

NJDEP Solid Waste Compliance and Enforcement

Regulatory Updates and Observational Trends Associated With Solid Waste Facilities That Potentially Impact Air Quality

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for the NJDEP Air Compliance and Enforcement Outreach Seminar

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Disclaimer

- *The photographs and illustrations noted herein are presented to enhance the viewer's understanding of the subject matter and do not depict, infer or suggest compliance issues at any particular facility or type of facilities nor suggest any preference of equipment types or operational controls. If no reference for a photo or schematic was given, it was generated by the NJDEP during site inspections.*

Coordination of Air and Solid Waste Facility Permits

- Solid Waste Facility Permits refer to and support Air Permits associated with such facility. Should there be an ambiguity or conflict between these permits, the **most stringent requirement will prevail.**
- General operational requirements for odor control at solid waste facilities can be found at N.J.A.C. 7:26- (b) 6 with additional details at:
 - Solid Waste Landfills: N.J.A.C. 7:26-2A.8*
 - Solid Waste Resource Recovery Facilities: N.J.A.C. 7:26-2B.8*
 - Solid Waste Transfer Stations: N.J.A. C. 7:26-2B.9*

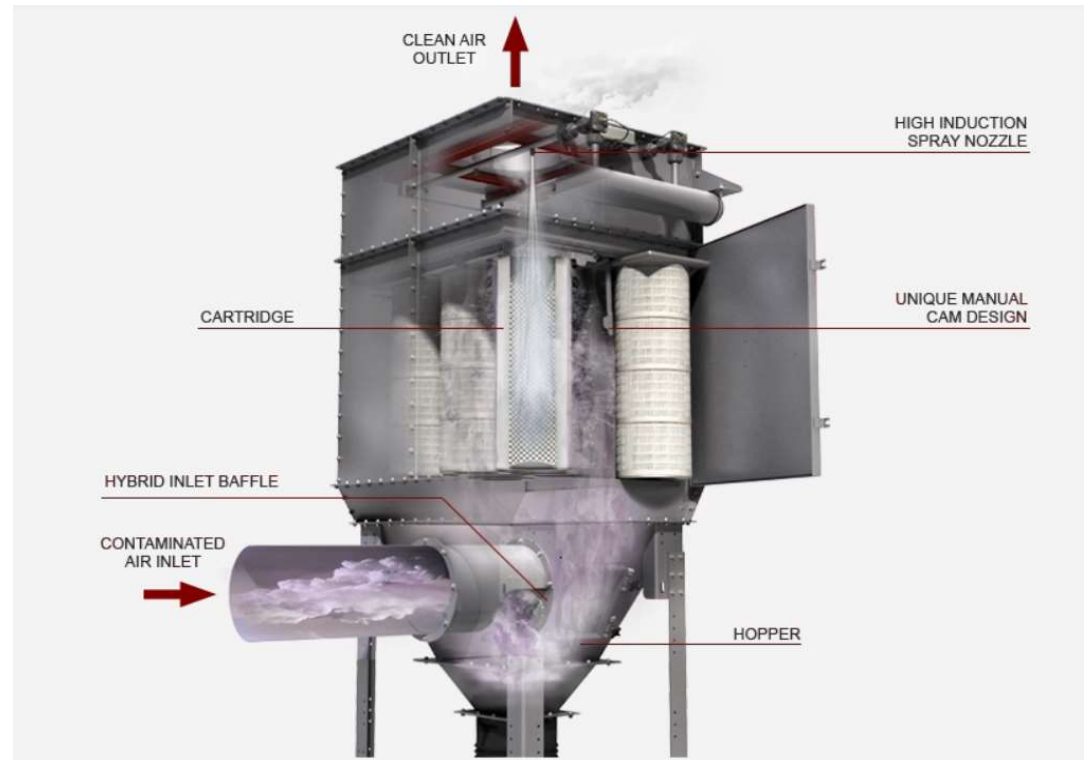
Emissions Control at Solid Waste Transfer Stations



<https://picgauges.com/products/pressure-gauges/digital-gauge/dpg-series-digital-gauges>

Are Dusts Being Adequately controlled? Is the Air Pollution Control System being properly maintained?

