



State of Oregon
Department of
Environmental
Quality

Proj 6623

Application for a Solid Waste Beneficial Use Determination

DEQ USE ONLY - BUSINESS OFFICE

Date Received: _____

Amount Received: _____

Check No.: _____

Deposit No.: _____

Forward confirmation of fee payment for:
Eastern Region to DEQ, The Dalles
Northwestern Region to DEQ-NWR, Portland
Western Region to DEQ, Salem

A. REFERENCE INFORMATION (Please type or print clearly.)

Frank Vaughan		Lane Forest Products	
Legal name of applicant		Business name of applicant if different	
2111 Prairie Road		Eugene	OR 97402
Mailing address		City	State Zip
541-345-9085	541-340-0035	fvaughan@laneforestproducts.com	541-688-3348
Phone	Mobile	E-mail	Fax

City of Eugene			
Generator of solid waste (may be same as applicant)			
125 East 8 th Avenue, 2 nd Floor		Eugene	Oregon 97401
Mailing address		City	State Zip
541-682-5010			541-682-5414
Phone	Mobile	E-mail	Fax

B. TYPE OF BENEFICIAL USE DETERMINATION REQUESTED Beneficial Use Determination applications are categorized based on the type of information and potential amount of work required by DEQ staff to review application materials and render a decision. A tiered review and fee system has been established in rule. The tiers are:

- Tier 1 For a beneficial use of a solid waste that does not contain hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product and that will be used in a manufactured product;
- Tier 2 For a beneficial use of a solid waste that contains hazardous substances significantly exceeding the concentration in a comparable raw material or commercial product, or involves application on the land;
- Tier 3 For a beneficial use of a solid waste that requires research, such as a literature review or risk assessment, or for a demonstration project to demonstrate compliance with this rule.

I am applying for a Tier 1 Tier 2 Tier 3 determination.

C. DOES THIS PROPOSED BENEFICIAL USE INVOLVE LAND APPLICATION OF ANY MATERIAL?

Yes No

D. SIGNATURE I hereby certify by my signature below that the information contained in this application, and the documents I have attached, are true and correct to the best of my knowledge and belief.

Signature of legally authorized representative

Oren Posner
Print name

RECEIVED
FEB 11 2014
Vice President
Title

2/7/14
Date

DEQ-SALEM OFFICE

E. REQUIRED ATTACHMENTS TO THIS APPLICATION *(For an application to be complete, it must provide the required information for each listed item of the tier which is being applied for.)*

Tier 1

- A description of the material, manner of generation, and estimated quantity to be used each year;
- A description of the proposed use;
- A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace;
- A demonstration of compliance with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing; and
- Any other information that DEQ may require to evaluate the proposal.

Tier 2

- The information required for a Tier 1 application;
- Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable;
- A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels;
- Location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk;
- Contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude); and
- A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.

Tier 3

- The information required for a Tier 1 & 2 application;
- A discussion of the justification for the proposal;
- An estimate of the expected length of time that would be required to complete the project, if it is a demonstration; and
- If it is a demonstration project, the methods proposed to ensure safe and proper management of the material.

F. PERFORMANCE CRITERIA *(For all tiers - An application for a beneficial use determination must demonstrate satisfactory compliance with the following performance criteria.)*

The use is productive, including:

- ◆ There is an identified or reasonably likely use for the material that is not speculative;
- ◆ The use is a valuable part of a manufacturing process, an effective substitute for a valuable raw material or commercial product, or otherwise authorized by DEQ, and does not constitute disposal; and
- ◆ The use is in accordance with applicable engineering standards, commercial standards, and agricultural or horticultural practices.

The use will not create an adverse impact to public health, safety, welfare, or the environment, including:

- ◆ The material is not a hazardous waste under ORS 466.005;
- ◆ Until the time the material is used in accordance with a beneficial use determination, the material will be managed, including any storage, transportation, or processing, to prevent releases to the environment or nuisance conditions;
- ◆ Hazardous substances in the material do not significantly exceed the concentration in a comparable raw material or commercial product, or do not exceed naturally occurring background concentrations, or do not exceed acceptable risk levels, including evaluation of persistence and potential bioaccumulation, when the material is managed according to a beneficial use determination.

The use will not result in the increase of a hazardous substance in a sensitive environment.

The use will not create objectionable odors, dust, unsightliness, fire, or other nuisance conditions.

