood wastes. This wood mulch can be used as an effective means of dust control on bare soil areas or open waste face areas. Wood chips or compost can be used as a temporary treatment until weather is suitable for permanent or temporary seeding. The wood chips or compost could be left in-place and blended with soil as part of an intermediate cover.

2.2.7 Road Grading

Road grading is one of the most effective procedures for controlling dust. Road grading will be performed on an as-needed basis to remove fines from the surface of the gravel access roads to minimize the potential for dust generation. Prior to starting regrading activities, the gravel will be watered if necessary to prevent dust generation during grading.

2.2.8 Haul Road Construction

Haul road construction for waste and/or soil hauling will be designed for construction traffic. One of the design goals is to minimize dust production. Road grading and the design features listed below can minimize dust production.

- If required or practical, construct the haul road with a geotextile below the aggregate. This will minimize the intrusion of fines into the aggregate;

- The road may be constructed with an open graded aggregate with less than 10% passing the number 200 sieve (P200). Crushed concrete or asphalt can be used for this purpose if it meets the P200 criteria. This will limit dust generation during normal use;

- Grade the road frequently and when the aggregate becomes fouled with fines; and

- Apply additional aggregates as required to maintain the construction traffic.

2.2.9 Restricted Operations

Filling operations will be modified depending on wind direction and velocity to limit dust and wind blown litter. During high winds from a southerly or westerly direction, operations will take place in the most protected area in each phase to minimize dust blowing north toward Highway 41 or east toward the residential areas. Filling operations will be conducted under regular controlled conditions when winds are from the northerly or easterly directions.

If wind speeds in any direction exceed 45 mph, consideration will be given to suspending operations.

3. Litter Control

3.1 Introduction

NELF operators will manage litter in a manner that is effective both inside and outside the landfill boundary. The purpose of a litter control plan is to prevent litter from becoming a nuisance or safety hazard and to provide adequate aesthetics. Problems that can develop if litter is allowed to go uncontrolled include:

- Complaints from neighbors and the public;
- Reduced aesthetics;
- Increased presence of vectors;
- Increased risk of onsite and offsite fire as well as other safety hazards;
- Increased landfill operating costs; and
- Reduced willingness of landowners to allow landfill expansion.

3.2 Litter Control Procedures

The most common ways to prevent and minimize litter problems are to:

- Confine the working face;
- Fencing;
- Make effective use of litter catch screens, fences and/or enclosure;
- Deposit / compact waste on the down-wind slope;
- Push waste short distances and minimize waste handling;
- Cover and/or compact waste more frequently during periods of high wind;
- Restrict waste deposition/handling during periods of high wind;
- Require incoming vehicles to cover loads;
- Conduct frequent litter inspections and clean-up.

3.2.1 Confine the Working Face

Keeping the working face of the active fill area as small as possible is one of the best ways to help prevent litter problems.

3.2.2 Fencing

Fencing is a primary method of litter control. Fencing can include portable litter catch screens and fixed fencing.

Litter catch screens are relatively simple to use and are typically oriented perpendicular to wind direction and located downwind from the working face. For smaller active areas, litter catch screen designs that completely enclose the working face are also very effective. The most practical designs will be portable and will be constructed of heavy-duty framing such that they can be transported and positioned using on-site equipment. There are numerous litter catch screen designs and spacings that work well. Most designs include the following elements:

- Heavy duty framing;

- Portability with means to move and position the screens using on-site equipment;

- Chain link fabric or equivalent material that has a large percentage of open area with relatively small openings;
- Inclined slightly to provide better trapping and retention of litter;
- Height of 7 to 12 feet; and
- Double rows with 40 to 80 foot spacing between rows.

Fixed fencing would consist of a wire mesh or similar fence installed along the perimeter of waste filling areas. Multiple rows of fencing can be used. In addition, fencing may be confined with screening berms (see Section 4.6 of P.O.O.) to increase effectiveness.

Note that all litter catch screens and fences should be cleaned regularly to maintain their effectiveness.

3.2.3 Push Short and Minimize Handling

Pushing short means that the refuse unloading or tipping areas are kept as close as possible to the working face of the landfill. In this manner, the distance that equipment operators will have to travel while pushing the garbage into place for cell construction and compacting is minimized. This practice will minimize the wind exposure that the uncovered garbage will receive as it is being placed. Landfill operators and spotters should be sure that incoming vehicles are unloading as close as possible to the working face.

3.2.4 Cover Waste More Frequently During Periods of High Wind

Periods of high wind may dictate that wastes be covered more frequently in order to control litter. Selective placement of small amounts of cover soil or alternative cover can effectively reduce wind dispersal of litter and can save significant amounts of time and cost when compared with litter clean up. Cover soils placed for the sole purpose of litter control do not have a minimum thickness and can therefore be placed in a manner that does not consume unnecessarily large volumes of landfill air space.

3.2.5 Restrict Waste Deposition / Handling During Periods of High Wind

Not only do high wind conditions contribute to severe litter dispersal, but can also result in safety hazards for people using the landfill. Depending on landfill use, it may be necessary to implement special "high-wind" operating protocols or restrictions. Examples of these kinds of protocol include decreasing the size of the working face, limiting the number of vehicles that unload simultaneously, and limiting operations to areas that are best sheltered. Use of special unloading screen enclosures and alternative cover materials can also be incorporated into high-wind operating protocol. Under extreme wind conditions, it may be appropriate to close the landfill entirely.

3.2.6 Require Incoming Vehicles to Use Controls or Covers

Many landfills require that incoming vehicles be covered with a tarp or other cover such that litter and other objects do not fall out or blow out. This requirement should be posted at the landfill gate and any incoming vehicles that do not follow the policy could be surcharged a litter collection fee or could be turned around.

3.2.7 Conduct Frequent Litter Inspections and Clean-Up

As expected, preventative litter control programs will not eliminate all litter problems. For this reason, regulations require that landfill operators conduct and document periodic litter inspections and remove litter from on-site and off-site areas of accumulation. Litter inspections should be conducted and documented on daily or weekly logs. Depending on typical wind conditions and waste types, inspections and litter removal may need to be carried out more frequently. Regular hand pick ups and/or vacuum trucks work well for litter removal. Litter inspection and removal efforts should focus on likely accumulation areas such as fence lines, borrow ditches, drainages, lee slopes, and areas of dense vegetation. Inspection and removal activities must be documented. It is best if the documentation is provided on the daily operating log (see example form in Attachment 2).

4. Odor Control

4.1 Introduction

Odor is frequently associated with landfill operations. Waste delivered to the site may have a characteristic odor. In addition, decomposition of the waste can release odor and generate gases. Leachate recirculation may enhance the generation of gas and odors due to increased waste decomposition.

Detection of odor is a subjective process and varies widely from one individual to the next. The following sections have been developed as a guide to address the potential odor issue at the NELF.

4.2 Identification of Potential Odor Sources

Odors can be created by a variety of materials and activities associated with the landfill. The following is a summary of the potential odor sources.

A. Acceptance of waste materials, including but not limited to:
   - Yard waste
   - Municipal solid waste
   - Construction & Demolition (C&D) wastes
   - Petroleum contaminated soils

B. Emissions from decomposing materials, including but not limited to:
   - Yard waste composting
   - Municipal solid waste (MSW)
   - Demolition waste

C. Emissions from operational activities, including but not limited to:
   - Equipment maintenance
   - Leachate recirculation
   - Gas system operation

D. Emissions from construction/closure activities, including but not limited to:
   - Gas extraction well installation
   - Splicing of separate liner and cover projects

4.3 Odor Monitoring

4.3.1 General

Odors will be monitored by landfill personnel at the NELF property line and various locations outside the perimeter of the NELF facility by recording observations regarding detectable odors. The summary of each monitoring event will be recorded noting existing weather conditions and any possible odor sources.