(schematic from epa.gov)



Responding to Landfill Gas Odor Complaints



Limitations placed on extent of active working faces



Landfill Odors from Exposed Waste



Landfill Odors from Erosional Gullies



Odors from Landfill Leachate



Controlling Fugitive Emissions at Landfills

Photos - MRLF-444.jpg

See all photos

+ Add to

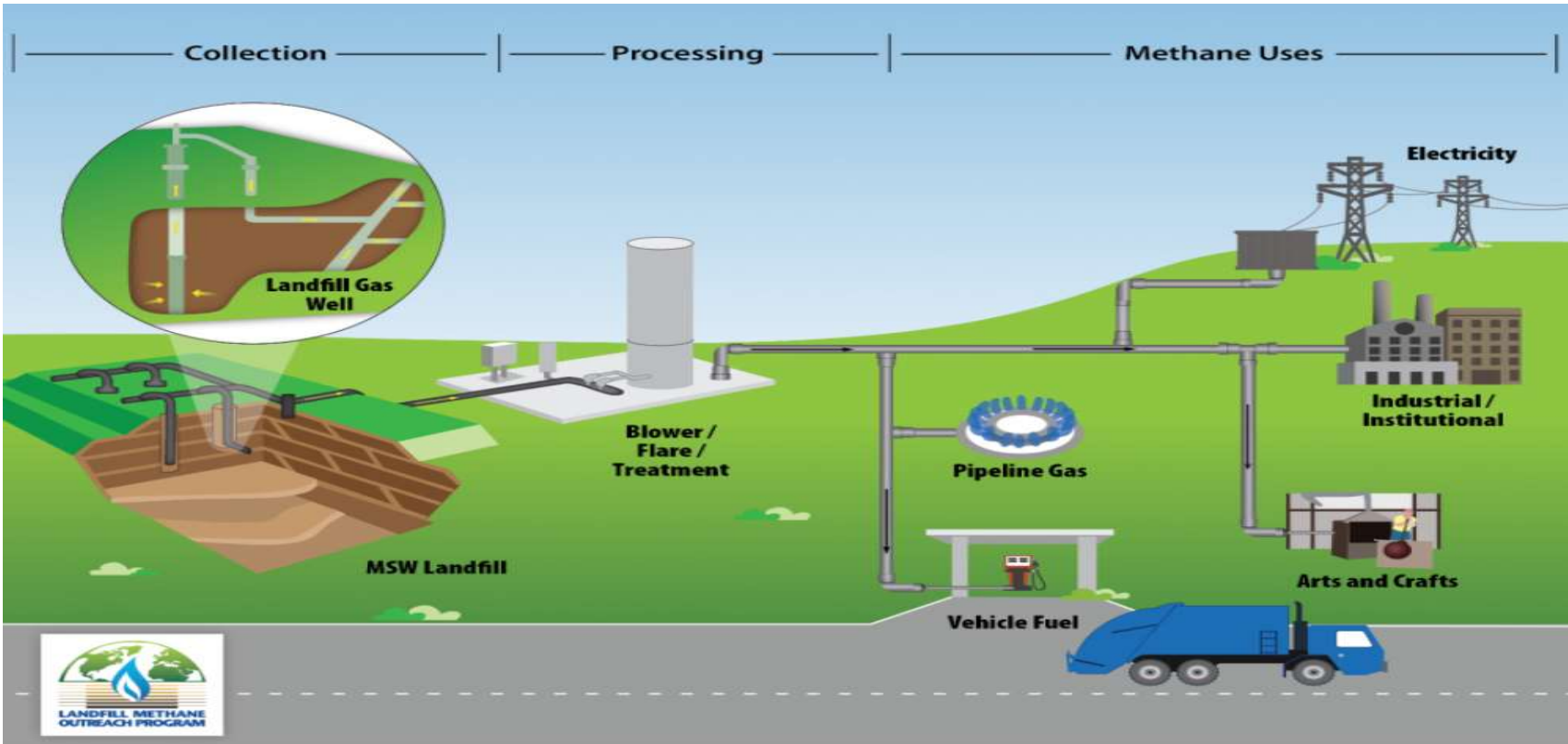


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Treating Landfill Gas



Some H₂S Gas Treatment Systems:

Inspectors familiarize themselves with the monitors and records that address system performance to ensure that the systems are operating as designed.