The use will comply with all applicable federal, state, and local regulations.

G. FEES (Must accompany the application for it to be considered complete)

<input type="checkbox"/>	Tier 1 beneficial use determination	\$1,000
<input checked="" type="checkbox"/>	Tier 2 beneficial use determination	\$2,000
<input type="checkbox"/>	Tier 3 beneficial use determination	\$5,000

Make checks out to: **Oregon DEQ**

Total fees included: \$2,000

H. APPLICATION PROCEDURE

Step 1

Contact a DEQ staff person for assistance with the preparation of the application. DEQ staff will help with: 1) Determination of the eligibility for a beneficial use determination of a particular waste or process; and, 2) If eligible, establish the tier of beneficial use determination review required and associated fee to submit with the application.

Step 2

Mail the original signed application, all attachments, including the fee payment plus one extra copy to the appropriate regional office (see listing below.) Note that DEQ review work will not begin until a complete application packet is received. Incomplete applications may be returned. DEQ recommends the applicant keep a full copy of all application materials to guard against possible loss in transit.

Step 3

DEQ will contact the applicant, acknowledging receipt of the application, and will identify the staff person assigned to carryout the review. This staff person will contact the applicant if any additional information is needed.

Region	Counties Served	Address & Phone
Eastern Region	Baker, Crook, Deschutes, Gilliam, Grant, Harney, Hood River, Jefferson, Klamath, Lake, Malheur, Morrow, Sherman, Umatilla, Union, Wallowa, Wasco, and Wheeler	Eastern Region Department of Environmental Quality 400 E Scenic Drive, Ste 2.307 The Dalles, OR 97058 (541) 298-7255 ext. 221
Northwest Region	Clatsop, Clackamas, Columbia, Multnomah, Tillamook, and Washington	Northwest Region DEQ Solid Waste Programs 2020 SW Fourth Ave. Ste 400 Portland, OR 97201 (503) 229-5353
Western Region	Benton, Coos, Curry, Douglas, Jackson, Josephine, Lane, Lincoln, Linn, Marion, Polk, and Yamhill	Western Region DEQ Solid Waste Programs 750 Front St. NE Suite 120 Salem, OR 97301 (503) 378-5047

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

153261

Issuing Office SALEM Date 2/11/2014

Received From Lane Forest Products

Address 2111 Prairie Rd, Eugene, OR Zip 97402

Description of Permit Requested
1. SW BUD app + fee
2. _____
3. _____

Fees Received
On-Site Sewage Permit _____ \$ _____
On-Site Sewage Surcharge _____
Other BUD app Fee 2000.00
Total \$2000.00

Received: Cash Amnt. \$ _____
Check \$ 2000.00

96045

Issued By Francis Holman

Tier 1

A description of the material, manner of generation, and estimated quantity to be used each year.

The material is generated during municipal road maintenance by the routine sweeping of streets. For the City of Eugene, sweeper trucks unload the material into 30 yard drop boxes placed around the city. When full, the drop boxes have been hauled to a DEQ permitted landfill. Street sweeping material consists of soil components (clays, silts and sands), rocks, and organic components (leaves, sod, and woody material), and trash. Most private and public entities run sweepers trucks on scheduled routes that vary from daily to monthly. Estimated actual processing and usage is 6000 tons.

A description of the proposed use.

The material will be screened to remove trash and separate the material by size. Trash will be disposed of and the organics will be composted. Heavier sands silts and clays may be composted or stockpiled for mixing into products. Organics will be composted under our Composting Permit. A Beneficial Use Permit is being sought for the composted organic material.

Products will include soil and compost mixes for use in agriculture and applied at or below agronomic rates. Other potential uses include highway berms and shoulder material, seeding medium for landfills and highways and other commercial applications.

A comparison of the chemical and physical characteristics of the material proposed for use with the material it will replace.

The soil and compost mixes will be custom made for the particular end use but will match in physical characteristics to non-sweeper base products. Mixes will generally include sands, silts and loams combined with compost, fertilizers, bark dust, amendments and seed. The chemical composition will also be similar, but some sweeper boxes can have contamination. Contamination can include heavy metals, petroleum and hydrocarbons such as PAH's and CPAH's. Most sweeper material tests at contamination levels that are below industrial cleanup levels as determined by DEQ's risk based soil matrix. For this reason, soil and compost mixes will be developed and marketed for non-residential uses.

