From: Mofidpoor, Maryam ENV:EX
To: Bryden, Jack ENV:EX;

**Subject:** FW: NET ZERO WASTE TEAM QUESTIONS - Ministry of Environment EQB RFP-

10-039 Waste Diversion

**Date:** Thursday, January 14, 2010 1:09:33 PM

**Attachments:** <u>image001.jpg</u>

Let's discuss.

**From:** Mateo Ocejo [mailto:mateo@netzerowaste.com]

Sent: Thursday, January 14, 2010 7:21 AM

**To:** Mofid-Poor, Maryam ENV:EX

**Cc:** mpitre@mapenvironmental.ca; s.22

Subject: NET ZERO WASTE TEAM nistry of Environment EQB RFP-

10-039 Waste Diversion

Our team would like to thank you for the above referenced opportunity. We have 3 questions (listed below) which we would like to have clarified prior to submitting our proposal.

- 1. Can the Ministry please provide guidance on when it is expected that the project will be awarded? This date is required so that we can accurately forecast our schedule prior to the project completion date of March 31<sup>st</sup>, 2010.
- 2. Can the Ministry please provide some clarification on the 10% project weight which is being provided for the Budget Breakdown among team members? Is this 10% based on the quality of this budget and its provision in the proposal or is this related to the project coming in within the desired budget of \$15,000. Is this a firm budget as it is our opinion that the scope of work will require more budget to be completed as outlined? How much weight is placed on price?
- 3. Can the Ministry please provide some guidance on if it would like a focus placed on any specific waste sectors (SFU, MFU, ICI and DLC) or if it would like us to address all waste sectors equally? (i.e. some sectors such as SFU and MFU currently hold among the lowest diversion rates so a specific focus may need to be placed in those areas as an example).

Best regards, Mateo Ocejo (On behalf of the NZW Team)

# Potkins, Samantha ENV:EX

From: Vanderhoek, Linda ENV:EX
Sent: Friday, January 14, 2011 1:46 PM

To: 'Mateo Ocejo'

Cc: Victoria EPD Permit Administration ENV:EX; Sundher, Avtar S ENV:EX; Potkins, Samantha

ENV:EX

Subject: FW: Log 136458 - Reply Direct - Due Feb 1st

**Attachments:** 136458\_136458 - Ocejo -.pdf

Hi Mateo – your attached notification was forwarded to me. All notifications under Section 25 of OMRR should go to PermitAdministration. Victoria EPD@gov.bc.ca

The personnel training program plan should address the specific training needed to operate the subject facility. The Compost Facility Operator Training you have attached is a generic course given in Washington and doesn't address your specific facility. Please refer to the example composting personnel training plan in the back of the *Compost Facility Requirements Guideline: How to Comply with Part 5 of the Organic Matter Recycling Regulation*.

As in previous discussions, MOE does not consider the gore system an in-vessel system. In-vessel systems can be seen at UBC and the Resort Municipality of Whistler.

If you have any questions, please feel free to call me.

### Linda

**From:** Potkins, Samantha ENV:EX **Sent:** Friday, January 14, 2011 11:40 AM

To: Vanderhoek, Linda ENV:EX

Subject: FW: Log 136458 - Reply Direct - Due Feb 1st

From: Jana.OConnor@gov.bc.ca [mailto:Jana.OConnor@gov.bc.ca]

Sent: Friday, January 14, 2011 11:27 AM

To: Potkins, Samantha ENV:EX

Cc: Loguisto, Colleen X ENV:EX; Russell, Veronica A ENV:EX

Subject: Log 136458 - Reply Direct - Due Feb 1st

Hi Sam,

This log was redirected to ERSC by EPD-CWR, attention: Linda Vanderhoek. Final response is due by February 1st.

## Thanks!

Jana

Ministry of	Ministry of Environment CLIFF Log 136458								
First Name	Mateo	Written	2011/01/10	Log ID	136458				
Last Name	Ocejo	Received	2011/01/12	Type	Letter				
Title		Due	2011/02/01	Action	Reply Direct				
Division		Interim		Office	EPD-ESB - Enviro Standards				

Company	Net Zero Was	ste Inc.			Signe	d				Sig	n By						
Address	111-2455 Yo	rk Avenu	e		Closed	d				Ent	ered	By	NHID	О			
					File N	lo.											
City	Vancouver	Postal	V6K 1	C9	Batch												
Province	BC	Phone	604-86	8-6075	Confidential:No Frequent Writer:No Elected Official:No												
Country		Fax			Email <u>mateo@netzerowaste.com</u>												
Subject	Letter of Not	ification:	Net Zer	o Waste	te Inc. operating a composting facility in Mission, BC												
Other Info	)																
Copied To	-																
Addressed	l to Environmenta	al Manage	ement B	ranch	Divisi	on	E	EPD	- Env	ironi	nenta	ıl Pr	otecti	on	Divisi	on	
Issue	Composting	<u> </u>			MLA		_		pbell,				Libera	al)			
X-Ref	134122					oral I	Dist V	/anc	couve	r-Poi	nt Gr	ey					
	Attachments for Log 136458																
	458 - Ocejo - INC																
Referrals	for Log 136458																
Sent By		PD-ESB - Enviro Standards				Se	nt		201	1/01	/13	Rec	eive	1	Statu	s S	ent
Sent To	EPD-CWR - Co	D-CWR - Community Waste Reduct			n	Dι	ıe		201	1/01	/19	Act	tive fo	or	State	P	ending
Action	Action   Necessary Action   Completed   File No.																
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Sent To 1	EPD-CWR - Com	nmunity W	Vaste Re	eduction	Due		20	11/0	01/19	Acti	ve for	r 1 d	ay		State		
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necessary	s From Sending of action. Commen direct to Surrey of	its From R	Receivin	g Office	2011/				`						_		
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Sent To	CU-Correspond	ence	Di	ue	20	11/0	2/01	A	Active	for				Sta	ite		
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Sent To	ERSC - South	n Coast		Due			2011/	1/02/01		A	Active for			Sta	ate	A	ctive
Action	Reply Direct			Comple	eted					F	ile N	o.					
	s From Sending attention: Linda									spon	dence	e) Re	edirec	ted	from	EPI	)-CWR



November 12th, 2010

Ministry of Environment
Environmental Management Branch
PO Box 9377, Stn Prov Govt, 3rd Floor, 2975 Jutland Rd.
Victoria BC V8W 9M1

To Whom It May Concern:

ENVIRONMENTAL MANAGEMENT

NOV 1 5 2010

RECEIVED

Re: Notification Process for Salish Soils Gore Cover Demonstration Composting Facility

As per the Organic Matter Recycling Regulation, it is our understanding that at least 90 days before beginning the operation of a composting facility, our team was required to give notice in writing to the Ministry. Our team provided such notice on September 15th, 2010 to Ms. Linda Vanderhoek, Senior Environmental Protection Officer, Government and Compliance Section responsible for our site location with the Ministry of Environment. Notice consisted of a series of detailed reports and communications which served to demonstrate compliance with the regulation. It is our intent to fully comply with the regulation at this time as we complete our demonstration project. We also intend to expand on our existing system with the installation of full in-ground infrastructure with our plans to develop a full scale invessel composting facility for the Sunshine Coast following completion of the trial.

The location of the demonstration project is at 5800 Black Bear Road in Sechelt. We have a general office email (salishsoils@gmail.com) and a fax# (604) 885-5389. Our office telephone number is (604) 885-5383, or the Ministry can always feel free to contact the undersigned as the qualified professional acting on behalf of Salish Soils for the demonstration project.

The demonstration project is expected to last only 4 months and will process a combination of green waste and fish waste utilizing the Gore Cover System. It is the intent of the project to demonstrate the effectiveness of the technology in processing this type of waste without producing odour or impacting the local environment. The demonstration project is expected to process a total of no more than 800 tonnes of green waste and no more than 40 tonnes of fish waste over the 4 month period. The demonstration will provide the necessary data required to complete a detailed report which will serve to document continual temperature and oxygen readings throughout the pile cross section. Full sampling of the finished compost will be completed by a third party laboratory so as to indicate compliance with OMRR as a Class A compost before the finished product will be sold locally.

All operators at the demonstration project have successfully completed the Washington Organic Recycling Council's Compost Facility Operator Training Program for 2010. Details associated with this training program, the certification obtained and the project specific training associated with the Gore Cover System can be provided to the Ministry upon request.

As mentioned in previous correspondence, I have been directed by Salish Soils Inc. to act as the "qualified professional" who has affixed my professional seal and signature to the plans and specifications for the demonstration composting facility which has been constructed on self governed band land in Sechelt. I am currently registered as a member in good standing with the Association of Professional Engineers and Geoscientists of BC (APEGBC). I act under our professional association's code of ethics, and I am subject to disciplinary action by that professional association. I hold over 14 years of Environmental Engineering experience as well as design, construction and operational experience with more than 20 composting facilities across North America. This notification is provided to supplement the package our team has already submitted to the Ministry on September 15<sup>th</sup>, 2010 as Ms. Vanderhoek has recently advised that notification also needed to be provided in writing to this address directly. We have

received no comment from the Ministry with regards to the various submittals we have provided as of the date of this letter.

It is our intent to utilize the same equipment which was recently demonstrated in Metro Vancouver in early 2008 for a 50% Food Waste / 50% Wood Waste Mixture. The Ministry inspected this operation at the North West Langley Waste Water Treatment Facility and is familiar with the successful results of this demonstration. (Our 2008 Metro Vancouver Report is attached to the end of this letter for reference).

I trust that the above information meets with your approval and should you have any additional questions, please do not hesitate to contact the undersigned at (604) 868-6075. As was the case on the last use of this demonstration equipment and my correspondence with the Ministry, we aim to keep open lines of communication with all concerned parties as well as share data collected during the trial and the final results of the sampling data obtained from the finished compost. We look forward to your favourable review and the start of this Gore Cover System trial which stands to benefit the entire community.

Respectfully,

Mateo Ocejo; P.Eng NET ZERO WASTE INC.





# "METRO VANCOUVER GORE COVER DEMONSTRATION PROJECT"

# ≈50% FOOD WASTE MIXTURE



TIMELINE:	2
AIM OF THE TRIAL.	2
PROJECT PHOTOS	3
TRIAL DOCUMENTATION	6
PRELIMINARY TRIAL ODOUR DATA	9





### TIMELINE:

Set Up:

Building the heap:

Mr. Mateo Ocejo & Mr. Marcel Pitre

January 23rd and 24th, 2008

Aeration piping previously built for the

second heap at the Vancouver

Landfill was cut apart and re-welded at the new location. The heap was

ar me new rocation, me neap was

built and feedstock mixed and then left to sit for 4 days to simulate a static

pile windrow. Odour samples were

taken on Jan28th for this baseline data

however cold weather may dampen

odour results. Aeration was turned on

interval control for two days to bring

the system back to aerobic levels

prior to starting the official 2 month

Gore Cover cycle on Jan.30th.