4.3.2 Monitoring Frequency and Procedure

Odor monitoring will be conducted weekly and also on receipt of any odor complaint received by the landfill, Outagamie County Health Department, or Wisconsin Department of Natural Resources (WDNR). The weekly observations will routinely be made at varying times of the day ranging from early in the morning before the landfill opens through the end of the day after placement of daily cover. The monitoring will consist of physically traveling around the perimeter of the landfill property. Observations made at the monitoring location will be recorded on an "Odor Monitoring Form" or on an "Odor Complaint Response Monitoring Form." Examples of these forms are in Attachment 3 of this Odor Control Plan.

If odors are detected at any of the monitoring locations, further inspection of the site will be implemented to locate the source of the odor as discussed in Section 4.4.3. Once the source is identified, measures will be taken to address the problem as discussed in Section 4.3.

4.3.3 Odor Source Identification

The following screening criteria will be utilized to determine if a detected off-site odor can be potentially attributed to the landfill:

- Location of the landfill in regard to the detected odor (landfill upwind or downwind of the odor);
- Can the odor be attributable to a non-landfill source; and
- Similar odors are not observed at odor monitoring locations upwind of the landfill.

NELF personnel will conduct further investigations to identify the odor sources, if the odor is considered to be potentially attributable to the landfill. This will consist of following the odor based on the wind direction at the time.

4.4 Odor control

Odor minimization and control is a high priority at the landfill facility. It is the Outagamie County Solid Waste Department's (OCSWD) policy to provide odor controls to minimize the potential for odor migrations beyond its property boundary. The following is a discussion of the efforts made to prevent or minimize odors at the landfill for each potential emission source.

4.4.1 Acceptance of Waste Materials

The primary odor control measure for the acceptance and placement of waste will be the use of daily cover. A minimum of 6-in of soil or an alternative daily cover (ADC) will be applied to the working area at the end of each working day. If weather conditions (high winds, high temperatures and humidity, etc.) exist which could exacerbate odors, the size and location of the active area will be adjusted to minimize potential for the odors to reach the property boundary. In addition, daily cover could be placed more frequently.

Odors from yard waste will be controlled by locating the stockpiles in areas which will minimize potential for the odors to reach the property boundary.

In the event that monitoring reveals that the control measures are ineffective in controlling the migration of odors off-site, the application of odor suppressants or masking agents may be utilized to enhance odor control.

4.4.2 Decomposing Materials

Various waste materials decompose over time and produce odors as a result. Waste which decomposes within the limits of the MSW landfill will be controlled by the placement of daily, intermediate & final cover and the installation and operation of an active gas system.

The design of the active gas system is provided in the Plan of Operation for the NELF. The system is designed to prevent migration of gases, produced by waste decomposition, beyond the waste limits. The final cover and gas system will be monitoring and maintained on a regular basis in accordance with the Plan of Operation.

4.4.3 Operational Activities

Leachate Recirculation
Leachate recirculation has the potential to create significant odor problems dues to the associated increase in waste decomposition and the exposure of leachate to the atmosphere. The operation, including the methods to control odor are included in the Leachate Recirculation Plan included the Plan of Operation for the NELF.

Equipment Maintenance
The NELF operations (waste placement, covering, maintenance, etc.) will be performed by the OCDSW. Routine maintenance is conducted on all landfill operations equipment. This maintenance program is designed to keep engines running clean and efficient to minimize exhaust fumes and odors.

Gas System Operation
The gas system will be operated and maintained in accordance with the Plan of Operation. Gas collected by the system will be combusted to generate electricity. In addition, an existing gas flare will be utilized to combust the gas when the cogeneration equipment is not operating.

4.4.4 Construction/Closure Activities

Construction activities at the landfill have the potential to create significant odors. The problems are primarily related to exposing waste during splicing of liner and cover sequences.
The primary control measure for odors created during liner/cover splicing will be to limit the period of time and the area of waste exposed during which this occurs.

In the event that monitoring reveals that the control measures are ineffective in controlling the migration of odors off-site, the application of odor suppressants or masking agents may be utilized to enhance odor control.

4.5 Provisions for Plan Amendment

This odor control plan has been developed as a guide to address potential odor issues at the NELF. This plan will be amended as needed due to operational changes, additional special waste acceptance, or changes in technology.

5. Responsibilities

This section describes responsibilities for implementation of the various components of this plan. Certain responsibilities lie with landfill personnel and contractors. Landfill operations personnel are responsible for implementing this plan during landfill operations and procedures are described herein.

5.1 Landfill Operations Manager

The OCDSW will designate an individual who will be responsible for landfill operations. This individual will have overall responsibility for insuring that the landfill operator and any contractors working on-site implement and follow this plan. Responsibilities include the following:

- Observations to determine if fugitive dust, blown litter or odors are being generated;
- Recording incidents of fugitive dust, litter generation, and odor complaints;
- Documenting any measures taken to control fugitive dust, litter, and odors, and their effectiveness;
- Watering of gravel access roads;
- Positioning of portable litter control devices;
- Deciding when to rehydrate or reapply dust suppressants (if required);
- Posting and enforcement of vehicle speed limits;
- Coordinating dust procedures with contractor(s) and the landfill operator;
- Deciding when to curtail or relocate landfill operations to preclude wind blown litter.

This individual shall document any dust, litter, or odor generation occurrences and the dust, litter, and/or odor mitigation procedures that were implemented. These data shall be recorded on the "Dust and Litter Control Monitoring Documentation" and "Odor Monitoring" forms located in Attachments 2 and 3. The frequency of observation will be determined on site conditions. However, days on which dust, litter, or odors were not observed shall be recorded as well.

Dust, litter, and odor control observations are conducted by an individual designated by the OCDSW. This individual will monitor the site conditions at the beginning of each work day, including a review of the weather forecast that may be helpful in anticipating significant dust generation "Significant dust, or litter" is defined as visible dust or litter generated by landfill activities, vehicular traffic, or high winds. High winds can generally be described as winds greater than 15 miles per hour. Reasons that dust generation would be insignificant could be a recent rain or snow event, or frozen soil conditions. Results of these observations will be recorded on a daily basis on the "Dust and Litter Control Monitoring" form in Attachment 2.

If significant dust or litter generation is anticipated due to site and/or weather conditions, designated personnel will check the site continually throughout the day. The active haul roads, construction areas, waste excavation and waste placement areas should be observed. If significant fugitive dust or wind blown litter is observed, appropriate action will be taken by the responsible party to control the dust and control the litter.

5.2 Construction Contractor(s)

Construction contractor(s) perform a number of construction tasks at the NELF. Each earthwork contractor will be responsible for observing and controlling dust generated by their specific tasks. A dust control supervisor must be assigned by each earthwork contractor that operates on-site. All contractors who may generate substantial dust will be responsible for monitoring dust generated by their activities. For example, a contractor who has constructed earthen haul roads has the responsibility for monitoring the dust conditions, and taking the action(s) necessary to mitigate dust. Contractor dust control activities will be coordinated with the OCDSW. Activities associated with dust control are described below:

- Air observations to determine if dust is being generated;
- Performing necessary measures to control dust in their work area;
- Documentation of dust control measures;
- Coordination of work activities with landfill personnel; and
- Reporting dust observations and the control measures implemented.

6. Corrective Actions

6.1 Failure of the Dust Suppressant

If the dust suppressant does not appear to be effectively eliminating fugitive dusts, prior to the next scheduled application, landfill personnel will coordinate the reapplication of the dust suppressant. Application will occur as soon as possible, but no later than 48 hours after the failure of the dust suppressant. The dust suppressant will be reapplied on those sections of the access road and haul roads that were observed to be dusty. Applications of the dust suppressant will be documented on the Dust and Litter Control Monitoring form.

6.2 Failure of Dust, Litter, or Odor Control Measures

If dust or litter control measures cannot adequately control dust (i.e., visible dust is still present), or wind blown litter, the Site Supervisor will stop work until adequate measures can be taken to control dust or litter. All work stoppages will be coordinated with the OCDSW, and documented on the Dust and Litter Control Monitoring form. If a dust control measure fails, this plan shall be modified accordingly, including details of the effective dust control technique.

