

## Zion Landfill Wind Erosion / Fugitive Particulate Matter Emission Control Plan

Condition 1.a.i.A. of the Section 3 of the CAAPP permit for the Zion Landfill (Landfill or facility) issued on 6/24/2015 requires the site to “*follow good air pollution control practices to minimize fugitive particulate matter emissions...*” This Wind Erosion / Fugitive Particulate Matter Emission Control Plan (Plan) details the procedures used to accomplish and document compliance with this and subsequent permit conditions. Condition 3.1.a.ii.C requires that this Plan include:

*(1) A map or diagram showing the location of all fugitive particulate matter emissions generating activities and/or where control measures are typically applied on a regular basis, including the location, identification, length, and width of roadways, and volume and nature of expected traffic or other activity.*

**Attachment 1** contains a map identifying the current and planned future asphalt paved surfaces, as well as typical vehicle types and quantities. The site will extend and maintain asphalt paved roads to primary access locations into the landfill footprint; these access locations will change over time as the Landfill is developed. Unpaved road lengths outside the landfill footprint will be minimized and generally limited to areas not utilized by vehicles delivering waste to the Facility; unpaved road lengths will vary with site conditions as landfill development progresses. The speed limit on unpaved sections of road will be 25 miles per hour.

*(2) Description of the standard control measures including type of measure, frequency and, if applicable, application rates;*

The primary control measure utilized is the proactive application of water spraying via a dedicated water truck on days when fugitive particulate matter is most likely to form based on recent and current climatic conditions. The site supplements these efforts with the deployment of a dedicated sweeper on asphalt paved surfaces. Hours of operation for each unit is tracked daily, with monthly summaries provided as shown in **Attachment 3**.

During construction and final cover construction events, the general contractor will employ dust control methods that include watering, re-grading and sweeping of roads to minimize fugitive dust formation.

Seeding will be applied on all landfill or stockpile slopes that will remain idle for at least one growing season in an effort to establish vegetative cover. The success of this effort will be monitored and supplemented as necessary to minimize dust emissions from these surfaces.

*(3) Description of any secondary control measures that would be used based on circumstances (freezing temperatures, recent rain, dry weather, etc.) with identification of the circumstances in which they would be used and identify any triggers for implementation of additional control measures, e.g., presence of extended dust plumes following passage of vehicles, with description of those additional dust control measures.*

Fugitive dust from facility haul roads is unlikely to occur on days when it is raining, or there is snow or frozen conditions. On these dates, the precipitation and/or frozen weather conditions would take the place of road watering.

*(4) Description of corrective actions that will be implemented in the event of visible emissions across the property line and/or observation of areas affected by wind erosion and/or reentrainment. Such corrective action may include but is not limited to the application of a protective cover on landfill surfaces, the spraying of surfactant solution or water on a regular basis, or other equivalent treatment methods;*

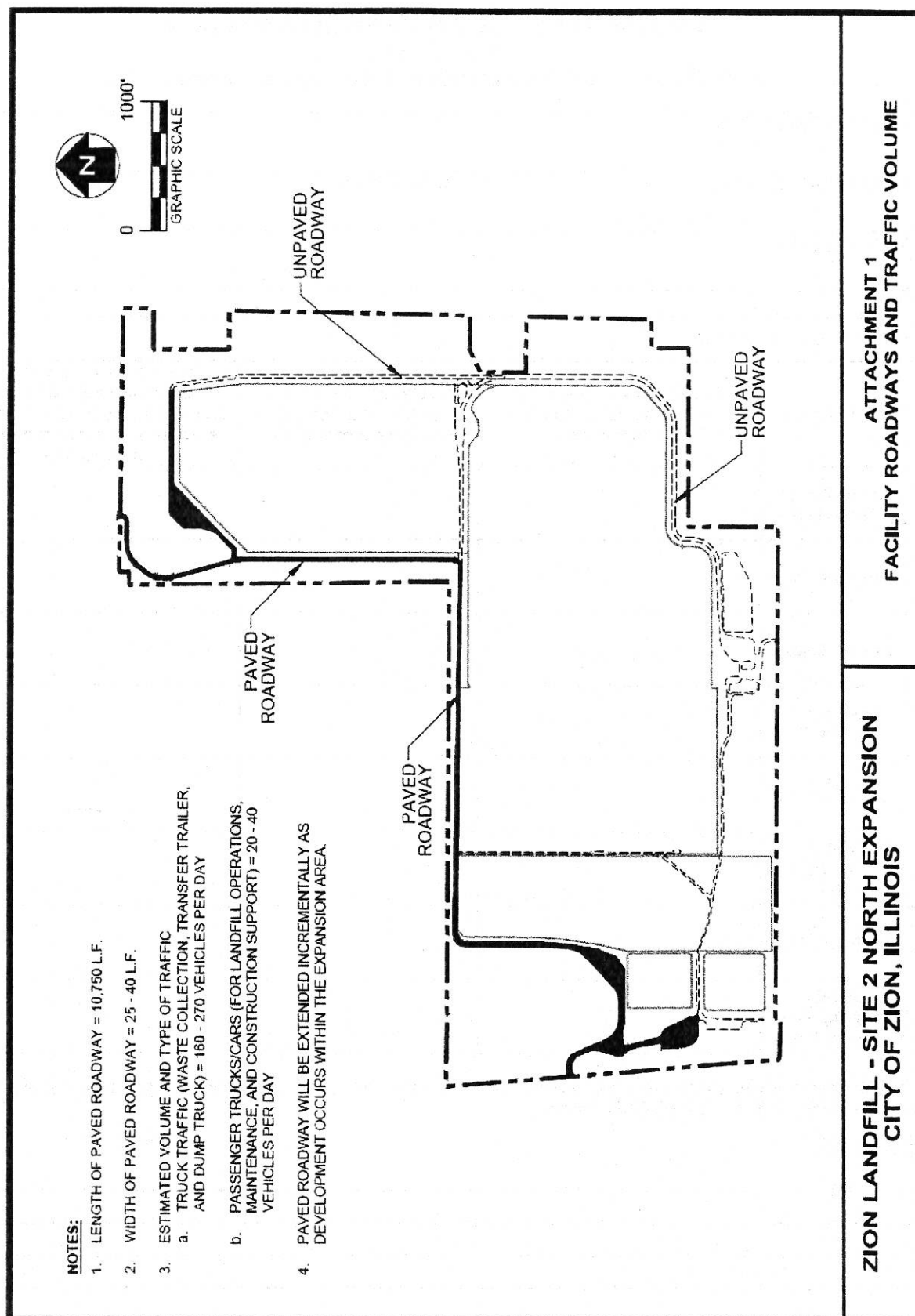
If a dust complaint is received and verified, or visible emissions are observed across the property line, either during required periodic inspections or regular daily observations, corrective action will be taken as soon as possible. Corrective actions may include, but are not limited to, spray application of water, use of chemical dust suppressants, operation of a street sweeper, changing traffic patterns, and cessation or modification of activities causing the emissions. All complaints will be added to the site's complaint log, and a representative from the Landfill will respond to the complainant within three business days.