Start of Phase I: January 30th, 2008

Turning: February 27th, 2008

Start of Phase II: February 27<sup>th</sup>, 2008

Turning: March 12th, 2008

**Phase III:** Start of Phase III: March 12<sup>th</sup>, 2008

End: March 26th, 2008

# AIM OF THE TRIAL.

Phase I:

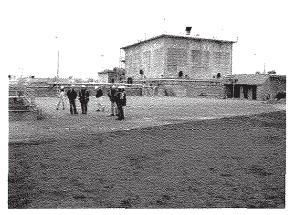
Phase II:

Demonstrate the effectiveness of the GORE<sup>TM</sup> Cover System process in treatment of approximately 50% food waste mixture. Define expected odour emissions and collect data so that additional odour modelling can be completed for the development of a full scale facility.





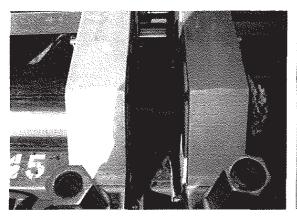
# **PROJECT PHOTOS**



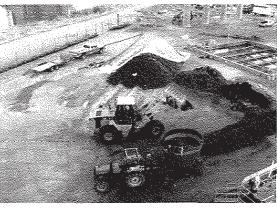
The North West Langley WWTP Site



Beautiful Morning on Site – January 23rd/08



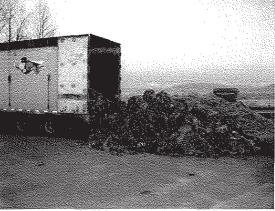
Fusion welding of 6" HDPE piping



Mixing of feedstocks in the Supreme Mixer



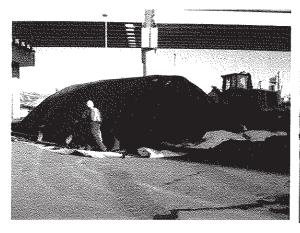
Aeration Piping Covered in Wood Chips



Delivery of Food Waste from Carneys



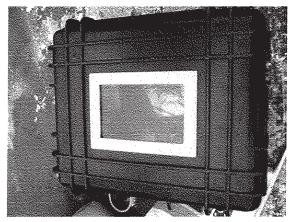




Heap Covered after 1st day of Construction to ensure protection from vectors

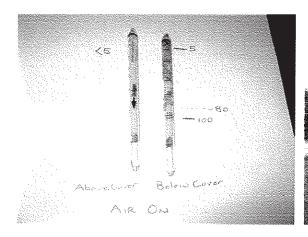
45% Food Waste Heap following Construction

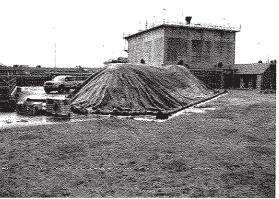




January 28th & a heavy snowfall

Odor Sampling Chamber





Preliminary Results of Ammonia show 90ppm below the cover and unmeasurable amounts (less than 5 ppm) above the cover

Food Waste Trial January 30th – Day 1 & Activation of the Gore Cover System.

Ambient Temperature of -3°C







45% food waste heap with aeration on for odour sampling. A strong seal around the cover shows no release of steam or humidity escaping from the environment beneath.

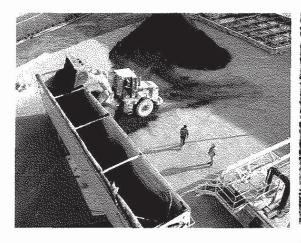
Temperatures beneath the cover rose quickly to over 70°C following pile construction. PFRP was easily met as temperatures beneath the cover have remained above 55°C since activation. Keep in mind that on the graph below, the heap had originally been sitting without aeration for 5 days to simulate a static pile for baseline odor measurements. This is why oxygen values continued to drop following activation.



Steam off pile, immediately following the removal of the cover for turning



Compost Heap Phase III – No Cover (Final 2 weeks)



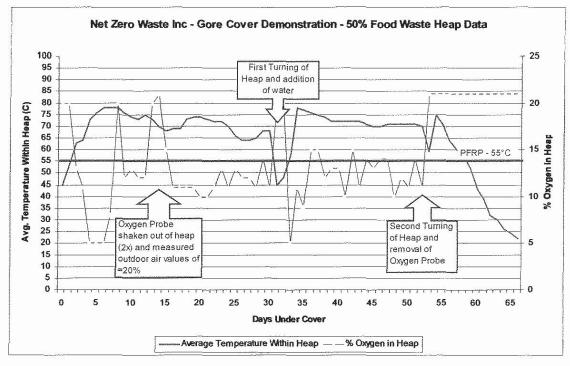
Load out of compost following completion of the 8 week process. Material is ready for sale



Overs Following Screening through 34" screen (Contaminants removed during screening)







# TRIAL DOCUMENTATION

	Pilot Heap 1
Input	Wood Waste (hog fuel) & Food Waste (commercially generated)
Age:	Fresh
Moisture Content	Wood Waste (approx 30%) & Food Waste (approx 50%)
Additional Note:	Many of the plastic bags in the mix didn't get broken / shredded by the mixer. A typical degree of contamination was observed. Some larger items were removed manually through visual inspection. Will use an "Allu" shredder / loader attachment at the turning of Phase I to ensure additional breakdown.
Food Waste: Observed to contain (fish, meat, fruit, vegetables, soiled cardboard, plastic of all types)	





Structural Material:	Wood waste
Age:	Fresh
Moisture Content:	30%
Additional Note:	Variable m.c. by load. Some loads wetter than others and all contained wood pieces up to 4" in length. Generally good quality waste with little to no contamination
Wood Waste:	
Observed to be	
comprised of	
wood chips (up to	
4" length) and saw	
dust	

Pre-Treatment	950 CAT Loader and Supreme Mixer
Machinery Type:	See above
Added Moisture Amount:	To 60% moisture – verified through snowball test
Mixing Ratio:	1 bucket of food to 2 buckets of wood
Additional Note	Start Date: Jan 30th, 2008

Open Windrow	4 days (to simulate static pile operation)
Start [Date]:	January 24th, 2008
End [Date]:	January 28th , 2008
Testing	Simulate un-aerated static pile





Requirements	Build pile and leave undisturbed for 4 days to simulate a typical windrow composting operation					
Additional Note:	Aeration was turned onto interval control for 2 days to get the system aerobic prior to starting the Gore Cover System. Under normal operations, the pile would NOT be left for 4 days without aeration to simulate an un-aerated static pile					
Emission Sampling:	Sampling Days:					
	28.01.08 1 sample bag					

Phase I	28 days – (	28 days – (High Rate Composting)								
Start [Date]:	January 30	) <sup>th</sup> 2008								
End [Date]:	February 2	February 27 <sup>th</sup> , 2008								
Testing Requirements	Testing of \	Testing of VOC's, Ammonia and Odour Grab Samples								
Test Results:	Preliminary results indicate >95% reduction in Ammonia and VOC's above the cover when compared with data collected below the cover.									
Additional Note:	After five days open windrow treatment, without aeration, material was covered on 28th. Jan. System ran for 2 days with 2 minutes ON and 10 minutes OFF. System placed on Oxygen control on Jan. 30th. Oxygen Settings: 11% ON and 12% OFF. Little Odour observed after 5 days without air. Only after two days with positive aeration did odour and biological activity commence with heap.									
Emission Sampling:	Sampling C		ken above a	nd below cover with air						
(For All Phases 1-3)	28.01.08	2 sample bags	30.01.08	4 sample bags						
	06.02. 08 4 sample bags 13.02. 08 4 sample bags									
	14.02.08	4 samples (Feb.1	3 <sup>th</sup> bags brol	ke & were re-sampled)						
	20.02. 08	4 sample bags	27.02.08	6 sample bags						
	(completio	on of Phase I)		Residence of the second						





# PRELIMINARY TRIAL ODOUR DATA (Phase I: Jan.30th - Feb.27th)

Please note: All odour data provided by CH<sub>2</sub>MHILL. At the time of this report, the below data had not been finalized (baseline considerations). Measurements above and below the cover do not provide a true indication of the odour reduction potential of the system. The biological process is optimized below the cover (through pre-set automated controls) with aerobic conditions reducing odor from what would be expected with a static pile.

Jan.30 / 08	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm		Detection Threshold	Odour strength Recognition threshold	Intensity	
Blower On							
above cover	<5	17.9	26.4	2800	2100	65	
below cover	90	338	380	4900	3300	100	
<b>Blower Off</b>					3,200,000		
above cover	<5	14.5	15	1200	720	50	
below cover		430	450	6500	3500	100	

Feb.06 / 08	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm		Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On						
above cover	1.5	n/a		2400	1600	30
below cover	25	Dirty Probe	Dirty Probe	12000	7500	70
<b>Blower Off</b>			**************************************	\$700000 		
above cover	0.4	3.5	7	2800	2000	35
below cover	10	115	134	5800	3900	40

Feb.13 / 08	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm		Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On						
above cover	0.12	13	15	Bags Broken	In Transport	
below cover	24	83.9	193			
<b>Blower Off</b>		720 (100 000)00000000000000000000000000000				
above cover	0.12	5.3	7.5	Bags Broken	In Transport	
below cover	5	21	23.7			





Feb.14 / 08*	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm		Detection Threshold	Odour strength Recognition threshold	Intensity	
Blower On							
above cover		3.7	4.7	1400	990	40	
below cover			***************************************	1500	1100	85	
<b>Blower Off</b>							
above cover				570	380	60	
below cover				2000	1400	85	

<sup>\*</sup> New Bags Collected as the samples from the day prior were damaged in transport

Feb.20 / 08	Ammonia (ppm) concentration Grab Sample		centration /max ppm	Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On						
above cover	4	28.8	34.1	750	460	75
below cover	Sample failure	105	168	1400	810	100
<b>Blower Off</b>			# TELEVISION			
above cover	3	10.3	28.8	220	110	45
below cover	3	109	148	1400	750	100

Feb.27 / 08**	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm	Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On					
above cover	< 3		1600	1100	50
below cover	< 5		2000	1200	70
Blower Off					
above cover			390	260	40
below cover			2000	1100	95
Disturbed	(Open Pile)				
Pile Center			1000	630	70
Pile Face			280	180	30

<sup>\*\*</sup> We have stopped collecting VOC Samples due to the unreliability of the results
Ammonia values are now also consistently **below detection levels** and will cease at this time





Phase II:	14 days – (Stabilization)
Start [Date]:	February 27 <sup>th</sup> 2008
End [Date]:	March 20th, 2008 (modified one week due to loader availability)
Test Results:	Values Collected over the past 4 weeks have continued to drop
Additional Note:	Values Collected above the cover consistently display a significant reduction in both odour detection and recognition thresholds. Intensity levels are also significantly reduced above the cover.