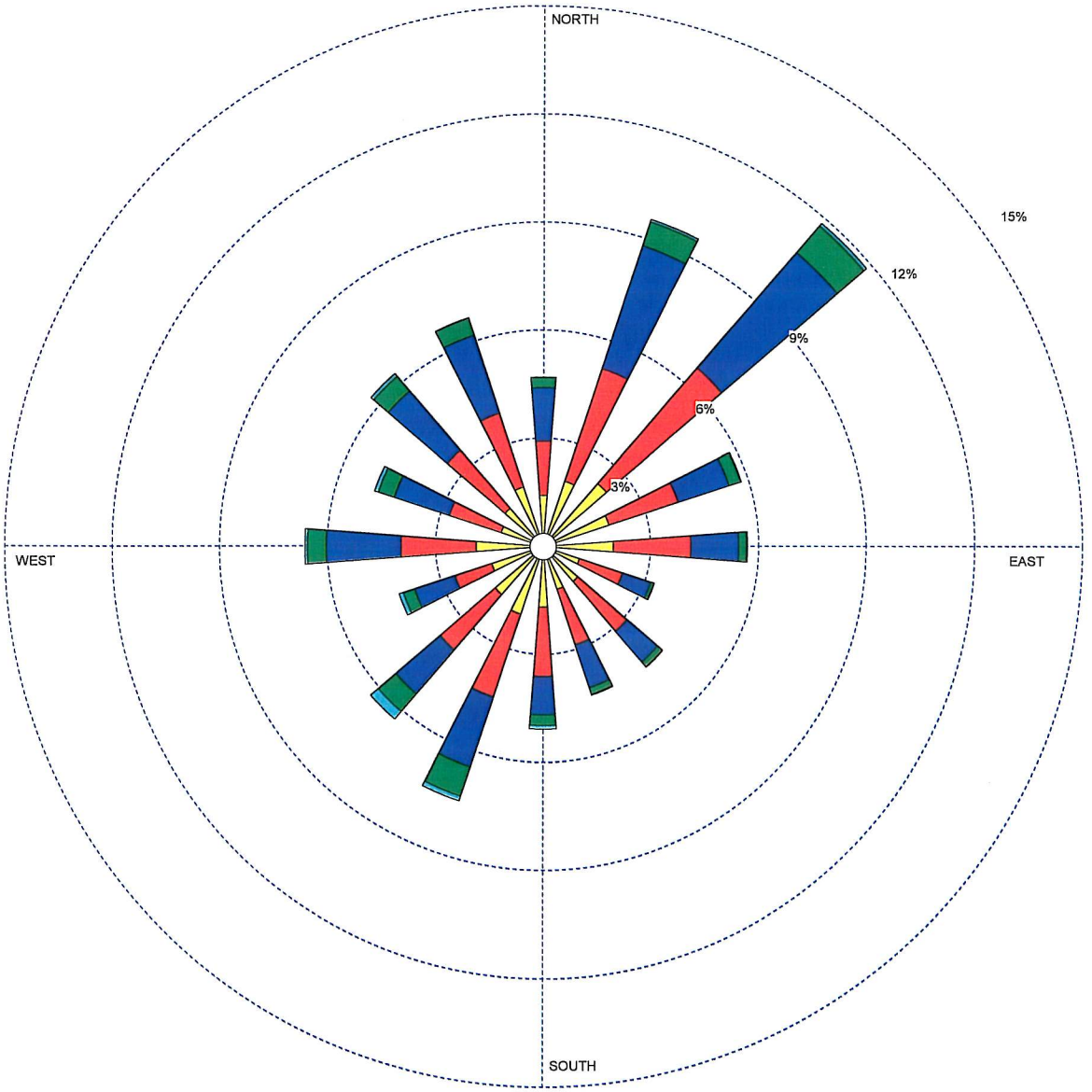
The odor control portion of this plan has been developed as a guide to address potential odor issues at the NELF. This plan will be amended as needed due to operational changes, additional special waste acceptance, or changes in technology.

Attachment 1

Wind Roses – April through November, Green Bay, Wisconsin

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



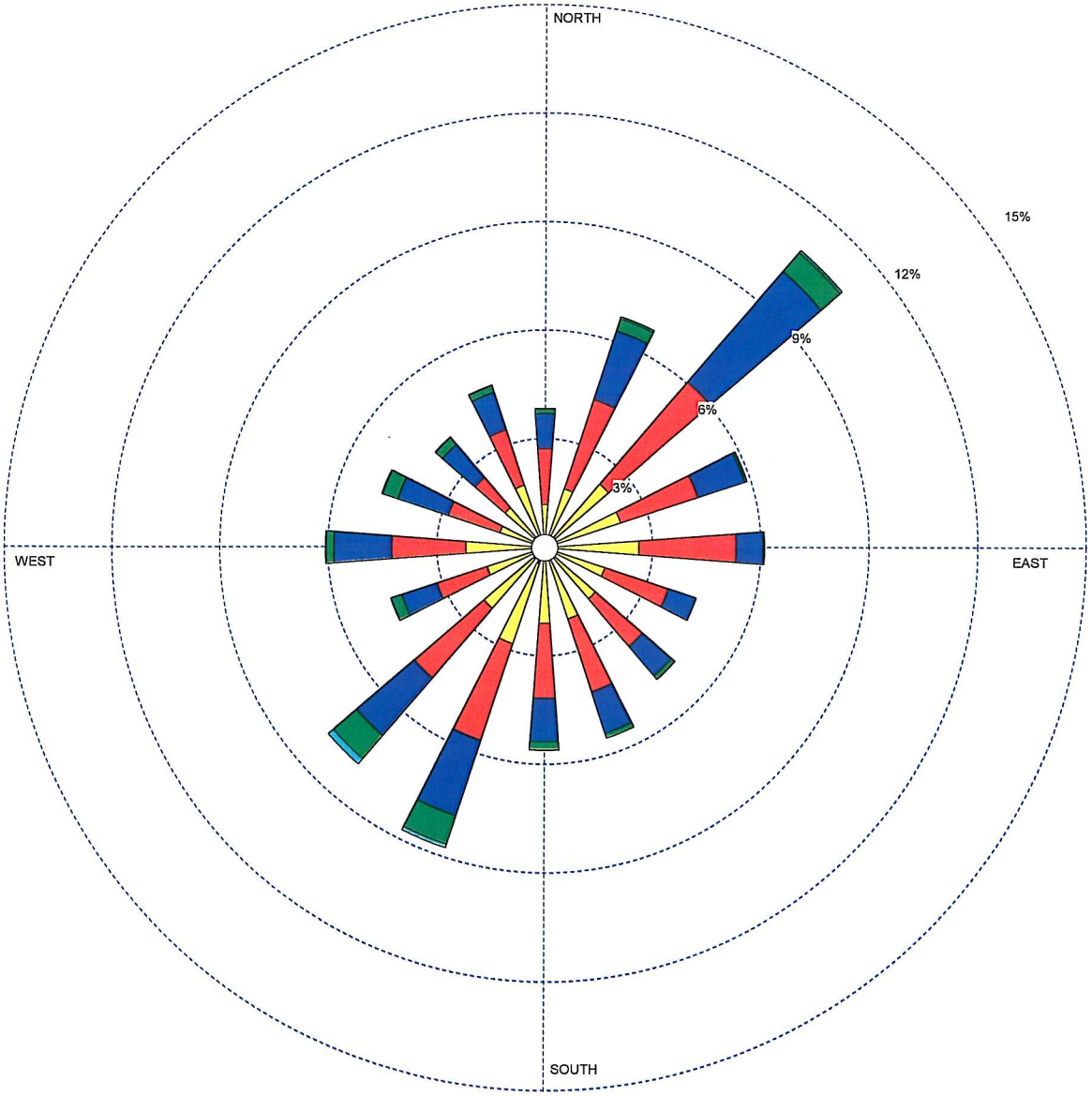
Wind Speed (m/s)

- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE	COMPANY NAME
	11/4/2002	
DISPLAY	UNIT	COMMENTS
Wind Speed	**m/s**	
AVG. WIND SPEED	CALM WINDS	
5.06 m/s	**2.83%**	
ORIENTATION	PLOT YEAR-DATE-TIME	PROJECT/PLOT NO.
Direction (blowing from)	**1961 Apr 1 - Apr 30 Midnight - 11 PM**	