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A demonstration of compliance with the performance criteria in OAR 340-093-0280 based on knowledge of the process that generated the material, properties of the finished product, or testing.

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This application for Beneficial Use follows a general outline as researched by the Oregon Department of Transportation in a series of Roadwaste studies completed by Jay Collins, et al. Additional resources, such as Portland's Bureau of Transportation which conducted a Street Sweeping Trial in 2005 have also been

researched. In Roadwaste: Issue and Options, the characterization of road waste, including sweepings, is discussed in detail and references to all of the ODOT studies by html link can be found in appendix III. The author consolidated road waste testing from multiple sources including ODOT, WsDot, Snohomish County, City of Everett and the City of Eugene. As part of the pilot project for the City of Eugene sweepers, we have conducted four tests and we have received an additional 4 years of testing from the City of Portland. These addition tests are in agreement with the general findings in the ODOT study.

In general, sweeping material is a very low risk material and according to the report such " ...findings can be stated with confidence"

'Highly volatile compounds are not found in road waste; low flash solvents and benzene are below detection limits...Halogenated compounds are rarely observed...Pesticides are normally below detection levels...PCB are not found...the flashpoint of Roadwaste poses no concern.' (Collins, 1998)

Contamination that can be found in sweeper material includes heavy metals, petroleum hydrocarbons and polycyclic aromatic hydrocarbons (PAHs and CPAHs). Most tests for sweeper contamination include the following: TCLP Metals, NWTPH with acid wash, diesel and heavy oil, testing for PAH's and CPAH's.

While the aforementioned contaminants can be found at some levels in sweeper material, the consensus of testing indicates that the risk low. In Issue and Options, the author states that for heavy metals "...the average contaminant levels observed in road waste are well below the cleanup standards..." For petroleum, it is well documented the difficulty in testing for Total Petroleum Hydrocarbon (TPH) in materials that contain organic material. Even when tested using the NWTPH with acid wash, organic material can show an elevated TPH level, but results would seem to indicate that TPH levels are at or near residential cleanup levels.

CPAH's represent the greatest risk as clean up thresholds for individual chemicals are lowest for CPAH's. Based on the consolidated information from the ODOT reports, CPAH levels are near and sometimes exceed residential clean-up levels. CPAH's and most other contaminants "...concentrate in the fines and silt particles....If contaminants are present, they will be in the clays, silt and finer sands." (Collins, et al, 2000). After processing the material through the picking process to remove contaminants, the material will be placed in windrows for composting. Batch testing for contaminates will be completed before incorporating the fines into products for protected uses.

The following remediation techniques will be used to reduce contaminants: (1) initial handpicking of contaminants when material arrives, (2) running large batches through a pick station with an airlift separator, (3) and composting after picking has been completed. Composting has been shown to dramatically reduce TPH levels in street sweeping materials. In Portland's Street Sweepings Trials (Jacobsen, et al, 2005), a reduction of up to 50% was shown. In ODOT's testing as part of phase II, they showed a reduction of about 50% TPH levels after screening. They "...suspected that the screening aerates the sweeping debris, increasing natural microbial decomposition of petroleum.." (Ghezzi, et al, 2001). While both of

these results would need additional vetting before taken as statically valid, it does give confirmation of our overall plan to screen and compost the sweeper material.

Tier 2

Sampling and analysis that provides chemical, physical, and biological characterization of the material and that identifies potential contaminants in the material or the end product, as applicable.

We have conducted five tests on sweeper material from the City of Eugene. Testing was done for TPH using the NWTPH with silica clean-up, TCLP metals and PAH's. The full result of this testing is in appendix II. Comparing the result of the tests to Oregon DEQ's Risk-based concentration showed one contaminant above the Residential, or lowest, level. In the first test, dated 3/06/12, Benzo(a)pyrene had a level of 35.3 parts per billion. This exceeded the urban residential cleanup level of 34 parts per billion. All other containments, across the first test, were under residential. In the second test, dated 1/29/13, all containments were under residential. In the third test, dated 8/27/13, Benzo(a)pyrene had a level of 222 parts per billion. This exceeded the urban residential cleanup level of 34 parts per billion. Dibenz(a,h)anthracene had a level of 26.7 parts per billion. This exceeded the residential cleanup level of 15 parts per billion. All other containments, across the third test, were under residential. The fourth test was performed on the sweeper material that had gone through the composting process. In the fourth test, dated 8/27/13, Benzo(a)pyrene had a level of 24 parts per billion. This exceeded the residential cleanup level of 15 parts per billion. All other containments, across the fourth test, were under residential. These results are very similar to the consolidated data aggregated by Collins in the ODOT studies. One additional test was performed at Soil Control Lab on August 13, 2013 on the finished sweeper material which reported on the "Total Metals". All metals tested below the EPA Limits.