Mar.5 / 08	Ammonia (ppm) concentration Grab Sample		centration /max ppm	Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On						
above cover	2	na	na	150	110	25
below cover	3	na	na	430	260	65

Mar.13 / 08	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm		Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On						
above cover	< 3	na	na	280	190	40
below cover	< 5	na	na	530	320	70
<b>Blower Off</b>			*28/3.19 + 0.67 03/02/**********************************	320,000,00		1 MSS 11 2000 MW 1 Z
above cover		na	na	440	260	80
below cover		na	na	3400	1900	80

Mar.20 / 08	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm	Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On					
above cover	< 3		130	80	30
below cover	< 5		340	210	50
Blower Off		15 2 35 3910			
above cover			180	120	65
below cover			410	210	65
Disturbed	(Open Pile)				
Pile Center			650	440	110
Pile Face	9,000 (900 (900))		220	150	70





Phase III:	14 days – (Curing)
Start [Date]:	March 20 <sup>th.</sup> , 2008
End [Date]:	April 3 <sup>rd</sup> , 2008
Test Results:	Values collected are very low. Measurements could only be taken on the exposed compost as the cover is removed for the final two weeks of curing
Additional Note:	Trial material resembles a dark compost soil at this time and produces little to no odour. No food waste is visible in the mixture and bio-degradable bags have decomposed leaving considerably little contamination.
	Samples were taken at the exposed face of the pile during turning and even at the centre of the pile, very low odour values were apparent. The oxygen probe was removed and the temperature probe remained inside the pile for the remaining 2 weeks of curing.

Mar.27 / 08	Ammonia (ppm) concentration Grab Sample	VOC concentration avg ppm /max ppm	Detection Threshold	Odour strength Recognition threshold	Intensity
Blower On	WATER CONTROL				
Cover Removed			220	140	85
Blower Off					
Cover Removed			170	120	85

Screening:	Using a McCloskey 516 Trommel with a 3/4" Screen Size				
Notes:	<ul> <li>Total weight finished compost sample – 11.1 Tonnes (100%)</li> <li>Total weight of compost – 8.1 Tonnes (73%)</li> <li>Total weight of overs – 3.0 Tonnes (27%)</li> </ul>				
	Total overs for the trial came in at 27%. This is on the high side of the 10-30% overs expected, however this is a function of the feedstock (hog fuel) which contained large wood chips and no grass or leaves which would normally be expected for a green waste stream.				
	Typical compost facility operation would warrant the use of a 1" screen as erosion / sediment control products can be derived from this material. Using a larger screen opening would also contribute to reducing the amount of overs produced at completion of the process.				



Ministry of Environment Environmental Management Branch PO Box 9377, Stn Prov Govt, 3rd Floor, 2975 Jutland Rd. Victoria BC V8W 9M1

To Whom It May Concern:

January 10<sup>th</sup>, 2011

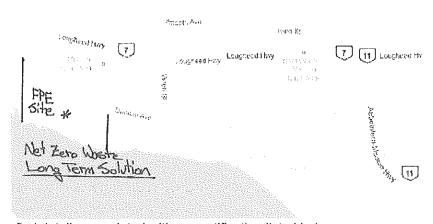
ENVIRONMENTAL MANAGEMENT

JAN 1 2 2011

RECEIVED

Re: Notification Process for Net Zero Waste Inc. Composting Facility – Mission, BC

As per Division 2 Section 25 of the Organic Matter Recycling Regulation, please accept this letter as our notification of operation for a facility which will be registered under the name of "Net Zero Waste Inc" and is to be located in Mission BC. It is our intent to provide organic recycling services to the Fraser Valley and surrounding communities. It is our intent to fully comply with the regulation both now and into the future and to use the Gore Cover



System so as to treat the waste. Please find details associated with our notification listed below.

Company Name: Net Zero Waste Inc.

Company Phone Number and Email Address: (604) 868-6075 / mateo@netzerowaste.com

Company Legal Address: 10<sup>th</sup> Floor, 595 Howe Street, Vancouver, BC, V6C-2T5

Company Mailing Address: #111, 2455 York Ave, Van, BC, V6K-1C9

Company Billing Address: Same as above

Contact Name, Ph # and Email: Mateo Ocejo – (604)868-6075; mateo@netzerowaste.com

Facility Site Description: The site is industrially zoned and currently used for a wood sorting and as a material handling yard. While the site is over 30 acres in size, Net Zero Waste Inc, will occupy approximately 2 acres of land above the flood plain and clear of all setbacks. Buffers and site synergies exist on the site as shown at the end of this notification. A processing building approximately 260 feet x 80 feet will be erected so as to receive incoming loads and begin the composting process utilizing the Gore Cover System. A similar design has recently been constructed in Chemainus, BC.

Legal Land Owner: Bev Toes, s.2

Facility Operator: Net Zero Waste Inc., Mateo Ocejo; P.Eng, (604)868-6075, <a href="mateo@netzerowaste.com">mateo@netzerowaste.com</a> Legal Land Description: Lot 1 Plan 8588, Section 18 and 19, Township 17, New Westminster Land District, Except Plan HWY R/W PL 52311, BCP 14718. A map showing this location has been provided above.

Facility Address: 31860 Duncan Avenue, Mission BC Design Capacity: Up to 20,000 Tonnes per year

Type of Operation: In-Vessel. Covered Aerated Static Pile (Gore Cover System) located in-side a tube

frame building

Compost Facility Type of Product: Class "A" Compost - Utilizing the Gore Cover System

Types of Wastes: Commercial Food Waste, Municipal Waste SSO Abbotsford

Carbon will be provided through a partnership with a local waste hauler who currently collects yard and garden waste and the potential exists for processing of a partner municipalities waste as we are currently short listed on open bids for source separated organics from single family unit collection. We may also choose to purse other wastes as listed in Schedule 12 of OMRR as material suitable for composting; however this is not currently our intent. Should a significant source of organic waste become available for processing which benefits the community we may chose to dedicate a portion of our processing capacity into treating this waste as each input material can be separated throughout the process as an independent pile.

Full sampling of the finished compost will be completed by a third party laboratory so as to indicate compliance with OMRR as a Class A compost before the finished product will be sold locally and through our distribution network including local engineered soil producers.

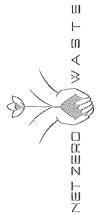
The plant general manager has successfully completed the Washington Organic Recycling Council's Compost Facility Operator Training Program for 2010. Details associated with this training program, the certification obtained and the project specific training associated with the Gore Cover System have been provided at the end of this document. Additional staff will attend the 2011 Operator Training Program as it is our intent to have all staff trained to this level within the first year of operations.

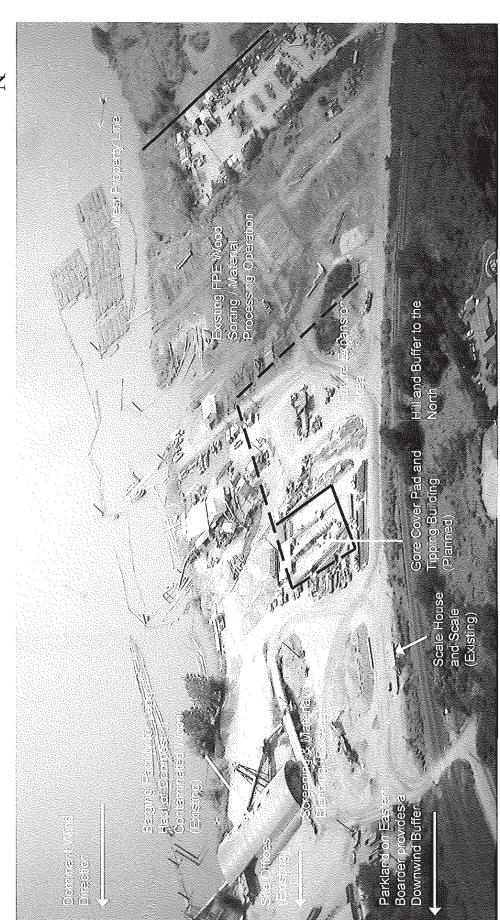
The undersigned will act as the "qualified professional" who will affix his professional seal and signature to the plans and specifications for the composting facility. Mr.Ocejo is registered as a member in good standing with the Association of Professional Engineers and Geoscientists of BC (APEGBC) and has over 14 years of Environmental Engineering experience including design, construction and operation of multiple composting facilities across North America.

It is our intent to utilize the same equipment (Gore Cover System) which was recently demonstrated in Metro Vancouver in early 2008 for a 50% Food Waste / 50% Wood Waste Mixture. This technology was also successfully installed in Chemainus in 2009 using a design similar to the system to be installed in Mission, and a small fish waste composting demonstration in Sechelt has also recently been registered in 2010 using this technology. I trust that the attached information meets with your approval and should you have any additional questions, please do not hesitate to contact the undersigned at (604) 868-6075. As was the case on the last use of this equipment and my correspondence with the Ministry, we aim to keep open lines of communication with all concerned parties as well as share data collected and the results of the sampling data obtained from the finished compost. We look forward to your favourable review and the start of this Gore Cover System Facility which stands to benefit the entire community.

Respectfully.

Mateo Ocejo; P.Eng NET ZERO WASTE INC.





Net Zero Waste Inc. Organic Management Facility Site Layout / Description



Day 1 - Monday (Agenda subject to minor changes) October 18, 2010

Day	1 - Monuay (Agenua Subject to minor changes)			October 16, 2010		
	Time	Topic			Time	Instructor
	7:30	Registration (Coffee	provided)		15 min	Dan Ollero and Dan Corum
	7:45	Orientation (meet ins	tructors; review a	ngenda)	15 min	Michelle Andrews
	8:00	Welcome & "warm-up Composting: The Ma		ess	90 min	Jeff Gage
	9:30	Break			15 min	
	9:45	Biology of the Compo	st Pile		60 min	Craig Cogger
	10:45	Class Introductions			60 min	All
	11:45 Lunch (provided)				60 min	
	12:45	Fieldwork Safety Ren	ninders	•	30 min	Jeff
	1:15	Germ City			30 min	Andy Bary
	1:45	Feedstock Intro & Es	tablish groups fo	r field work	30 min	Andy
	2:15	Field Demonstrations	- Walk across th	ne street	10 min	
	2:25- 4:20  Pile Bulk Density (BD) and Free Air Space (FAS) Craig & Nehemias Chalma  Pile Bulk Density (BD) and Free Air squeeze test (% moisture) Jeff  Aerated Static Pile (ASP)Demo/Discussion and Evaluate pre-built compost piles Andy			change sta	station (plus 5 min to tion). Rotate. s at each station	
		Return to classroom			20 min	
	4:40	0 Homework, evaluation, and adjourn				Michelle

<sup>\*\*</sup> Remember to complete and turn in Monday's evaluation form!