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)

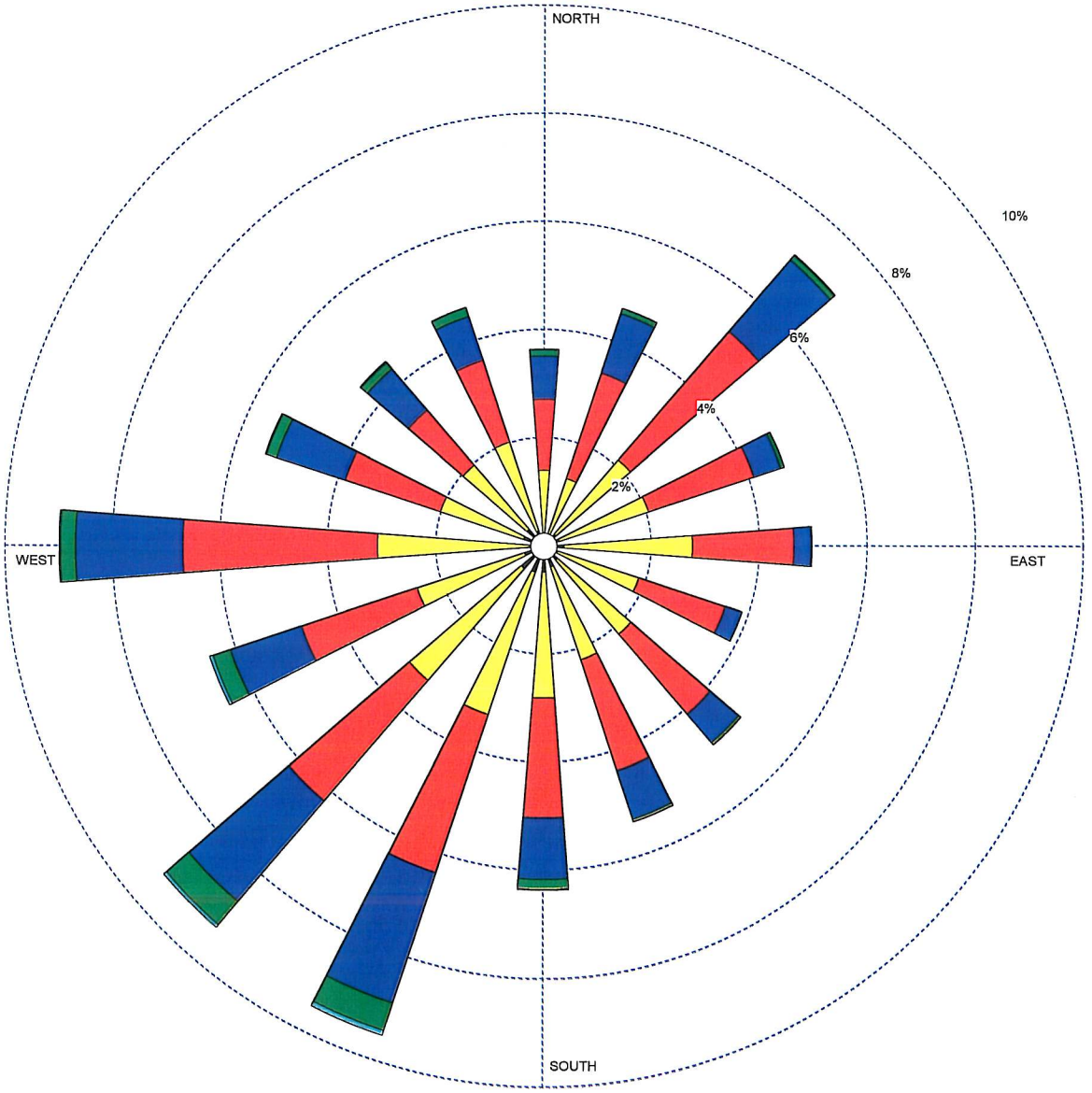
- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE	COMPANY NAME
	11/4/2002	
DISPLAY	UNIT	COMMENTS
Wind Speed	**m/s**	
AVG. WIND SPEED	CALM WINDS	
4.63 m/s	**5.52%**	
ORIENTATION	PLOT YEAR-DATE-TIME	PROJECT/PLOT NO.
Direction (blowing from)	**1961 May 1 - May 31 Midnight - 11 PM**	

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

WIND ROSE PLOT

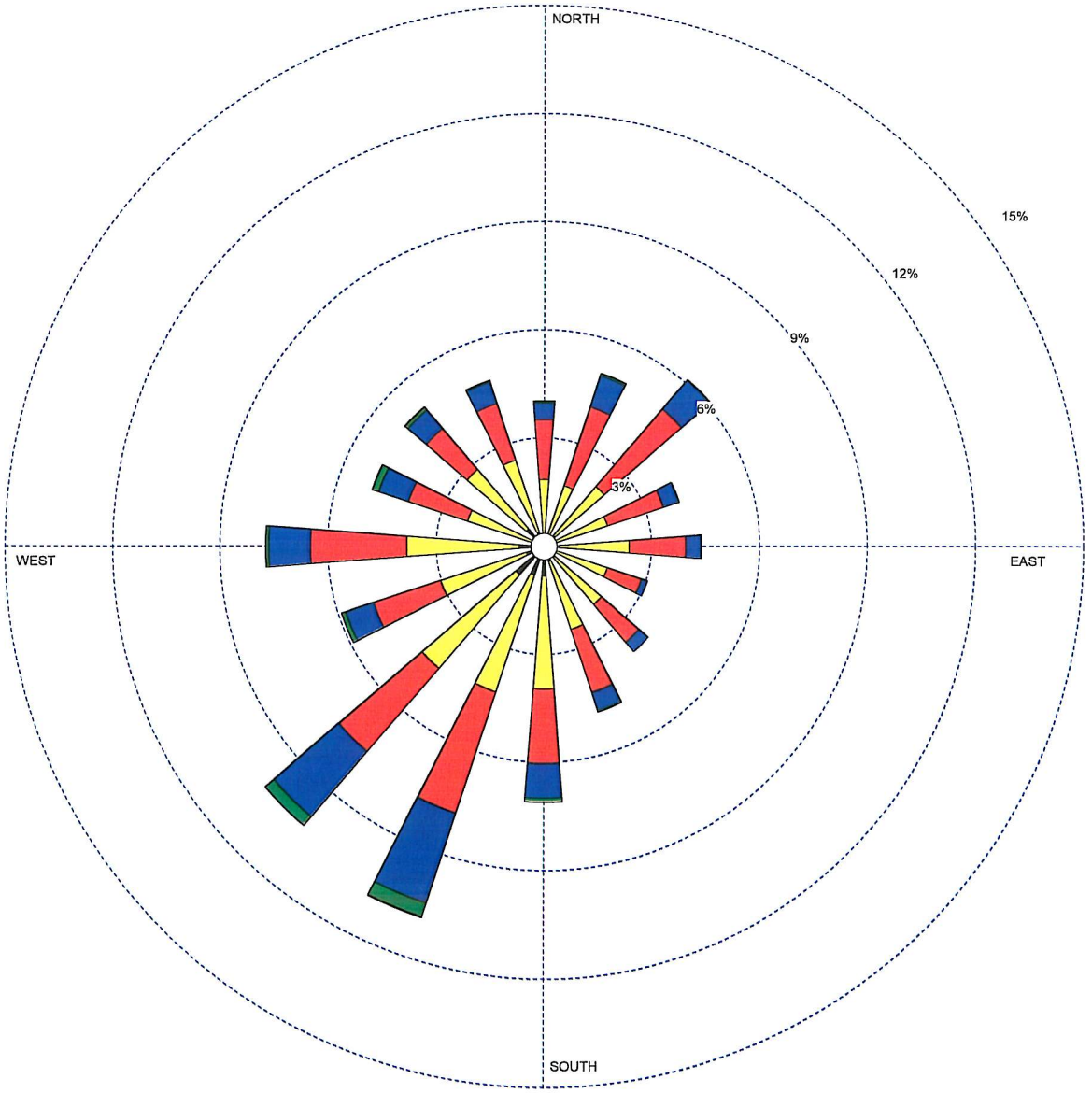
Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s) > 11.06 8.49 - 11.06 5.40 - 8.49 3.34 - 5.40 1.80 - 3.34 0.51 - 1.80	MODELER	DATE **11/4/2002**	COMPANY NAME
	DISPLAY **Wind Speed**	UNIT **m/s**	COMMENTS
	AVG. WIND SPEED **4.25 m/s**	CALM WINDS **5.66%**	
	ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **1961** **Jun 1 - Jun 30** **Midnight - 11 PM**	PROJECT/PLOT NO.