A risk screening comparing the concentration of hazardous substances in the material to existing, DEQ approved, risk-based screening level values, and demonstrating compliance with acceptable risk levels.

SUMMARY OF ANALYTICALS

RISK-BASED CONCENTRATIONS										Date	3/6/12	1/29/13	8/27/13	8/27/13						
Contaminated Medium	Exposure Pathway	Receptor Scenario	Direct or Indirect Pathway (see notes)	Contaminant of Concern	Unit	SOIL mg/Kg (ppm)														
						Soil Ingestion, Dermal Contact, and Inhalation RBCs										Material Type	Sweeper Coarse	Sweeper Coarse	Sweeper Coarse	Sweeper Compost Finished
						Residential	Urban Residential	Occupational	Construction Worker	Excavation Worker	Site	LFP JC	LFP JC	LFP JC	LFP JC					
						DCS	DCS	DCS	DCS	DCS	Site	LFP JC	LFP JC	LFP JC	LFP JC					
						Note	Note	Note	Note	Note	mg/Kg (ppm)									
Asbestos	nc, v					4,700	>Csat	9,400	>Csat	51,000	>Csat	19,000	>Csat	520,000	>Csat	mg/Kg (ppm)	ND	ND	0.0140	0.0093
Anthracene	nc, v					23,000	>Csat	47,000	>Csat	310,000	>Csat	93,000	>Csat	-	>Csat	mg/Kg (ppm)	0.0113	ND	0.0353	0.0113
Arsenic	c, nv					0.39		1.9		1.7		13		370		mg/L	ND	ND	ND	ND
Barium	nc, nv					15,000		31,000		190,000		60,000		590	>Max	mg/L	0.4540	0.2425	0.4210	0.2575
Benzo(a)anthracene	c, nv					0.15		0.34		2.7		21	>Csat	590	>Csat	mg/Kg (ppm)	0.0233	0.0093	0.1160	0.0220
Benzo(a)pyrene	c, nv					0.015		0.034		0.27		2.1		59	>Csat	mg/Kg (ppm)	0.0353	0.0107	0.2220	0.0240
Benzo(b)fluoranthene	c, v					0.15		0.34		2.7		21	>Csat	590	>Csat	mg/Kg (ppm)	0.0593	0.0120	0.1940	0.0440
Benzo(k)fluoranthene	c, nv					1.5		3.4		27	>Csat	210	>Csat	5,900	>Csat	mg/Kg (ppm)	0.0127	ND	0.1750	0.0127
Cadmium (VI)	nc, nv					39		78		510		150		4,300		mg/L	ND	ND	ND	ND
Chromium (VI)	c, nv					0.29		0.65		5.5		43		1,200		mg/L	0.0435	0.0340	0.0350	0.0360
Chrysene	c, v					74	>Csat	32	>Csat	250	>Csat	2,100	>Csat	57,000	>Csat	mg/Kg (ppm)	0.0433	0.0153	0.2100	0.0493
Dibenz(a,h)anthracene	c, nv					0.015		0.034		0.27		2.1		59	>Csat	mg/Kg (ppm)	ND	ND	0.0267	ND
Fluoranthene	nc, v					2,300	>Csat	4,600	>Csat	29,000	>Csat	8,900	>Csat	250,000	>Csat	mg/Kg (ppm)	0.006	0.0200	0.2580	0.0580
Fluorene	nc, v					3,100	>Csat	6,300	>Csat	41,000	>Csat	12,000	>Csat	340,000	>Csat	mg/Kg (ppm)	0.09887	nd	0.0160	0.0060
Indeno(1,2,3-cd)pyrene	c, nv					0.15		0.34		2.7	>Csat	21	>Csat	590	>Csat	mg/Kg (ppm)	0.0273	0.0080	0.0747	0.0190
Lead	nc, v					400	L	400	L	800	L	800	L	800		mg/L	ND	0.1950	ND	ND
Mercury	nc, nv					23		47		310		93		2,600		mg/L	ND	ND	ND	ND
Naphthalene	c, v					4.6		25		23		590	>Csat	16,000	>Csat	mg/Kg (ppm)	0.0173	ND	0.0187	ND
Pyrene	nc, v					1,700	>Csat	3,400	>Csat	21,900	>Csat	5,780	>Csat	190,000	>Csat	mg/Kg (ppm)	0.101	0.0280	0.2880	0.0727
Silver	nc, nv					390		780		5,100		1,500		43,000		mg/L	ND	ND	ND	ND
Diesel						1,100										mg/Kg (ppm)	163.00	245.00	849.00	172.00
Lube Oil						2,800										mg/Kg (ppm)	1250.00	1570.00	1770.00	664.00