Day 2 - Tuesday (Agenda subject to minor changes)

October 19, 2010

	ay (Agenda subject to mi	noronanges;	October 19, 2010		
Time	Topic		Time	Instructor	
7:30	Review agenda & home	work	15 min	Craig	
7:45	Compost recipe, pile but and compost recipes in	공사 하는 경구하는 것은 사람들이 하는 것이 되는 것이 되는 것이 되는 것이 없는 것이 되는 것이 없다.	75 min	Andy, Instructors	
9:00	Walk across the street		10 min		
9:10	Build-your-own (BYO) C	compost Pile	110 min	All	
11:00	Return to classroom				
11:10	Biology of Odor		20 min	Chery Sullivan	
11:30	Biofilters	20 min	Jeff		
11:50	Safety – Protecting You	ost 25 min	Carrie Gregory		
12:15	Lunch (provided)	60 min			
1:45	Trouble shooting and Pr	ocess Problems	30 min	Jeff	
2:15	Break		15 min		
2:30	Composting Business E	ssentials	50 min	Jeff	
3:20	Homework assignment/	Tour Day reminders	5 min	Michelle	
	<u>Field Demonstrations</u> –	Walk across the street	20 min		
3:40 – 4:45	Screening Demonstration Jeff, Andy and Tom Walter		station (plus 5 min to		
4:45	Collect data at BYO con	npost piles	15 min	All	
,				*	

<sup>\*\*</sup> Remember to complete and turn in <u>Tuesday's</u> evaluation form!



Day 4 – Thursday (Agenda subject to minor changes)
Oct. 21, 2010

	y 4 – Thursday (Agenda Subject to Inmor Changes)			Vol. ZI, ZVIV	
Time	Topic		Time	Instructor	
7:30	Review agenda & homework		10 min	Jeff	
7:40	Compost Stability/Carbon & Nitrogen Cycle, Solvita® Testing		35 min	Andrew Sparda	
8:15	Solvita set-up (See Solvita instructions in "Thursday" section in binder)		30 min	Andy & Andrew	
8:45	Soil Science 101		60 min	Craig	
9:45	Break		15 min		
10:00	Compost Quality Considerations by End-Use; "Seal of Approval" Programs		60 min	Craig	
11:00	anel Discussion – Compost "End-Users" andy Salisbury, WS DOT; Dr. Gwen Stahnke, WSU-Puyallup; David lcDonald, Seattle Public Utility; Howard Stenn, Stenn Design		75 min	Chery (moderator)	
12:15	Lunch (provided)		45 min		
			70 (1111)		
1:00	Solvita Demonstration		30 min	Andrew; Instructors	
		eet		Andrew; Instructors	
1:00	Solvita Demonstration	1	30 min 15 min 30 min/per	Andrew; Instructors  station (plus 5 min to groups per station	
1:00 1:30 1:45-	Solvita Demonstration  Field Demonstrations – Walk across str  Low Impact Compost Application Development Rates (LID) Andy	Compost use in stormwater control	30 min 15 min 30 min/per	station (plus 5 min to	
1:00 1:30 1:45- 3:30	Solvita Demonstration  Field Demonstrations – Walk across str  Low Impact Compost Application Development Rates (LID) Andy  Craig	Compost use in stormwater control	30 min 15 min 30 min/per rotate). 2	station (plus 5 min to	
1:00 1:30 1:45- 3:30	Solvita Demonstration  Field Demonstrations — Walk across str  Low Impact Compost Application Rates (LID) Andy Craig  Walk to pre-built compost piles  Evaluate pre-built compost piles	Compost use in stormwater control	30 min  15 min  30 min/per rotate). 2	station (plus 5 min to groups per station	

<sup>\*\*</sup> Remember to complete and turn in <u>Thursday's</u> evaluation form!



Day 5 - Friday (Agenda subject to minor changes)

October 22, 2010

ouy o Triday	7 3 – Filday (Agenda Subject to Innior Changes)		October 22, 2010	
Time	Topic	Time	Instructor	
7:30	Review agenda & homework	15 min	Andy and Craig	
7:45	Walk across street	15 min		
8:00	Evaluate BYO compost piles Final evaluation; group discussion; lessons learned ***After you collect your data, give your data sheet to Craig***	15 min	Jeff; Instructors	
8:15	Break into Piles	60 min	Jeff	
9:15	Return to classroom	15 min		
9:30	Compost Facility Regulations	10 min	Michelle	
9:40	Compost Facility Siting and Design	40 min	Jeff	
10:20	Lessons from the compost piles Review the week's data; Q&A	15 min	Craig; Instructors	
10:35	Break	15 min		
10:50	Panel Discussion — Compost Operators  Bob Dressel, North Mason Fiber or Jerry Katt, NW Fish By-Products, Inc.;  Andy Bary, WSU/Puyallup; Arlie Huffman and/or Nehemias Chalma, Natural Selections Farm; Greg Schoenbachler, Silver Springs Organics; Dan Corum, Woodland Park Zoo; Gerry Sullivan, Dept of Corrections	75 min	Jeff (moderator)	
12:05	Lunch (provided)	30 min		
12:35	Evaluations; Drawings; Closing thoughts Share your thoughts, ideas, and helpful hints to improve training	25 min	All	
1:00	Exam			
2:00 ish - 5:00	Workshop Reception Join the instructors and your fellow compost enthusiasts for refreshments and parting words just outside the classroom		All	

<sup>\*\*</sup> Remember to complete and turn in Friday's evaluation form!

From: Mofidpoor, Maryam ENV:EX
To: "mateo@netzerowaste.com";

**Subject:** outcome for RFP (waste diversion calculator) **Date:** Thursday, January 28, 2010 11:28:25 AM

January 28, 2010

File: RFP EQB-10-039

Mateo Ocejo

Net Zero Waste Inc.

111-2455 York Ave

Vancouver, BC V6K 1C9

Dear Mr. Ocejo

# <u>Subject: Updating the solid waste diversion calculator for BC Proposal (RFP #EQB-10-039)</u>

Thank you for your response to our Request for Proposal.

The Evaluation Team has completed the review of all proposals submitted and an award decision has been made and approved based on the proposal that best meets the requirements of the Ministry of Environment and provides overall best value.

The submission of Kelleher Environmental\_ has been accepted as the proposal offering best value and a contract will be awarded. This proposal demonstrated an excellent understanding of the issues and regulations, and documented specific waste diversion calculator, and solid waste management plans.

Thank you for your submission and participation in this process.

Yours truly,

Maryam Mofid-Poor, M.Sc., P.Ag.

Environmental Management Officer

Community Waste Reduction Section

Environmental Quality Branch

Telephone: 250-387-6663

maryam.mofidpoor@gov.bc.ca

## Vanderhoek, Linda ENV:EX

Subject:

FW: CVIS EPO Webinar

Location:

CSD R @2975 Jutland, Rm 4-1 CSD:EX + Livemeeting + Teleconference

Start: End: Thu 2011-10-13 9:00 AM Thu 2011-10-13 11:00 AM

Show Time As:

Tentative

Recurrence:

(none)

Meeting Status:

Not yet responded

Organizer:

Solomon, Lorelei CSNR:EX

LMAllowSendEmail:

.

----Original Appointment----From: Solomon, Lorelei CSNR:EX

Sent: Wednesday, September 28, 2011 4:28 PM

To: Solomon, Lorelei CSNR:EX; Zacharias-Homer, Christa ENV:EX; Sharpe, Ian D ENV:EX; Lamb-Yorski, Matthew J ENV:EX; Michael, Bill ENV:EX; Berube, Conrad ENV:EX; Hunse, Laura A ENV:EX; Huska, Stephanie ENV:EX; Hamelin, Trevor M ENV:EX; Jeske, Dean ENV:EX; Black, Brenda ENV:EX; Pearce, Katherine ENV:EX; Phillips, Lloyd ENV:EX; Smith,

Ashley N ENV:EX

Cc: Roberts, Marty ENV:EX; Keith, Tyler ENV:EX; Rosser, Craig L ENV:EX

Subject: CVIS EPO Webinar

When: Thursday, October 13, 2011 9:00 AM-11:00 AM (GMT-08:00) Pacific Time (US & Canada).

Where: CSD R @2975 Jutland, Rm 4-1 CSD:EX + Livemeeting + Teleconference

When: Thursday, October 13, 2011 9:00 AM-11:00 AM (GMT-08:00) Pacific Time (US & Canada).

Where: CSD R @2975 Jutland, Rm 4-1 CSD:EX + Livemeeting + Teleconference

Note: The GMT offset above does not reflect daylight saving time adjustments.

\*~\*~\*~\*~\*~\*~\*~\*

3<sup>rd</sup> CVIS Webinar

Teleconference

Participant ID:

s.15, s.17

-+---+

Solomon, Lorelei CSNR:EX has invited you to attend an online meeting using Microsoft® Office Communications Server. Join the meeting

Make sure the Office Live Meeting client is installed before the meeting:

- I am connecting from inside the Corporation network
- · I am connecting from outside the Corporation network

í

### TROUBLESHOOTING

Unable to join the meeting? Start Office Live Meeting and join the meeting with the following information:

Meeting ID:

Entry Code:

s.15, s.17

Location:

 $\underline{meet:sip:Lorelei.Solomon@gov.bc.ca;eruu:opaque=app:conf:focus:id:79b35e5352bd40f3bdd550e3e7a04c62\%3Fconf-key=rGRqM8Cn246s$ 

If you still cannot enter the meeting, contact support:

- Inside the Corporation network
- Outside the Corporation network

### NOTICE

Office Live Meeting can be used to record meetings. By participating in this meeting, you agree that your communications may be monitored or recorded at any time during the meeting.