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



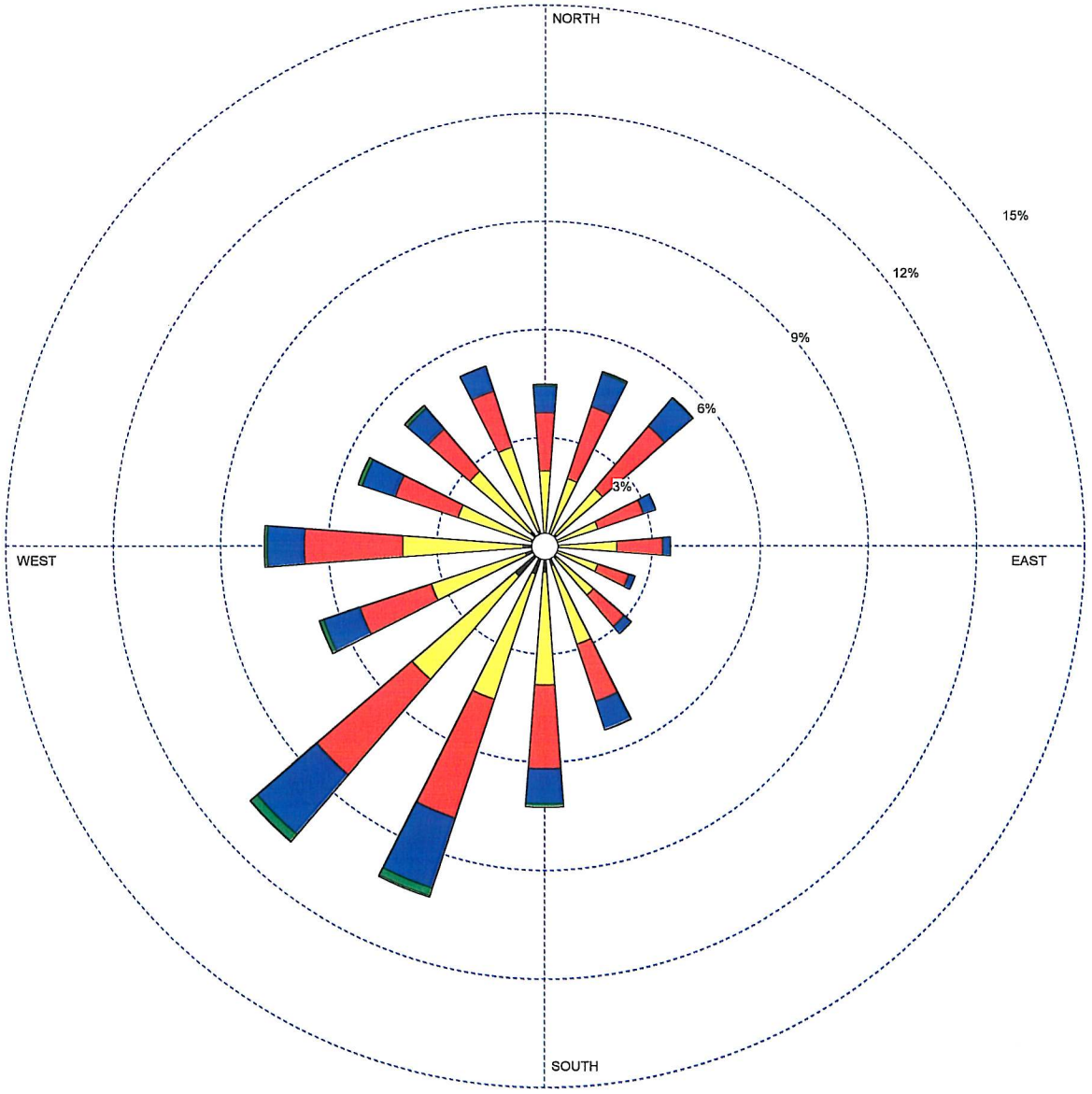
Wind Speed (m/s)

- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE	COMPANY NAME
	11/4/2002	
DISPLAY	UNIT	COMMENTS
Wind Speed	**m/s**	
AVG. WIND SPEED	CALM WINDS	
3.84 m/s	**7.95%**	
ORIENTATION	PLOT YEAR-DATE-TIME	PROJECT/PLOT NO.
Direction (blowing from)	**1961 Jul 1 - Jul 31 Midnight - 11 PM**	

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)

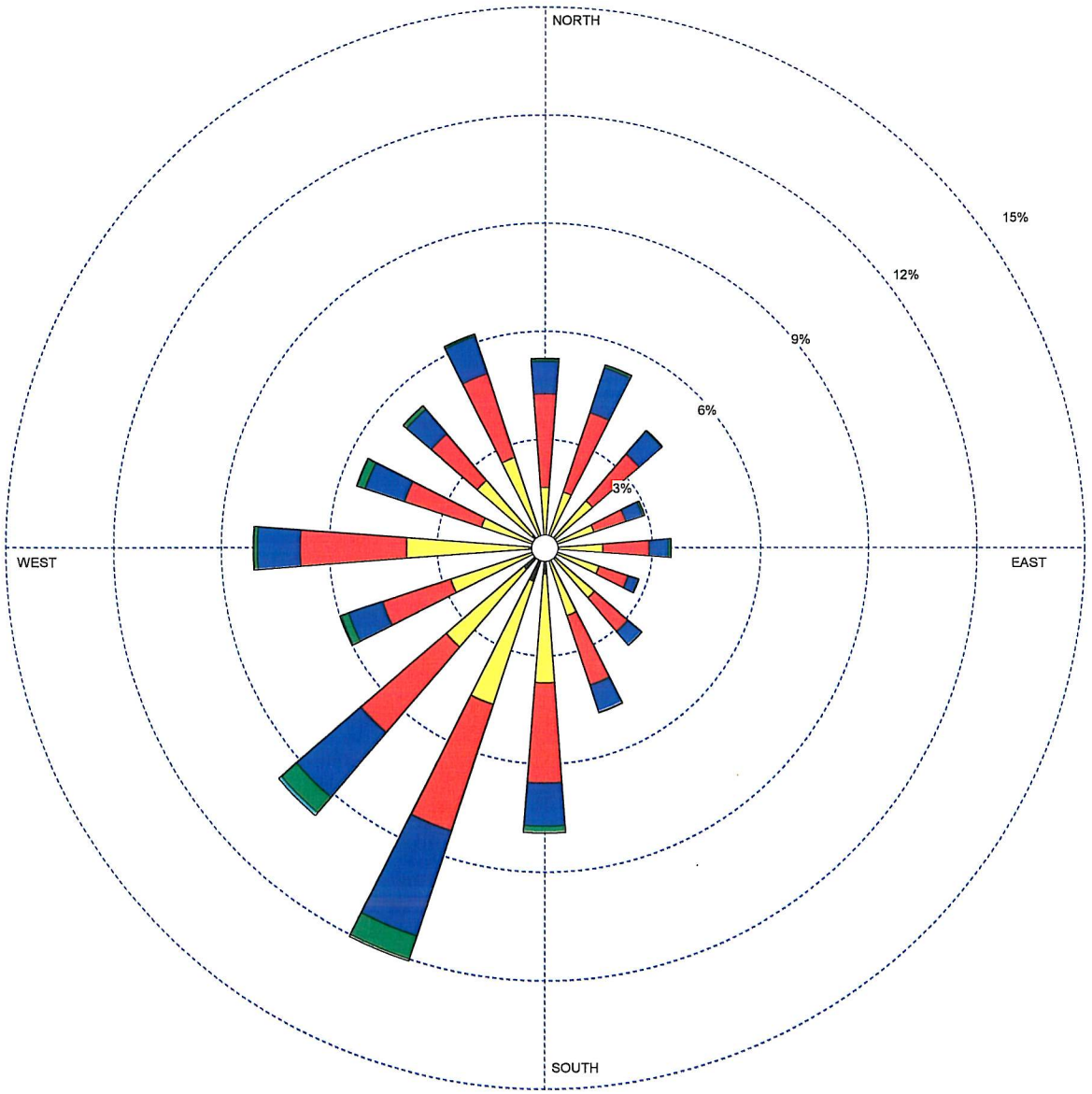
- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER		DATE **11/4/2002**	COMPANY NAME
DISPLAY **Wind Speed**		UNIT **m/s**	COMMENTS
AVG. WIND SPEED **3.78 m/s**		CALM WINDS **8.45%**	
ORIENTATION **Direction (blowing from)**		PLOT YEAR-DATE-TIME **1961** **Aug 1 - Aug 31** **Midnight - 11 PM**	PROJECT/PLOT NO.