Air Permits establish site specific limits for active landfills. The Legacy Landfill Law, N.J.S.A. 13:1E-125.1 et seq, establishes H₂S concentrations that cannot exceed 30 ppb at the property line of the closed landfill.

Catalytic Oxidization – bond destruction

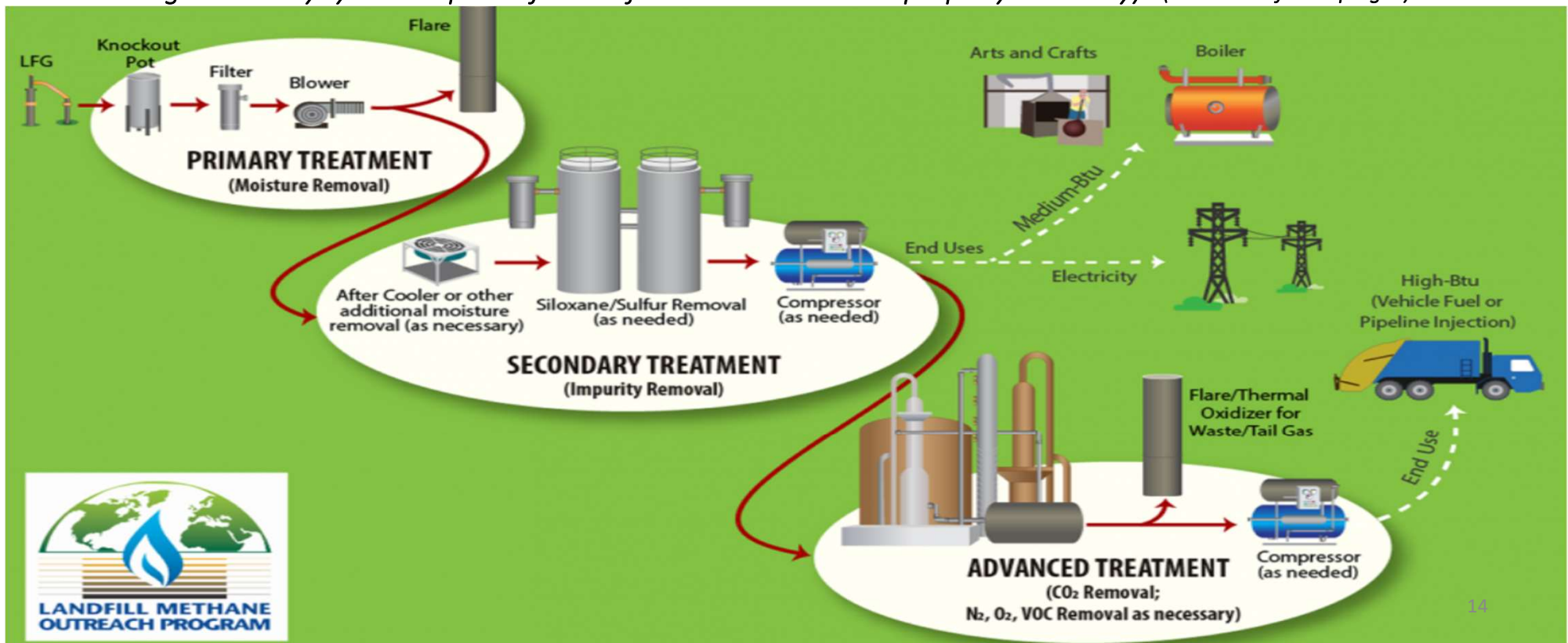
Sulfur Recovery through microbial digestion