# Vanderhoek, Linda EMV:EX

From: Sent: To:

Scott.Gamble@CH2M.com

Tuesday, October 4, 2011 6:13 PM Vanderhoek, Linda ENV:EX

Cc:

lindi@pilotpacific.com

Subject: RE: Pilot Grove Soils - Maple Ridge

Thanks for the reminder Linda. Out of courtesy, I would still like to get you the technical details on the project before we submit a formal notice to you. We are dealing with last-minute issues on the right-of-way, so I will not be able to get the details to you as quickly as I initially thought.

From: Vanderhoek, Linda ENV:EX [mailto:Linda.Vanderhoek@gov.bc.ca]

Sent: Tuesday, October 04, 2011 10:35 AM

To: Gamble, Scott/EDM

Subject: RE: Pilot Grove Soils - Maple Ridge

Just a reminder that under OMRR, there is a 90 day notification period before a compost facility can operate.

From: Scott.Gamble@CH2M.com [mailto:Scott.Gamble@CH2M.com]

Sent: Monday, October 3, 2011 12:43 PM

Yo: Vanderhoek, Linda ENV:EX Cc: lindi@pilotpacific.com

Subject: Pilot Grove Soils - Maple Ridge

Linda, attached is the latest (but still draft) site layout for the Pilot Grove site in Maple Ridge. We are still working through the utility crossing details with Fortis, but I expect we'll be close to this layout at the end of the day.

I have also included a rendering of the site that was prepared a few months back. This rendering is based on an older layout, but it should give you a sense of what the facility will look like when fully developed.

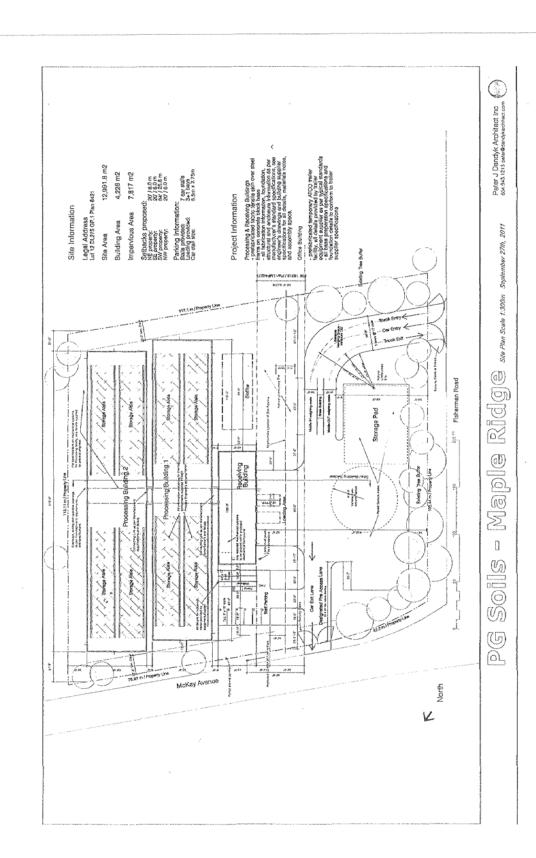
I will get you more detailed technical information on the project in the coming days/weeks as we go forward with the MetroVan permit applications.

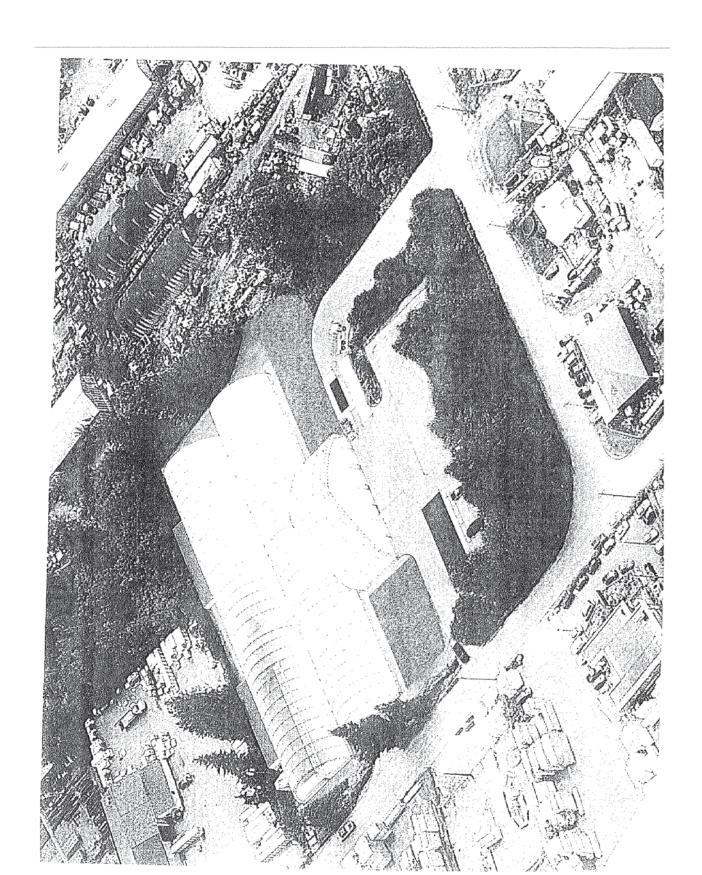
Thanks.

Scott Gamble, P.Eng. CH2M HILL Edmonton, Alberta Canada Direct Tel: 780-628-4496

Cell: 780-722-4626

Email: scott.gamble@ch2m.com





# Vanderhoek, Linda ENV:EX

From: Scott.Gamble@CH2M.com

Sent: Friday, September 30, 2011 1:16 PM

To: Vanderhoek, Linda ENV:EX Subject: RE: OMRR Contact?

I understand that you and Lindi from Pilot Grove connected on the phone this morning. I will try to connect with you today or Monday re the project and start some dialogue.

Scott Gamble, P.Eng.

CH2M HILL

Edmonton, Alberta Canada Direct Tel: 780-628-4496 Cell: 780-722-4626

Email: scott.gamble@ch2m.com

From: Vanderhoek, Linda ENV:EX [mailto:Linda.Vanderhoek@gov.bc.ca]

Sent: Tuesday, August 16, 2011 11:44 AM

To: Gamble, Scott/EDM Subject: RE: OMRR Contact?

yes

From: Scott.Gamble@CH2M.com [mailto:Scott.Gamble@CH2M.com]

Sent: Monday, August 8, 2011 2:23 PM

To: Vanderhoek, Linda ENV:EX Subject: OMRR Contact?

Linda, will you be the primary contact person at BCMOE for OMRR questions and facility notifications re a new compost site in MetroVancouver area?

Scott Gamble, P.Eng.

CH2M HILL

Edmonton, Alberta Canada Direct Tel: 780-628-4496 Cell: 780-722-4626

Email: scott.gamble@ch2m.com

Pages 33 through 36 redacted for the following reasons:

s.3

# September 15, 2011

# Pilot Grove Ltd.

Site visit on September 14, 2011; empty property – no activity; development sign out front

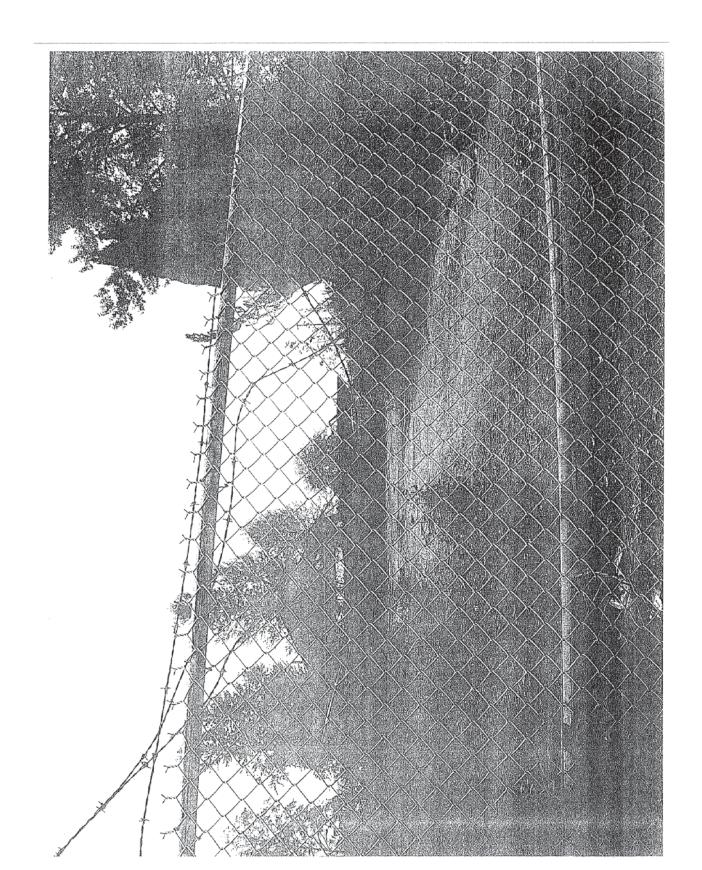
Zinda Vanderhook

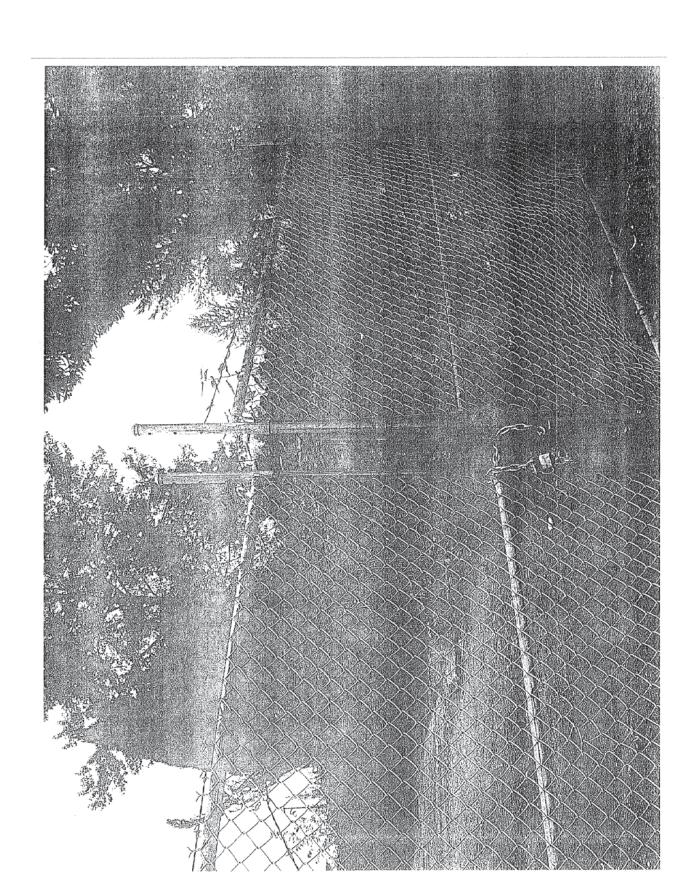
# DEVELOPWENT APPLICATION (23352 McKay Avenue, Maple Ridge)