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)

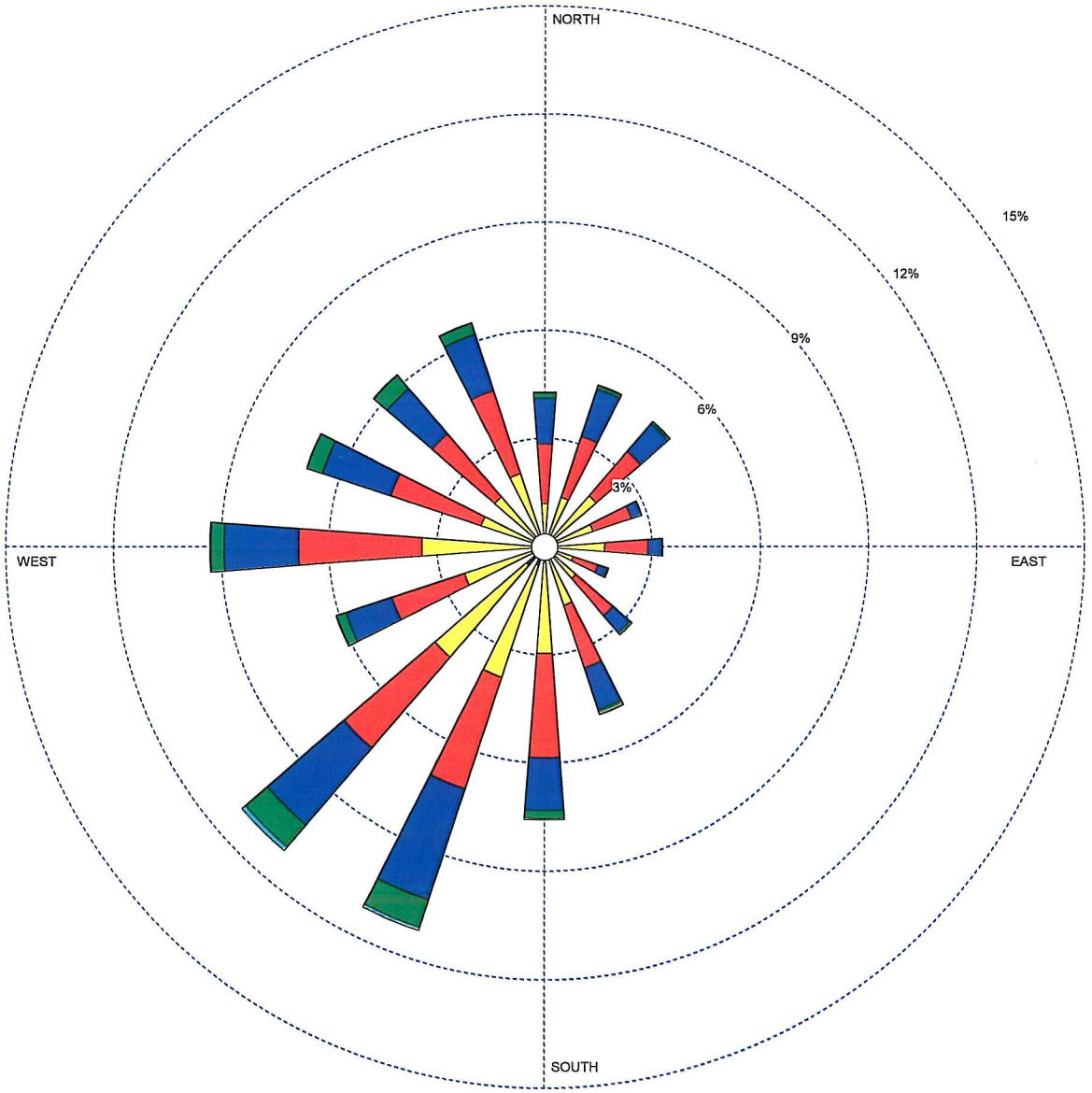
- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE **11/4/2002**	COMPANY NAME
DISPLAY **Wind Speed**	UNIT **m/s**	COMMENTS
AVG. WIND SPEED **4.12 m/s**	CALM WINDS **6.73%**	
ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **1961** **Sep 1 - Sep 30** **Midnight - 11 PM**	PROJECT/PLOT NO.

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)

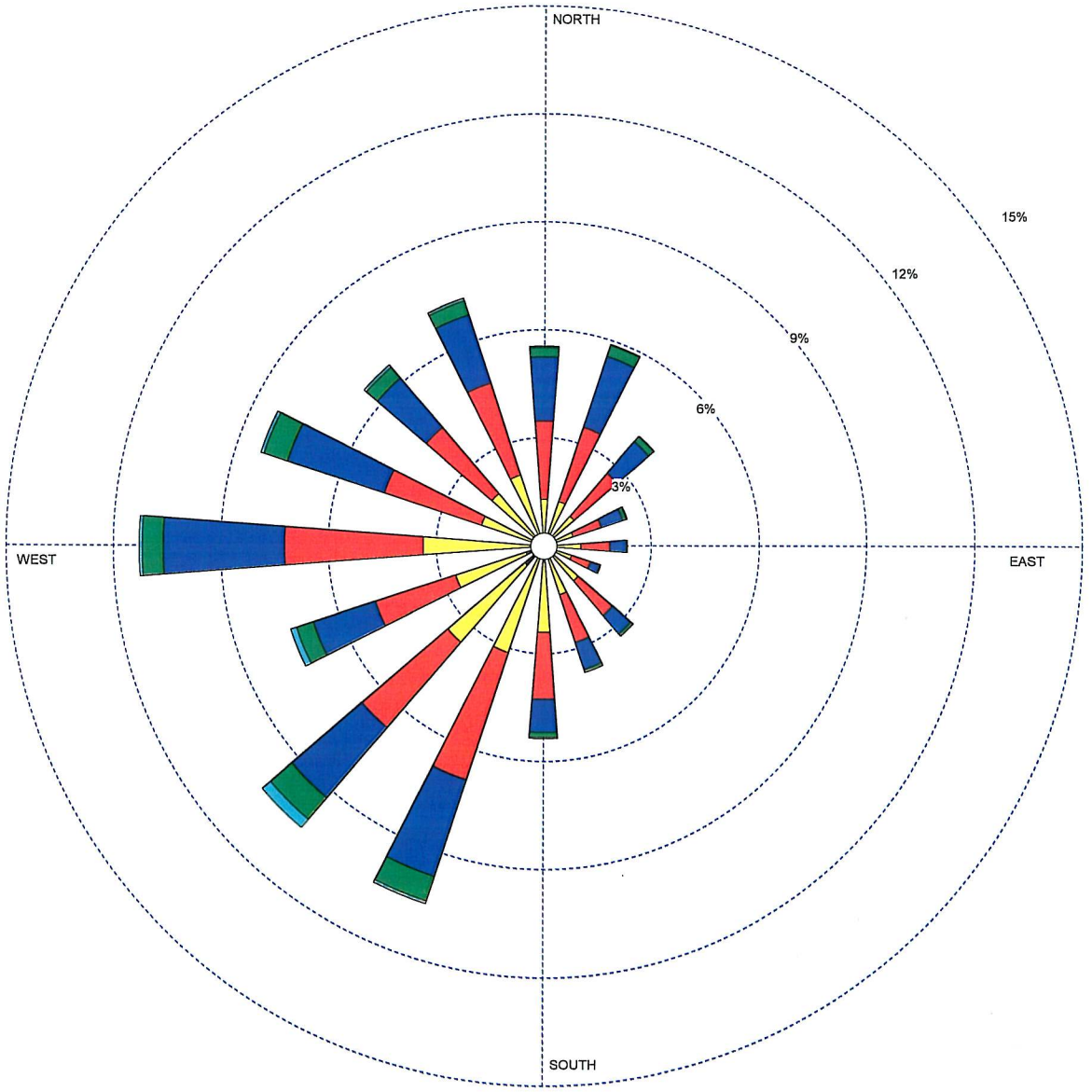
- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE **11/4/2002**	COMPANY NAME
DISPLAY **Wind Speed**	UNIT **m/s**	COMMENTS
AVG. WIND SPEED **4.50 m/s**	CALM WINDS **5.19%**	
ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **1961** **Oct 1 - Oct 31** **Midnight - 11 PM**	PROJECT/PLOT NO.