REDOX Reactions such as using iron sponge

Physical Adsorption filtration

Methane Gas Treatment

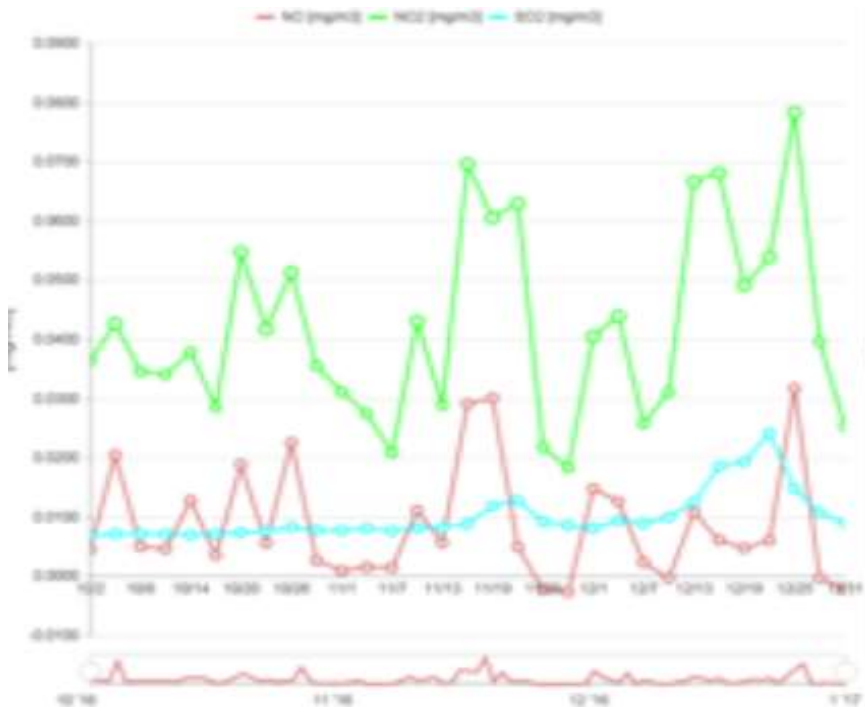
Inspectors familiarize themselves with the monitors and records that address system performance to ensure that the systems are operating as designed (for closed landfills an active gas recovery system required if subsurface CH₄ > 25% LEL at property boundary). (illustration from epa.gov)



Resource Recovery Facilities

Review Records for Emissions Controls

source: horiba



Ensure Proper Management of Ash



Truck Queuing



Vehicular Dust Control



Controlling Incoming Wastes

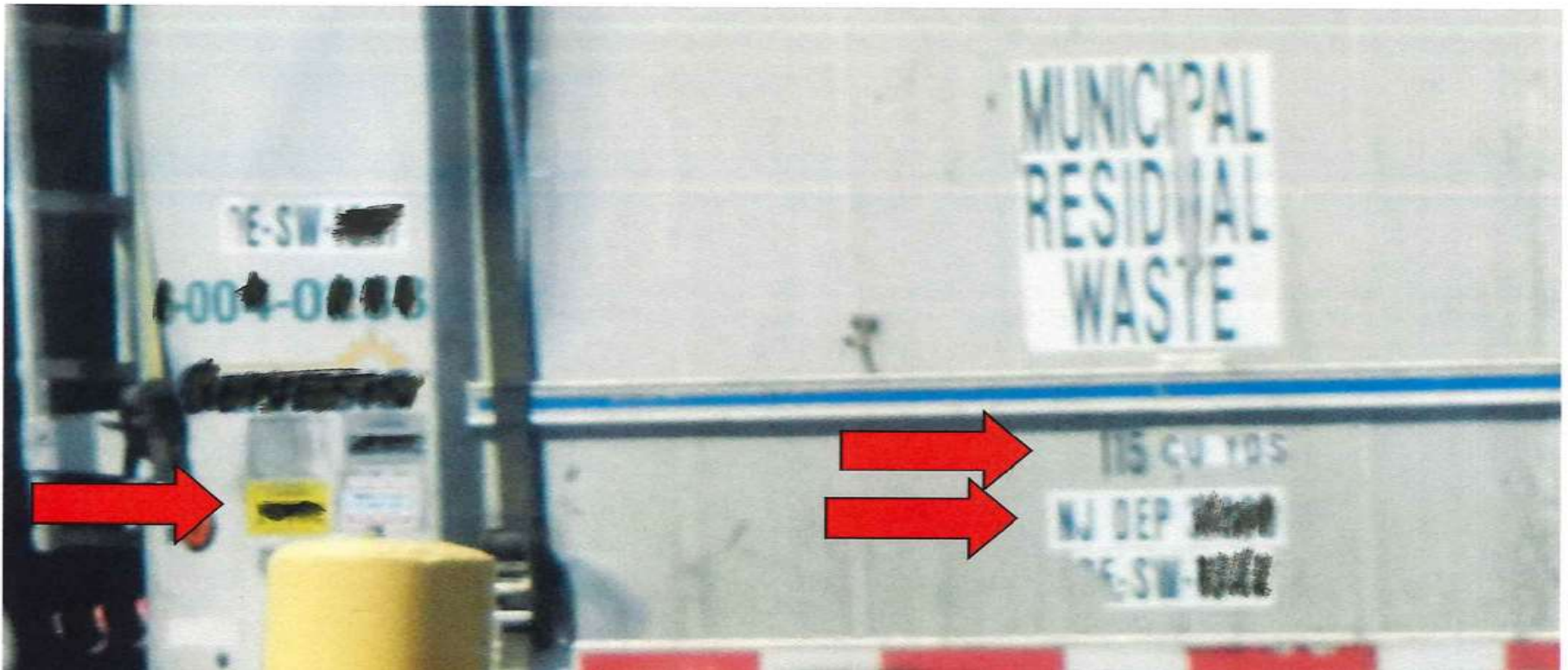
Is there a sign listing acceptable waste types?