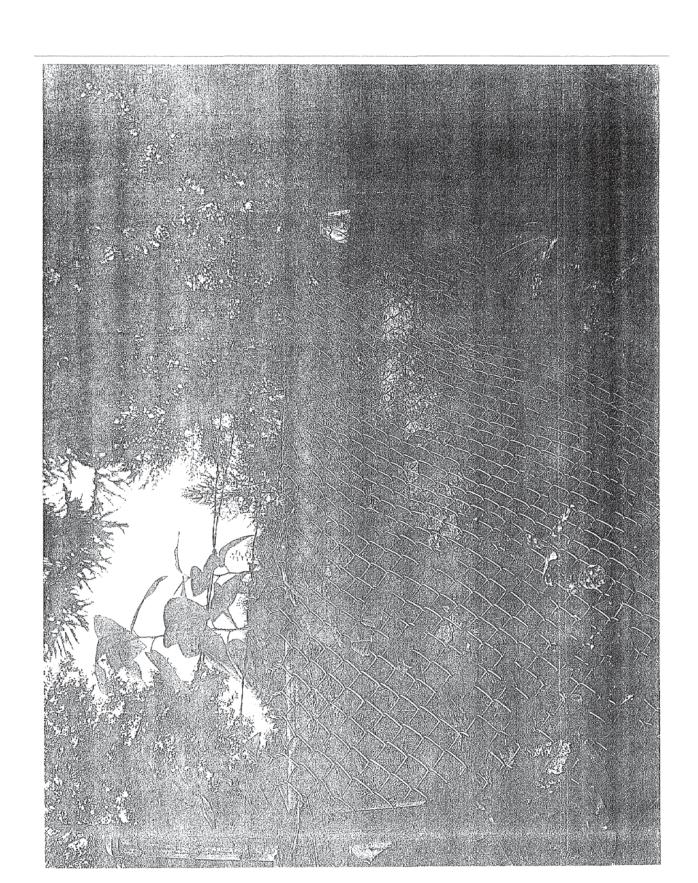
PURPOSE: To enable the development of a fully enclosed, in-vessel transfer and processing facility for the production of Class A Soil Products.

SITE SIZE: 3.2 Acres

DEVELOPER: Pilot Grove Developments 604-617-5306









# JOSEPH W. JACHIMOWIE CONTROLL REGION

Barrister & Solicitor

19500 56th AVENUE

TELEPHONE (604) 539-1916

SURREY, B.C. V3S 6K2

Linda Vanderhoek

September 6, 2011

The District of Maple Ridge 11995 Haney Place Maple Ridge, BC V2X 6A9 SEP 0 7 2011

(1'.CO F)

SOUTH COAST REGION

Attention: Mayor Ernie Daykin and Council

via Y2K courier Northwest waste Systems

Re: A composting operation facility (the "Facility") to be constructed at 23352 McKay Avenue (the "Property") by Pilot Grove Ltd. ("Pilot Grove")

I write on behalf of a person residing in the vicinity of the Property, and a company with business interests throughout the District of Maple Ridge (the "District").

It has recently come to our attention that the Facility is being proposed for construction on the Property. The Facility is clearly not permitted on the Property under the Maple Ridge Zoning Bylaw No. 3510 – 1985 (the "Zoning Bylaw") and the proponent of the Facility has not applied for a rezoning of the Property or for any regional or Provincial approvals required to construct and operate the Facility. If constructed, the Facility will have a devastating effect on air quality and liveability of the nearby area. Consequently, we adamantly oppose the Facility and request that the District not approve or facilitate the establishment of the Facility. Alternatively, we request that the District not make any decision in respect of the Facility without public input and without extensive social and environmental impact studies being undertaken by the proponent.

### DISTRICT SHOULD NOT APPROVE THE FACILITY

Regional and Provincial Approvals Have Not Been Sought

Composting facilities in Metro Vancouver require a license from Metro Vancouver pursuant to the *Greater Vancouver Sewerage and Drainage District Municipal Solid Waste Recyclable Material Regulatory Bylaw, No. 181, 1996* (the "Municipal Waste Regulation"). We understand

3150935.03



that Pilot Grove, the proponent of the Facility, has not submitted a license application to Metro Vancouver.

Further, all composting facilities must be constructed and operated in accordance with the Provincial Organic Matter Recycling Regulation ("OMRR") and the Compost Facility Requirements Guidelines ("OMRR Guidelines"), overseen by the Ministry of Environment. We understand that Pilot Grove has not registered the Facility with the Ministry of Environment and has not submitted any plans and specifications for review by the Ministry of Environment.

The District must ensure that the Facility is not approved or constructed until and unless all the proper provincial and regulatory approvals have been obtained by Pilot Grove and until the Ministry of Environment has had a chance to review and comment on the proposed Facility.

#### The Zoning Bylaw Does Not Permit the Facility

The Zoning Bylaw clearly does not permit a composting operation on the Property. The principal uses on the Property <u>explicitly exclude</u> waste reduction plats, chemical plants and similar operations. These uses are supposed to be conducted in other zoning designations, such as M5 – Heavy Impact Industrial.

As a result, the Property would require a rezoning in this instance. If a rezoning is not required, the District would not be properly applying the Zoning Bylaw, and thus would be denying the public the right to provide input into the use of land that will significantly affect the air quality, the liveability and the commercial vitality of the area.

## IMPACTS OF THE FACILITY

To date, we are not aware of any public or governmental scrutiny into the socio-economic, the environmental or the human and animal health impacts of the proposed Facility through either an environmental assessment process, a notice required under the Municipal Waste Regulation, or through the rezoning process.

Composting facilities of any type have many negative impacts on communities. Among other, these facilities are susceptible to generating offensive odours, bioaerosols and volatile organic compounds, are potentially unsightly and cause disruption to traffic and destruction of road beds.

### Odours

Offensive odours can arise not only from the composting process itself, but also the transportation, receipt, storage and handling of rotting putrescibles which are the necessary feedstock of the Facility. The OMRR and the OMRR Guidelines suggest the minimum distances that a composting facility should be from certain types of facilities and activities, for example: 400 to 1,000 meters from a residential area or tourist area, 100 to 300 meters from a commercial or industrial area and 150 to 300 meters from wetlands, ponds, lakes, streams, etc. There is no indication at this time that the Facility would respect any of the required buffer zones.

Included with this letter is a recent article about a similar composting facility located in Everett, Washington. Please review this article as it demonstrates the injurious effects of allowing a facility which uses the same Gore system to be constructed in Maple Ridge. It should also be noted that the Cedar Grove facility, which is the subject of the article, was situated farther away from its neighbours than the proposed facility in Maple Ridge.

## Volatile Organic Compounds

There have been numerous studies done on the effects of bioaerosols and volatile organic compounds on human and animal health. The development permit application sign indicates that the Facility would be "a fully enclosed in-vessel system for the production of Class A soil products". The plans submitted towards the development permit application do not support this statement. It appears that the Facility is a covered windrow which is likely to result in significant release of bioaerosoles and volatile organic compounds into the air. According to OMRR Guidelines the system that will be used only requires that the facility be covered from October through March. It is going to be exposed to air every time new material is added or removed.

This is not only dangerous for the health of nearby residents, but also inconsistent with the Maple Ridge Official Community Plan Chapter 5 – Natural Features, which aims to address emissions from industrial operations.

### Industrial Design Guidelines

We understand that the Facility does not comply with the Industrial Design Development Permit Guidelines. These guidelines were originally developed as a result of public input. They should not be varied or relaxed without public input in respect of such variation or relaxation. Further, the sign posted by the proponent clearly misrepresents what is planned to be constructed and operated on the Property.

### Flood Plain

The Facility is proposed in a flood plain. <u>Composting facilities should not be located in a flood plain</u>, as such placement is likely to result in irreversible devastation of the nearby stream. The Property has also been flagged by the Ministry of Environment as a contaminated site. The proposed Facility would exacerbate the contamination of the Property and, should flooding occur, could result in destruction of the nearby marine habitat.

### Traffic and Roads

The proposed Facility will cause traffic disruption and safety issues and lead to the destruction of the road pavement.

The District should not make a decision in respect of the Facility without requiring that traffic and road studies be conducted and made available for public review. If those studies then identified any issues (which they are likely to), the District should require that the proponent mitigate the issues prior to any approval by the District, or further construction by the proponent.

We refer you to part 4.6 of the OMRR Guidelines which includes specific considerations for evaluating vehicular access to and from composting facilities.

## Storm Water Management

To date, the District has not required the proponent to prepare and present to the public any studies in respect of the geotechnical safety and the storm water management of the Facility. Due to the proximity of the Facility to the residential and commercial areas, as well as its location in the flood plain, the District should require such studies to be conducted and made available for public review before approval of the Facility is even considered.

We refer you to part 4.3 of the OMRR Guidelines that addresses site drainage issues as they relate to run-on control, runoff control and leachate management. The OMRR Guidelines expressly stipulate the necessity for an impermeable surface.

#### **NEXT STEPS**

We request the District to:

- (a) reject issuance of Development Permit 2011-076-DP due to non-compliance with the development permit guidelines;
- (b) require the proponent of the Facility and the Property Owner apply to rezone the Property to permit construction and operation of the Facility; and
- (c) require the proponent of the Facility to apply for a license from Metro Vancouver and register the proposed Facility with the Ministry of Environment.

We look forward to the District's consideration and response to the above as soon as possible, and in any event, prior to any approval of the Facility being granted by the District.

Yours truly,

## JOSEPH W. JACHIMOWICZ

Copies to:

Ministry of Environment, attention Linda Vanderhoot Metro Vancouver, attention Johanna Hercun Ministry of Transportation Department of Fisheries and Oceans DECEIVED Sep 0 7 2011

SOUTH COAST REGION

Northwest Work System.

Ministry of Environment 200-10470 152<sup>nd</sup> Street Surrey, BC V3R 0Y3 Attn: Linda Vanderhoot

19500 56th Ave Surrey, BC V3S 6K4

Ve & Judy Rudin (CDDC Communications): is Pilot Grove operating
Lindy-Lee 604 (687-0400)
Brandt

- Judy Rudin says she hasn't talked to them for 2 6 months = and isn't aware of any of PG's activities - she said call them directly (- Lindy-Lee)

I phoned Lindy-Lee + left message asking what PG's status is.