WRPLOT View 3.5 by Lakes Environmental Software - www.lakes-environmental.com

WIND ROSE PLOT

Station #14898 - GREEN BAY/AUSTIN STRAUBEL FIE, WI



Wind Speed (m/s)

- > 11.06
- 8.49 - 11.06
- 5.40 - 8.49
- 3.34 - 5.40
- 1.80 - 3.34
- 0.51 - 1.80

MODELER	DATE **11/4/2002**	COMPANY NAME
DISPLAY **Wind Speed**	UNIT **m/s**	COMMENTS
AVG. WIND SPEED **4.78 m/s**	CALM WINDS **4.08%**	
ORIENTATION **Direction (blowing from)**	PLOT YEAR-DATE-TIME **1961** **Nov 1 - Nov 30** **Midnight - 11 PM**	PROJECT/PLOT NO.

Attachment 2

Dust and Litter Control Monitoring Form

Dust and Litter Control Monitoring Documentation
Outagamie County Landfill
Appleton, Wisconsin

Date: _____ Initials: _____

Dust or Litter Possible Yes _____ No _____	If No, Provide Rationale (e.g., rain, frozen, etc.)

Time	Activities Occurring	Dust (Y/N) Litter (Y/N)	If yes, describe action taken to control dust or litter	Gal. Water Applied
AM				
PM				

Was Dust Suppressant Applied to Roads? Yes _____ No _____
If Yes, how much was applied: _____ approximate gallons? Road Description _____
Prewatered? Yes _____ No _____
Application Rate: _____ gal/yd^2 Applications _____
Were portable litter control devices used? Yes _____ No _____
Was an alternative landfill operations area used? Yes _____ No _____

General Comments

Attachment 3

Odor Monitoring Forms

Routine Odor Monitoring Form
Outagamie County Landfill
Appleton, WI

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Odor Complaint Response Monitoring Form
Outagamie County Landfill
Appleton, WI

Complaint Location:	
Complaint Time/Date:	
Reported By (Name):	
Report Odor Description:	
Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Complaint Location:	
Complaint Time/Date:	
Reported By (Name):	
Report Odor Description:	
Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Complaint Location:	
Complaint Time/Date:	
Reported By (Name):	
Report Odor Description:	
Monitoring Date:	Cloud Cover/Precipitation:
Air Temperature:	Monitor:
Location: see attached Figure A	
Wind Direction:	Odor: Yes/No (Circle One)
Odor Description (if applicable)	
Comments:	
WDNR Monitor Present: Yes/No (Circle One)	Comments Attached: Yes/No (Circle One)

Attachment 2

NCM Odor Delivery System

NCM Environmental Solutions

Nonaqueous Odor Control Chemicals Delivery System

Nonaqueous Odor Control Chemicals Delivery System (patent pending) is designed by NCM.

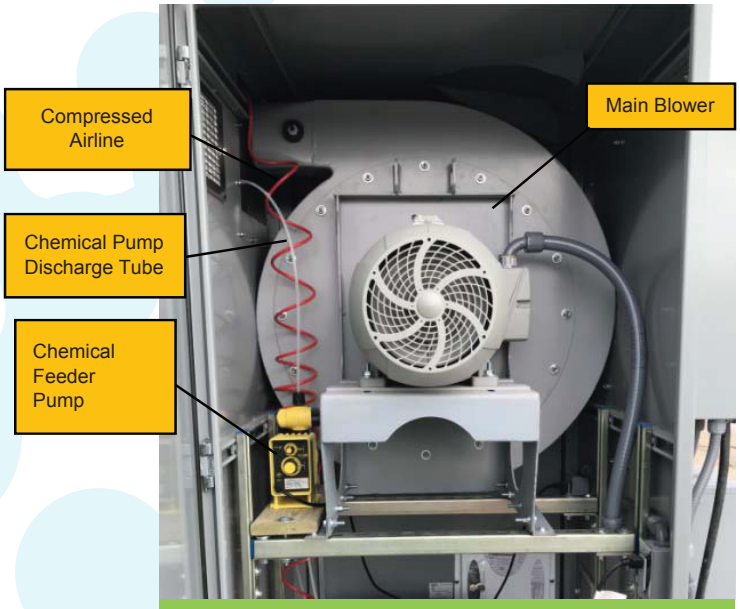
Vapor Odor Control System is designed for simplicity, dependability, and ease of operation. O&M requirements for the system are next to nothing comparing to water based systems. The system reliability system is ensured in any weather conditions from hot and humid to dry with freezing temperatures.

The system has been installed and successfully operating to keep our clients in compliance with regulatory odor control requirements throughout the United States.

NCM Environmental Solutions designs each system to meet clients' site specific needs. Each base station is manufactured based on the site specific design. The site specific design is developed based on the geographic location and climatological conditions, the odor causing area that requires odor control coverage, and facility specific conditions. The system can be developed for enclosed structures, structure ventilation systems, and for large open areas such as a landfill. The service area of the system can vary from a few 100 feet long coverage to 4,000 feet using a single base station.

1-855-NCM-5540 ncmenvironmentalsolutions.com

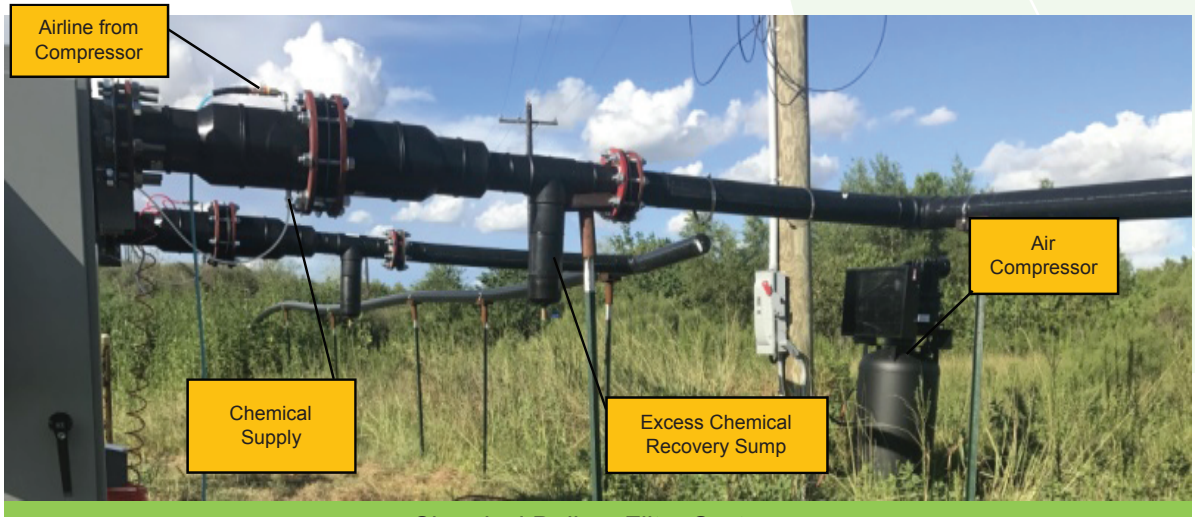
Odor Control System Description



Inside the System Base Box

Air Filter

The machine box of the system base station includes a main air blower that supplies up to 1,200 cfm of pressured air. A chemical feeder pump supplies nonaqueous odor control chemical to the main airline using a high pressure (over 100 psi) air through the filter system. The filter system safely mixes the chemical into the main airflow generated by the blower. The amount of chemical supplied depends on the characteristics of the odor control chemical supplied by third parties. An excess chemical recovery sump is incorporated into the design to verify the ability of the odor control chemicals to vaporise. Ambient air pulled by the main blower is filtered to prevent particle build up in the system.