ACCEPTABLE WASTE TYPES.		
NJ DEP#	CATEGORY	DISPOSAL COST PER TON
TYPE 10	MUNICIPAL WASTE	\$63.40
TYPE 13	BULKY WASTE	\$96.40
TYPE 13	TIRES AND CABLES	\$234.40
TYPE 23	VEGETATIVE WASTE	\$63.40
TYPE 25	ANIMAL + FOOD PROC. WASTE	\$96.40
TYPE 27	NON-CHEMICAL INDUST WASTE	\$96.40
TYPE 27	ASBESTOS (Land fill Only)	\$169.40

UNACCEPTABLE WASTE TYPES	
NJ DEP#	CATEGORY
TYPE 12	DRY SEWAGE SLUDGE
TYPE 17	DRY HAZARDOUS WASTE
TYPE 18	DRY NON-HAZARDOUS CHEMICAL WASTE
TYPE 26	OIL SPILL CLEAN-UP WASTES
TYPE 28	INFECTIOUS WASTE
TYPE 70	WASTE OIL AND SLUDGE
TYPE 72	BULK LIQUID AND SEMI-LIQUIDS
TYPE 73	SEPTIC TANK CLEAN-OUT WASTES
TYPE 74	LIQUID SEWAGE SLUDGE
TYPE 76	LIQUID HAZARDOUS WASTE
TYPE 77	LIQUID CHEMICAL WASTE

ALL WASTES DESIGNATED AS HAZARDOUS BY THE FEDERAL OR NJ STATE GOVERNMENTS GENERAL - ANY MATERIAL WHICH BY NATURE OF ITS CHARACTER OR QUANTITY IS CONSIDERED DETRIMENTAL TO THE EFFICIENT AND SANITARY OPERATION OF THE WLF.
FEE/SURCHARGES WILL BE IMPOSED FOR HAZARDOUS WASTES DELIVERIES OF UNACCEPTABLE WASTES.
WASTES NOT HAZARDOUS BY NATURE.

- Are only properly registered transporters being allowed into facility?



- Is each load accompanied by a properly completed Origin & Disposal (O&D) form?



- Is all tipping, processing, sorting and compacting being conducted within enclosed building and capacity not being exceeded?



Class B Recycling Facilities



Leachate from partially ground wood



Fires at Class B Recycling Facilities



Class C Recycling Centers



Orient windrows perpendicular to elevation contours to guide drainage through the aisle space rather than through the windrows.



Odors from Food Waste and/or Grass



Rachael Zimlich | Jul 07, 2015

- Source – Waste 360

Food Waste Composting

(photo from epa.gov – paper on PETCO park project)