*Soil Control Lab-(Sweeper Finished)(TOTAL METALS)
Date Sampled(8/11/13) Full technical report in appendix II*

Metals	Dry wt.	EPA Limit	units
Aluminum (Al)	11000	-	mg/kg
Arsenic (As):	3.4	41	mg/kg
Cadmium (Cd):	< 1.0	39	mg/kg
Chromium (Cr):	44	1200	mg/kg
Cobalt (Co)	6.3	-	mg/kg
Copper (Cu):	59	1500	mg/kg
Iron (Fe):	18000	-	mg/kg
Lead (Pb):	27	300	mg/kg
Manganese (Mn):	350	-	mg/kg
Mercury (Hg):	< 1.0	17	mg/kg
Molybdenum (Mo):	1.7	75	mg/kg
Nickel (Ni):	21	420	mg/kg
Selenium (Se):	< 1.0	36	mg/kg
Zinc (Zn):	160	2800	mg/kg

Location or type of land use where the material will be applied, consistent with the risk scenarios used to evaluate risk.

Currently there are several possible protected uses of the material: commercially, agriculture, highway, and land fill. Each of these potential uses would place the material away from residential areas. Additionally, each use would replace the need to use virgin material and could be provided at lower cost than existing material.

Commercial uses could include industrial and commercial landscaping, building sites, large government projects, or highway use. Highway uses are the same as described in great detail in ODOT's aforementioned studies. These include soil amendments, trench fill and highway shoulder repair. Additional uses of this material would be erosion berms or the seeding of highway areas such as median and shoulders.

Agricultural uses would include compost, which has well-documented positive impacts when spread on fields at agronomic rates. We have several existing customers that would use composted sweeper material on their fields, including one large, local coop that could take all of the foreseeable volume.

Land fill use has been explored with Lane County Solid Waste. Lane County has expressed interest in using the composted sweeper material as seeding medium when closing a cell at the land fill. They currently use hydro-seeding and we could provide the material, blown into place, with seed of their choosing.

Contact information of property owner(s) if this is a site-specific land application proposal, including name, address, phone number, e-mail, site address and site coordinates (latitude and longitude).

This is not a site specific application.

A description of how the material will be managed to minimize potential adverse impacts to public health, safety, welfare, or the environment.

Lane Forest Products will work closely with the generator of the material, customers and regulatory agencies to manage the material using best practices. To that end, we have developed an operations plan that describes best management practices (BMPs) that we will use in managing the sweeper recycling program. This will be a living document that we can modify as needed to provide for the best protection of public health, safety, welfare and the environment.

The plan covers the following components:

- Overview
- Generator Procedure
- Delivery Procedure
- Storage
- Screening
- Composting
- Testing
- Products

The plan includes foreseen needed elements such as storm water protection, employee and public safety, and hot loads procedure. The plan will be modified as conditions change or better management methods are developed. The entire plan is included as appendix I.

Additionally, Lane Forest Production has a composting permit filed with DEQ that outlines our procedure for composting operations including pathogen kill and vector control. The site is also covered by a 1200Z permit. These permits are active and can be provided as needed.