Chemical Deliver Filter System

Attachment 3

Random Hazardous Waste Inspection Form

OUTAGAMIE COUNTY SOLID WASTE
INSPECTION OF IN-COMING LOAD

WEEK OF INSPECTION: _____ **INSPECTION #:** _____

DATE: _____ **WEATHER:** _____

TIME: _____

NAME OF COMPANY: _____

VEHICLE #: _____ **DNR HAULERS PERMIT#:** _____

DRIVER'S NAME: _____

HOW LONG EMPLOYED: _____

LOAD ORIGIN: _____

MATERIAL CODE/DESC: _____ **SCALE TICKET #:** _____

INSPECTION NOTES:

_____

_____

_____

_____

_____

_____

Hazardous wastes found: _____

_____

COMMENTS:

_____

_____

_____

_____

INSPECTED BY: _____

DRIVER'S SIGNATURE: _____

NOTE: The load will not be accepted for disposal at the landfill until the driver is released from the inspection area.

Updated: 12/03/2010

Attachment 4

Alternative Daily Cover Program Materials

Posi-Shell®

ENVIRONMENTAL COATINGS

The most effective, versatile, and cost-efficient cover system for landfills.

- Extends landfill life
- Reduces operational costs
- Addresses multiple challenges

LSC Environmental Products, LLC
www.LSCenv.com • sales@LSCenv.com • 800-800-7671

LSC™

Posi-Shell®

ENVIRONMENTAL COATINGS

Use Posi-Shell® to effectively address multiple landfill challenges:

- Daily Waste Cover
- Intermediate Cover
- Erosion Control
- Odor Suppression
- Coal Ash
- Landfill Emergencies
- Fire Supression
- Waste Latex Recycling
- Waste Transport Cover
- Leachate Prevention and Recycling

Brief Specifications

- Non-flammable
- Adheres to any surface
- Up to 95% water shed (run off)
- Durability from overnight to years with minimal maintenance

MADE IN THE USA

PSL0219

Use Posi-Shell® to reduce your operational costs, extend your landfill life, and address many of your site's daily challenges.

Using Posi-Shell® instead of natural soil for daily cover is your ticket to achieving maximum airspace utilization. Posi-Shell® is the one system that gives you easy access to every cubic yard of airspace formerly consumed by thick soil covers.

Posi-Shell® is affordable in your existing landfill budget as it allows you to reduce equipment usage and manpower hours.

Mixing and application

Mixing is accomplished using LSC Equipment or standard hydroseeding units. Mixing and application can be completed with one operator, and typically takes 45-60 minutes. Clean up takes about 10 minutes.

Erosion Control in Hong Kong, using PSA-2000 Applicator

Packaging

Bags: 50 lb. (22.7 kg.)
60 bags per pallet

Bulk Sacks: 500 lb (227 kg.)
4 sacks per pallet

For technical services or to locate your nearest Posi-Shell® dealer:

LSC ENVIRONMENTAL PRODUCTS, LLC ™

Call: **1-800-800-7671** • Email: **Sales@LSCenv.com**
Visit LSC online at: **www.LSCenv.com**
LSC Environmental Products, LLC
2183 Pennsylvania Ave., Apalachin, NY 13732

Posi-Shell®

ENVIRONMENTAL COATINGS

The most effective, cost-efficient and versatile cover system on the market

- **Erosion Control**
- **Dust Control**
- **Waste Cover**

Composition

Posi-Shell® is a patented blend of clay binders, reinforcing fibers, and polymers that, when mixed with water, produces a spray-applied mortar forming a thin layer of durable stucco. Posi-Shell will adhere to any surface or topography.

Posi-Shell's unique properties also enable the use of durability enhancers to achieve long-term coatings that remain resilient to erosion for more than a year.

Mixing and Application

Mixing is accomplished using LSC Equipment or standard hydroseeding units.

Mixing and application can be completed with one operator, and typically takes 45-60 minutes. Clean up takes about 10 minutes.

Brief Specifications

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Contact us today for more information.

LSC ENVIRONMENTAL PRODUCTS, LLC

LSC Environmental Products, LLC
800-800-7671 or 607-625-3050
www.lscenv.com

Odor-Shell®
COMPLAINT ELIMINATOR

How it works:

- Seals odors at the source.
- Spray-applied.
- Foundational material naturally filters odor.
- Aggressive odor neutralizing component tackles foulest offenders.
- Slow release mechanism allows for long-term results.

Why use Odor-Shell®?

- Eliminates unnecessary complaints and fines.
- Versatile durability.
- Simple to implement.

From the makers of Posi-Shell®.

To order or for more information call: 800-800-7671

Eliminate odors on contact.

Odor-Shell® Complaint Eliminator was developed specifically to address industry's most challenging waste odors. Whether generated from landfill, food, animal, agricultural, or sewage wastes, Odor-Shell®'s environmentally friendly formulation kills offensive odors on contact before they become problems.

- Leverages a three-pronged approach of sealing, filtering and neutralizing.
- Provides peace of mind for neighbors and regulators.
- Adheres to any surface.
- Effective in wet or cured forms.
- Can be used in any type of weather condition.
- Eliminates costly fines and shutdowns.
- Its unique properties enable the use of durability enhancers to achieve coatings that perform for up to a year.

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www.LSCenv.com • sales@LSCenv.com • 800-800-7671

LSC™

Odor-Shell®
COMPLAINT ELIMINATOR

Kill odors before they become problems.

Waste Hauling – Odor-Shell® eliminates difficult odors in both short or long haul waste operations for materials such as sewage sludge, and solid, food, or agricultural wastes. In trucks, trains, or barges, this product completely locks in odors on contact, and it eliminates the need for cumbersome tarps or expensive closed containers.

Landfill Operations – Odor-Shell® enables landfill managers to complete critical, but potentially offensive, tasks by containing odor releases at their source. Odor-Shell® is used to kill odors from working faces, well drillings, landfill excavations, special waste trenches, and sewage sludge.

Compost Operations – Odor-Shell® is effective at controlling odors generated from passive or active composting operations. Leveraging an infused neutralizer to kill odors on contact while allowing compost to remain aerated even after coating. Additionally, Odor-Shell® is made from earthen materials that integrate seamlessly into the compost when turned.

Soil Remediation – Odor-Shell®'s unique ability to be precisely applied makes it the perfect containment product for odorous materials generated from dredging or remediation projects. If sealing is required to eliminate run-off or facilitate dewatering, durability enhancers may be added to achieve coatings that will shed water up to a year while still containing odors. Unlike geo-membranes that are expensive and difficult to maintain, Odor-Shell® requires virtually no maintenance and simply integrates into the waste when moved.

Application equipment is available.

Contact us today for more information.

For technical services or to locate your nearest Odor-Shell® dealer:

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MADE IN THE USA
OSCE 0217

Outagamie County Northeast Landfill Daily Posi-Shell Cover Log

DATE	APPLICATOR OPERATOR	SITE (Phase I-II-III)	WATER USED (in gallons)	MATERIAL USED (in lbs)	DAILY CELL SIZE	# OF DAYS COVERED (72 hr max)	WEATHER CONDITIONS	DAILY NOTES