Sinda.

Sept 7,2011 - left another mestage a Lindy-Lee - PLS CALL

## Vanderhoek, Linda ENV:EX

From:

Vanderhoek, Linda ENV:EX

Sent:

Tuesday, October 5, 2010 8:04 AM

To:

'iudv

Subject:

RE: Pilot Grove Farms Media Kit

I don't have any details on your proposed operation. Please ensure you are aware of any requirements under provincial legislation of your proposed facility. If you have any questions please feel free to contact me.

From: judy [mailto:judy@cddcstrategic.com] Sent: Tuesday, October 5, 2010 1:09 AM

To: Vanderhoek, Linda ENV:EX

Subject: Re: Pilot Grove Farms Media Kit

Importance: High

Hi Linda,

Sorry, this is several weeks old news, but I did misplace your e-mail.

As you may know, the ALC ruled against my client's application for an exemption to the 'non-farm use' composting regulation.

They did not list many reasons in the letter to the client, and in fact, told my clients that they thought the overall the concept was "sound". I anticipate that if it is not already posted on the ALC website, that their reasons for ruling will soon be up.

FYI, Pilot Grove Farm principals are studying the ruling and will consider what, if any, further and future options will be open to them, after they have reviewed all the material.

Regards, Judy Rudin

Judy Rudin
President, CDDC Strategic Communications

PO Box 74521 2768 West Broadway Vancouver, BC Canada V6K 2G4

tel/cell: 604-219-5168

e-mail: judy@cddcstrategic.com

---- Original Message ----

From: Vanderhoek, Linda ENV:EX

To: judy

Sent: Thursday, August 26, 2010 8:38 AM Subject: RE: Pilot Grove Farms Media Kit Alright. Please contact me when you hear from ALC. From: judy [mailto:judy@cddcstrategic.com] Sent: Wednesday, August 25, 2010 10:54 PM To: Vanderhoek, Linda ENV:EX Subject: Re: Pilot Grove Farms Media Kit Hi Linda, s.22 Sorry to not have gotten back to you sooner; At this point, the matter of the Pilot Grove Farms project is before the ALC and we anticipate a decision very soon, possibly at the end of next week. s.22 Can we talk again once we hear from the ALC? Cheers, Judy Judy Rudin President, CDDC Strategic Communications PO Box 74521 2768 West Broadway Vancouver, BC Canada V6K 2G4 tel/cell: 604-219-5168 e-mail: judy@cddcstrategic.com ---- Original Message -----From: Vanderhoek, Linda ENV:EX To: Judy@cddcstrategic.com Cc: Sundher, Avtar S ENV:EX Sent: Tuesday, August 17, 2010 1:59 PM Subject: Pilot Grove Farms Media Kit Hello Ms. Rudin: I am an Environmental Protection Officer with the Ministry of Environment and I administer authorizations for operations that fall under the jurisdiction of the Organic Matter Recycling Regulation. I was forwarded an email from you (August 3, 2010 3:07 pm) regarding the subject line. I would like to learn more about your proposed operation in south Surrey and would like to visit the site. Please contact me at your earliest convenience to set up a meeting to discuss any requirements for your plans under provincial legislation.

Regards

\_inda Vanderhoek

10470 - 152 Street

Surrey BC

V3R 0Y3

604-582-5307

No virus found in this incoming message.

Checked by AVG - <u>www.avg.com</u>
Version: 8.5.441 / Virus Database: 271.1.1/3077 - Release Date: 08/17/10 06:35:00

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Version: 8.5.441 / Virus Database: 271.1.1/3095 - Release Date: 08/26/10 06:34:00

## Vanderhoek, Linda ENV:EX

From:

Sent:

Payette, Krista M ENV:EX Wednesday, April 7, 2010 5:00 PM

To:

Rushworth, George N ENV:EX; Vanderhoek, Linda ENV:EX

Subject:

Not Responsive

Importance:

High

George and Linda,

Sending this on to you for your consideration.

Not Responsive

The emails further down in the chain are about a proposed composting facility at Not Responsive the corner of 176 St. and 12 Ave. by Pilot Grove Farms. The proposed composting facility is near Sam Hill Creek in the Little Campbell River watershed.

Krista

Not Responsive

From: Zimmerman, Kathleen AL:EX [mailto:Kathleen.Zimmerman@gov.bc.ca]

Sent: April 7, 2010 10:11 AM To: Margaret Cuthbert; Cc s.22 Lisa Dreves

Subject: RE: Q and A from composting facility open house

Margaret - I've put some additional comments in red font below each of Lisa's bullets, based primarily on the information that the project proponents provided in the January and April Agricultural Advisory Committee agenda packages, as well as my personal knowledge.

1

Thanks,

Kathleen

From: Margaret Cuthbert [mailto:blueheron@birdsonthebay.ca]

Sent: Tuesday, April 6, 2010 6:00 PM To: Zimmerman, Kathleen AL:EX Cc: s.22 Lisa Dreves

Subject: FW: Q and A from composting facility open house

Hi Kathleen, Hope all is well for you. Please see the email below re Lisa's queries to Pilot Farms and their replies, your comments will be appreciated, thanks, warm regards, Marg

Margaret Cuthbert President Friends of Semiahmoo Bay Society email: blueheron@birdsonthebay.ca tel: 604-536-2636 fax: 604-542-9882 Visit www.birdsonthebay.ca

From: Lisa Dreves [mailto:ldreves@tol.ca]

Sent: April 6, 2010 3:44 PM

s.22

s.22 Emily Robertson (emily@robertsonenvironmental.com);

John Elliott (john.elliott@ec.gc.ca); s.22

.. Margaret Cuthbert

s.22 Lisa Dreves; s.22 [blueheron@birdsonthebay.ca]; Marko Kostamo (kostamo@arocha.org);

Cc: Andrea Lawseth

Subject: Q and A from composting facility open house

Hi Little Campbell Watershed Society member!

JAKE Borgen 604-657-0400
went to
locate on any land their
locate of the locate of their
locate of their lo I had an opportunity to attend the open house for the proposed composting facility at the corner of 176 St. and 12 Ave. by Pilot Grove Farms. Below are the answers of a few questions I was able to ask.

Number of truck loads a day: 7-10 (they said in and out but flaked on the amount of traffic in and out for the commercial side of things)

According to the proponents, the facility would be accepting 50,000 tonnes of raw materials and producing 20,000 tonnes of finished compost. If there is a total of 70,000 tonnes of material moved in and out in a year, and a dump truck carries about 13 tonnes (Lisa's next bullet), and if trucks move in and out 365 days a year, that is about 15 trucks a day.

(174 of Surrey 2 Robert Costonzo

Tipping fees: most green waste would have a tipping fee of \$55-65/Tonne (a dump truck carries about 13 tonnes), they noted horse manure would be accepted but at a lower tipping fee, invasive species would also be accepted

The proponents didn't discuss how much they would charge for tipping fees, but agreed it was a crucial part of their business plan. It's unclear why horse owners would pay this much, when, for example, LEPS has a program that helps them find an end user for their manure for low to no cost.

 How much land would need to be removed from the ALR if legislation isn't changed to allow for commercial composting facilities: 25%

I'm not sure I understand this point. With the current ALR legislation, compost facilities are an outright permitted use in the ALR if at least 50% of the waste used is agricultural waste, and at least 50% of the finished compost is used on farm. Since that is not the case with this application, they have to apply for a non-farm use permit in the ALR. Do they mean that if this non-farm use isn't approved that they will then apply for an exclusion application to take the land out the ALR? Or do they mean that the compost facility footprint takes up 25% of this property? According to the information provided in the January AAC package, the compost facility took up 50% of the total area of 25 acres. The April AAC package didn't give a site footprint analysis, but the area delineated as the compost facility looks slightly smaller than before. What is not clear is whether the site footprint would expand in the future, given that the urban organic waste stream can only increase as the population increases. The non-farm use application from the ALC (and the related CD zoning from the City) would not require them to keep the site footprint to its currently proposed size. By designating the whole 25 acres (17960 and 17720 12 Avenue) as a non-farm use, that takes the entire area out of farm production.

Why is this happening on ALR land when it should be in an industrial park: industrial land is too
expensive and the educational opportunities awarded by keeping the facility in the ALR would not be
attained

In Monday's Vancouver Sun there was an article on Page A3 ("Proposed plant would turn food scraps into fuel") that stated that Surrey and Metro Vancouver are working on a new composting facility for food waste and yard waste that will be located in the Port Kells industrial area, near 98th Avenue and 192 Street. The article didn't state the volumes of raw materials this new plant could accommodate but comments from Councillor Marvin Hunt implied that it would be composting urban organic waste from Surrey alone. The facility would turn the urban wastes into a vehicle grade biofuel to be used to power garbage trucks. If this plant can be successfully accommodated on industrial land, it's not clear why the proposed facility on 176 Street is still needed. See the point on the "educational facilities" below.

- Setback from Sam Hill Creek: there will be a 30m setback from the top of bank of Sam Hill Creek That's consistent with the April AAC package material.
- Other dedicated purposes to land beyond composting facility: there is an educational component to the site through a partnership with the Earthwise Society (www.earthwisesociety.bc.ca), there are demonstration gardens proposed, community gardens and study fields provided for research Based on the site plan the applicant provided at the April AAC meeting, there are approximately 20,000 m2 (or about 5 acres) of proposed garden area. That's a lot of community garden plots! It's a philosophical argument as to where the best location is for community gardens. My personal opinion is that community gardens should be located in urban areas, close to the people who need them especially those who don't own vehicles. The whole property would lose its farm status with BC Assessment, as community gardens do not meet the farm income threshold. The Earthwise Society's current site of garden plots and a demonstration farm on the Southlands Property in Delta has just lost its farm status with BC Assessment. As approximately 20 acres of forage grass fields (its current use), this property is of definite value to the agricultural community, both the livestock producers who want to re-distribute their manure, and the livestock producers who depend on forage hay or grass silage for feed for their animals.
- Prime concern that I overheard from the other people that were at the open house was the expected smell from the composting

The Organic matter Recycling Regulation requires that this proposed facility have an odour management plan. If the neighbours felt there was an unacceptable level of odours, Metro Vancouver has the jurisdiction for the air quality issues in the region, and they have a phone number to call to report odours.

Why does Surrey council seem bent on pushing forward a commercial composting facility: if Surrey goes
online for organic waste recycling (kitchen scraps beyond the usual backyard composter) they would
benefit from a facility in their municipality, less trucking of waste and they keep the compost/commodity
in their municipality

The commercial composting facility proposed for the Port Kells area would provide all of the benefits mentioned above, and more (if biofuel is produced). There is not a deficit of organic waste in the ALR — in fact it's the opposite. There is lots of poultry manure and horse manure, and both those sectors have programs to help their members deliver manure to crop farmers who need it.