Appendix I - Operations Plan

1. Overview
 - a. Goals – Manage the materials collected from the sweeper boxes efficiently and proactively. Separate and remove contamination to allow LFP to readily manage a high percentage of this material as “product” rather than waste.
 - b. Measurement – analytical lab test will enable LFP to ensure we can re-use a substantial portion of the material collected at “product” rather than waste.
2. Generator Procedures
 - a. Hot Loads – Sweeper truck operators will notify their manager of a suspected hot load. Clues that a load may be contaminated by hazardous materials may present themselves during the route, such as obvious spills or spill containment devices, broken containers of oils or chemicals, et al. There may also be smells that present themselves when emptying the sweeper truck, or visual clues that might indicate excessive contamination. Loads such as these should be reported to the suppliers’ management and in turn reported to Lane Forest Products’ dispatch. Information should include time and date of route, suspected contaminant and box number.
3. Delivery Procedure
 - a. Inspection – LFP drivers shall inspect the box at pick-up. During leaf season, they will determine if the box is a leaf or sweeper box and haul accordingly. Any boxes that have signs of contamination shall be called into dispatch.
 - b. Weights – Sweeper boxes shall be hauled to LFP’s Junction City yard where they will be weighed both in and out to determine the net weight.
 - c. Visual inspection. - Loads will be dumped in a covered building and inspected by the drivers after unloading. Once unloaded and inspected the load may be combined with previous loads.
 - d. Hot loads – Suspected hot loads will be dealt with on a case by case basis, but loads will always be isolated, covered, and leachate will be contained. Loads may then be tested and held for results, delivered to the landfill, if the material conforms to the landfill’s guideline for special waste and petroleum contaminated soil, or other as deemed appropriate.
4. Storage
 - a. Hand Picking – Each sweeper box will be spread out and hand picked for trash removal prior to storage.
 - b. Covered – Sweeper material will be stored under cover until processing.
 - c. Leachate – Water that drains from the sweeper material will be absorbed by a perimeter of material such as bark dust. The bark dust, or other material, will be added to the sweeper material and then handled as sweeper material throughout the remainder of the process. This will eliminate any leachate from the sweeper material. The Junction City site is covered by a 1200Z permit for other water not associated with sweeper materials.
 - d. Temps – Sweeper material that is stored for long periods of time will have temperatures taken and the material may be turned to prevent the temperature from rising to the point of potential fires.
5. Screening

- a. Screening – The sweeping material will be screened through a shaker screen or similar. The purpose of the screening is to separate the organic material and remove trash.
 - b. Picking – Picking will be completed with a picking station and Airlift sorting. Trash will be removed and disposed of.
 - ii. Personal Safety
 - 1) Gloves – appropriate gloves that offer a level 5 cut resistance and are puncture resistance shall be worn.
 - 2) SHARPS – The belt shall be stopped if a SHARPS object is spotted and removed with grabbers. A sharps container shall be placed near the picking station for disposal. All SHARPS object shall be reported.
6. Composting of Organics
- a. Windrow - The organic component shall be placed in compost windrows and composted as per our composting plan and permit. Organics from sweeper material shall be composted separately from other material and tracked throughout the process.
 - b. Pathogen Kill – All composted material at LFP go through a pathogen kill process and temperature and turns are recorded.
 - c. Compost Testing – All finished compost is sampled for pathogen kill success as per the composting permit.
7. Testing
- a. Material Arrival Testing – When the covered storage bunker is 50% full of sweeper material testing shall be completed with the following tests.
 - i. NWTHP-DX with silica clean-up
 - ii. TCLP 8 ICPMetals
 - iii. PAH's by GC/MS low level
 - b. Post Composting Testing – Once the batch has been processed through the composting process, testing shall be completed with the following tests.
 - i. NWTHP-DX with silica clean-up
 - ii. TCLP 8 ICP Metals
 - iii. PAH's by GC/MS low level
 - c. Testing shall be done by a third party lab, reputable in soil analysis.
 - d. Testing shall be by composite sample.
 - e. Hot Load Testing – Sweeper material suspected as a hot load may be tested as per above, or alternate testing if conditions indicate.
8. Products
- a. Commercial
 - i. Commercial and industrial landscaping opportunities would offer a large number of uses across a wide spectrum of possibilities.
 - b. Landfill
 - i. Seeding – Potential landfill application by using a compost seed mix as part of the process for closing cells. Currently, the landfill uses hydro-seeding and the use of a seeded compost medium derived from sweeper material could a win-win alternative
 - ii. Other – TBD
 - c. Agro
 - i. Soil Amendment – Compost could be applied at agronomic rates to replenish soils.

- ii. Berms - TBD
- d. DOT
 - i. Shoulder Repair
 - ii. Seeding Medium
- e. Other