Ponding at Class B and C Recycling Facilities



Responding to Odor Complaints

360 Degree Odor Surveys Conducted

ODOR INVESTIGATION FIELD DATA		Time: <u>6:30</u> PM /AM			
		Date: <u>[REDACTED]</u>			
Weather Conditions: Weather: <input type="checkbox"/> Sunny (SY) <input type="checkbox"/> Partly Cloudy (PC) <input type="checkbox"/> Mostly Cloudy (MC) <input type="checkbox"/> Overcast (OC) <input type="checkbox"/> Hazy (HZ) <input checked="" type="checkbox"/> Night (NT)		Precipitation: <input checked="" type="checkbox"/> None (NO) <input type="checkbox"/> Fog (FG) <input type="checkbox"/> Rain (RN) <input type="checkbox"/> Sleet (ST) <input type="checkbox"/> Snow (SW)			
		Wind Direction: (Blowing From) 		Wind Speed: <input checked="" type="checkbox"/> Calm (CM) <input type="checkbox"/> Light Breeze (LB) (1-5 mph) <input type="checkbox"/> Moderate Wind (MW) (5-15 mph) <input type="checkbox"/> Strong Winds (SW) (15 or higher mph)	
Temperature : <u>34</u> F /°C		Relative Humidity <u>10</u> %			
Observations During 360					
Time	Location	Scale (0-5)	Odor Description (if applicable)		
<u>6:32</u>	<u>[REDACTED]</u>	<u>3</u>	<u>CALM</u> <u>LANDFILL GAS TYPE / GARBAGE TYPE ODOOR</u>		

- Incidental exposure from ingestion or dust inhalation, particularly within areas not expected to contain contamination such as residential settings, lead to the promulgation of the “Dirty Dirt Law”, (N.J.S.A. 13:1E-127.1) signed on January 21, 2020.



DISCLAIMER

- This part of the presentation includes deliberative considerations that do not necessarily represent the official thought process, priorities or opinions of the NJDEP nor any members of the rule team working on development of the regulations for the “Dirty Dirt Law”. Prior to the public distribution of proposed regulations, the NJDEP anticipates consulting stakeholders for their input on same. As such, the viewer of this presentation is cautioned not to interpret any statements, questions or considerations as final evaluations conducted by the NJDEP.

Reasons for Passage of the Dirty Dirt Law

- The New Jersey State Commission of Investigations highlighted the propensity of organized crime to infiltrate the recycling industry.
- The NJDEP has confirmed several cases where contaminated fill materials have been distributed to unsuspecting homeowners who answer ads for “free clean fill”.





Chemical Hazards of Dirty Dirt

- Polycyclic Aromatic Hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) are classified as carcinogens.
- Heavy metals such as Lead, Cadmium, Arsenic and hexavalent Chromium at certain concentrations can be toxic.

Physical Hazards of Dirty Dirt



Biological Concerns with Dirty Dirt



WHAT DOES THE LAW REQUIRE?

- Certain persons who provide “**Soil and Fill Recycling Services**” may be required to pass a criminal background check to receive a license to transport such materials .
Such services include:
 - *“Persons engaging in the business of the collection, transportation, processing, brokering, storage, purchase, sale or disposition.... of soil and fill recyclable materials”*

“ ‘*Soil and Fill Recyclable Materials*’ means non-putrescible aggregate substitute.....broken or crushed brick, block, concrete or other similar manufactured materials; soil or soil that may contain aggregate.....”



Within a certain period after the current COVID-19 State of Emergency is lifted, those who perform “Soil and Fill Recyclable Services” must register with the Department to enable the continuation of such services in the interim of processing their A-901 license application.

Just a few of some of the issues under consideration for applying Exclusions:

- Based on capacity of trucks/trailers used in transportation? If so, what should such de minimis capacity be?
- Based on type of business? If so, on what basis should the cut be made?
- Based on volume processed? If so, what should the volume be and for what time period?

- ❑ Consistency with NJDEP's policy of excluding certain appropriately credentialed consultants on site remediation projects.

- ❑ Appropriate consideration given to projects under NJDEP oversight by other regulatory Programs.

Potential Impact to Class B Facilities

Soil and Fill Recyclable Materials going to a Class B are exempted by law. Should Class B Recycling Approvals be modified?

(image from Wikipedia)



NJDEP Guidance on Dirty Dirt:

- <https://www.nj.gov/dep/guardyourbackyard>

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Guard Your Backyard

A local leaders' guide to protect against unwanted residential soil dumping

Clean soil or "clean fill" is often trucked into residential sites throughout New Jersey. Clean soil is fine, but sometimes "clean fill," which is sold or offered free of charge, may contain contaminants that should not be on residential property.

How to stop illegal fill dumping? Effective action begins at the municipal level, where local governments can take steps to prevent the problem by enacting a [municipal soil and fill ordinance](#). This type of ordinance gives a municipality authority over soil brought into and placed on construction, development and residential properties [within municipal boundaries](#).






Q U E S T I O N S ?

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