*(5) Assumptions and/or observations regarding the quantity and nature of vehicle traffic at the source as related to source operations.*

Zion Landfill is an active municipal solid waste landfill. As such, the primary truck traffic at the facility will be comprised of refuse disposal vehicles. These range in size from civilian pick-up trucks, to front and rear end residential loaders, to transfer trailers. The facility also receives roll-off trucks and dump trucks. The number of trucks received in a day can vary from less than one hundred to several hundred.

The CAAPP permit requires that routine (quarterly) fugitive dust inspections be performed and documented. Fugitive dust inspections will normally be conducted on a monthly basis. Inspection frequency will be increased to weekly during weeks when cell construction and/or final cover construction activities are being conducted. The inspection form is included in **Attachment 2**. Records are maintained on site which will include safety data sheets (SDS) for any chemical dust suppressants. The chemical dust suppressant SDS will be made available for public review upon request from the public.

Additionally, the CAAPP permit requires that the site document the implementation of the dust control measures. Water Truck and Sweeper Vehicle hours are logged (See **Attachment 3**) and these records are maintained on site. The water truck generally dispenses up to 7,000 gallons per hour of operation. Any unusual incident requiring additional measures that cannot be controlled by these vehicles is documented as well.



<b>Attachment 2 - Quarterly Inspection Form</b> <b>Zion Landfill</b> <b>Wind Erosion / Fugitive Particulate Matter Emission Control Plan</b>	
Inspection Date and Time:	
Inspector Name (print):	Inspector Signature:
Weather Conditions:	

OBSERVED CONDITIONS			
Inspected Areas	No visible particulate matter emissions at nearest downwind property line	Visible particulate matter emissions at nearest downwind property line*	Area snow or ice covered, or recent precipitation sufficient to eliminate visible particulate matter emissions at nearest downwind property line
Main Haul Road to Scale House			
Parking Areas			
Landfill Roads			
Landfill Active Area			
Landfill Cover			
Landfill Construction Area			
Soil Stockpiles			
Asbestos Containing Waste Deposited Areas			

\* NOTE: Take immediate corrective action to avoid particulate matter emissions. See Wind Erosion/ Fugitive Matter Emission Control Plan for additional information.

COMMENTS:

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**Attachment 3 - Dust Control Measure Log For the Year \_\_\_\_\_**

(a) Month	(b) Sweeper Vehicle (hours)	(c) Water Truck (hours)	(d) Were there any extreme incidents or weather conditions requiring additional control measures? If, yes, identify dates and actions taken.
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

**NOTES:**

- (a) This table should be updated on a quarterly basis, minimum.
- (b) The average speed of the sweeper vehicle is approximately 5 mph.
- (c) The water truck generally dispenses up to 7,000 gallons per hour of operation.
- (d) CAAPP permit Section 5.4.a.iv states, "If the fugitive particulate matter program fails to address or inadequately addresses an event that meets the characteristics of a wind erosion, reentrainment, or fugitive event but was not included in the program at the time the Permittee developed the plan, the Permittee shall revise the program within 45 days after the event to include detailed procedures for operating, monitoring, and maintaining the source during similar events and a program of corrective action for similar events."