When is this expected to happen: they are hoping this year

Lisa Dreves . LEPS Stewardship Coordinator 604-532-3517

## www.leps.bc.ca

## **Upcoming Events:**

- Watershed Exchange: Saturday April 10, McLeod Athletic Park Field House, 10-3pm, for details contact Lisa at <a href="mailto:lct.ca">ldreves@tol.ca</a> or 604-532-3517
- Wildlife Week Celebration: Saturday April 10, 10-2pm, Brookswood Community Park, for details contact kgreenwood@tol.ca
- Fish Release: Saturday April 17, Derby Hills Park, for details contact Lisa
- Community Clean-ups: Saturday April 24, Walnut Grove and Aldergrove, for details contact Lisa
- Arbour Day Celebration: Sunday April 25, 1-3pm, Walnut Grove Community Park

Please visit www.leps.bc.ca/events for more details.

"Unless someone like you cares a whole awful lot, nothing is going to get better. It's not!" - The Once-ler, from Dr. Seuss' "The Lorax"

## Vanderhoek, Linda ENV:EX

From:

Sundher, Avtar S ENV:EX

Sent:

Tuesday, August 3, 2010 3:05 PM

To:

Braman, Jonn ENV:EX

Cc:

Smith, Ashley N ENV:EX; Vanderhoek, Linda ENV:EX

Subject:

FW: Pilot Grove Farms Media Kit

Attachments:

PGF - Fact Sheet\_june3-10.doc; PGF - Benefits\_August 2.doc

Importance:

High

Hi Jonn,

FYI

As per our discussion regarding my conversation with Cindy Burton earlier today, the attached documents were forwarded on the proposed composting operation in south Surrey (176 Street and 12<sup>th</sup> Ave)—Pilot Grove Farms.

Avtar

From: judy [mailto:judy@cddcstrategic.com] Sent: Tuesday, August 3, 2010 3:07 PM

To: Sundher, Avtar S ENV:EX

Subject: Pilot Grove Farms Media Kit

Importance: High

FYI.

Regards,

Judy Rudin

Judy Rudin President, CDDC Strategic Communications

PO Box 74521 2768 West Broadway Vancouver, BC Canada V6K 2G4

tel/cell: 604-219-5168

e-mail: judy@cddcstrategic.com e-mail: judy@cddcstrategic.com

## **FACT SHEET** Pilot Grove Farms

- Pilot Grove Farms is a full-cycle farm and small-scale composting and soil amendment facility proposed for 17690 and 17720 12 Avenue, Surrey, BC.
- Pilot Grove Farms' concept encompasses a three-part cycle of sustainable agriculture that includes: 1) growing pesticide-free plants and vegetables for the local community; 2) recycling local agricultural materials, green trimmings and kitchen scraps into nutrient-rich Class A Compost; 3) producing high-grade organic soil-amending compost products that offer disease-resistance, are pesticidefree, and safe for children, pets and wildlife.
- · Pilot Grove Farms will farm its own healthy field crops.
- Pilot Grove farms will offer youth and adult educational programs teaching about organic gardening, composting, water conservation and backyard habitats.
- · The Compost Council of Canada points to organics buried in landfills as a key contributor to greenhouse gases.
- Pilot Grove Farms will be able to produce up to 20,000 tonnes of Class A Compost per year, for use in the community and surrounding area.
- · Pilot Groves Farms will provide an environmentally sustainable, recycling solution that is locally staffed, fullymonitored and completely contained Indoors.
- The bio-filtered fully-enclosed system eliminates odour, pests, run-off and leachate.
- The indoor and enclosed composting facility uses modern methane-free composting technology that heats materials to high temperatures, killing bacteria, pathogens and weeds.
- From the recycled organic materials, Pilot Grove Farms will produce nutrient-rich soil-amending compost products ideal for local garden, field and greenhouse crops.
- Pilot Grove Farms is seeking an exemption from the ALC in order to be able to remove or sell more than 50% of the finished compost it produces on site.
- Pilot Grove Farms is seeking approval from the City of Surrey for a zoning amendment from A-I to CD, which still keeps the property within the Agricultural Land Reserve.
- Pilot Grove Farms conforms to the City of Surrey's Sustainability Charter by providing local environmental solutions, local jobs, and local social and educational programs.
- Pilot Grove Farms will help Metro Vancouver meet its Zero Waste Challenge by diverting organics from the landfills to composting.
- Pilot Grove's Farms full life-cycle operation aligns with the Provincial Farm Practices Act which directs that the urban and farm environments work together for the benefit of all.

MOE-2011-00172

# Pilot Grove Farms - Healthy Soils, Healthy Communities

For more information, please contact:

Judy Rudin

s.22

### Pilot Grove Farms Benefits

## Benefits to the City of Surrey:

- · Offers local solutions for local organics diversion.
- Considers community needs as part of a healthy organics management strategy.
- Uses a BC designer of modern in-vessel aerated recycling technology.
- · Fully-indoor process 'raises the bar' for local composting practices.
- · Creates local jobs in the green technology and recycling sectors.
- Models sustainable agricultural development on the Agricultural Land Reserve.
- · Demonstrates the viability of sustainable agribusiness.
- Supports Surrey's Sustainability Charter goal to become "a 'green' business leader."
- Supports the City of Surrey's Sustainability Charter as follows: "Surrey will also seek to
  cut down on waste it generates by making sure most of its resources will be produced
  locally, recycled or reused."

## Benefits to the Community:

- · Contributes to the preservation of local soil quality.
- Enhances local farm businesses by providing natural fertilizers and soil conditioners.
- Reduces the dependence on chemical fertilizers and pesticides.
- · Provides alternatives that support a ban on cosmetic use of pesticides and fertilizers.
- Recycles locally, instead of using fuel to transport it out of the community.
- Provides a source of healthy seasonal produce, grown locally.
- Produces organic vegetables and plants, without chemical fertilizers or pesticides.
- Demonstrates healthy and sustainable food production for the local community.
- · Promotes sustainable stewardship of land within the Agriculture Land Reserve.
- · Creates local jobs and volunteer opportunities in the agricultural sector.
- Educates local school children, youth and adults about sustainability and preservation.
- Supports the City of Surrey Sustainability Charter, which advocates "making fresh local produce available."

## Benefits of Compost:

- · Improves soil structure and overall quality
- · Aids in water conservation
- · Supplies slow release nutrients to plants
- · Holds moisture and reduces erosion
- Immobilizes and degrades pollutants
- Improves soil's filtration (Remediation)
- · Creates cleaner, higher nutrient foods
- · Is an economical solution for landscaping
- Can replace the use of toxic fertilizers

#### Pilot Grove Compost Facility Meets and Exceeds BC Regulations

John Paul, Ph.D. P.Ag. Qualified Professional

The Pilot Grove Compost Facility meets and exceeds BC Regulations for composting, and also provides a tangible action plan for the City of Surrey to ensure that this facility is properly maintained and operated.

Composting is regulated by the Organic Matter Recycling Regulation (B.C. Reg. 18/2002) which was developed by the BC Ministry of Environment. This regulation exist to ensure that composting operations do not negatively impact the environment or the community.

"This regulation governs the production, quality and land application of certain types of organic matter. The intent was to provide guidance for local governments and compost producers, to protect soil quality and drinking water sources, and provide a beneficial use for organic material. The regulation governs the construction and operation of composting facilities, and the production, distribution, storage, sale and use or land application of compost." www.....

The Organic Matter Recycling Regulation (OMRR) is not a permit, it is a regulation that puts 100% of the responsibility for environmental and community protection on the owner/operator of the compost facility. The regulation is administered by the BC Ministry of Environment. Although there are regular reporting requirements, the reports are kept at the compost facility and are only reviewed upon request. Given the current staffing of the Ministry of Environment, it is difficult for the Ministry of Environment to review all compost facilities on a regular basis.

In order to ensure that Pilot Grove Farms complies with the Organic Matter Recycling Regulation, we recommend that the City of Surrey hire a qualified professional (as defined within the Organic Matter Recycling Regulation) on an annual basis to review the operation to ensure compliance with the regulation. Pilot Grove Farms will make up to \$5000 available annually for the City of Surrey to have a qualified professional review the activities, and provide a compliance report. Renewal of the business license for the composting facility depends on a positive compliance report.

There are many aspects to the Organic Matter Recycling Regulation that relate to the design, operation, and the product produced at the compost facility. We will highlight the key components of the Organic Matter Recycling Regulation and relate it to the design and operation of the Pilot Grove Farms composting facility.

# Part 2. Application and Exemption General application

- 2 (3) This regulation applies in British Columbia to
  - (a) the construction and operation of composting facilities, and
  - (b) the production, distribution, storage, sale and use or land application of biosolids and compost.

The Pilot Grove Compost Facility will be composting more than yard waste or untreated and unprocessed wood residuals, therefore the process and quality criteria include the pathogen reduction limits, sampling and analysis, and record keeping. These requirements will be discussed further in this document.

### Division 5. Class A Compost

Process and quality criteria

- (1) In this section, untreated and unprocessed wood residuals means clean wood from lumber manufacturing, and includes shavings, sawdust, chips, hog fuel, ground mill ends and land clearing waste which has been ground with the majority of the greenery removed and no soil present.
  - (2) Compost that is produced solely from yard waste or untreated and unprocessed wood residuals, or from both, and that meets the requirements of all of the following, is Class A compost:
    - (a) Schedule 1, Pathogen Reduction Processes;
    - (b) Schedule 2, Vector Attraction Reduction;
    - (c) Column 1 of Schedule 4, Quality Criteria.
  - (3) Compost that is not solely produced from yard waste or from untreated and unprocessed wood residuals and that meets the requirements of all of the following is Class A compost:
    - (a) the requirements of subsection (2) (a) to (c);
    - (b) Schedule 3, Pathogen Reduction Limits; (c) Schedule 5, Sampling and Analyses — Protocols and Frequency;
    - (d) Schedule 6, Record-keeping.
  - (4) Class A compost must be derived only from organic matter.

Pilot Grove Farms requires a qualified professional to provide the design and plans for this compost facility. Dr. John Paul is the qualified professional for the Pilot Grove Facility. Dr. Paul has considerable experience in providing guidance for composting facilities meeting the Organic Matter Recycling Regulation. Dr. Paul, together with Dr. Geesing has provided 6 compost facility operator training courses in British Columbia over the last three years, and has written a Compost Facility Operator Manual, which is distributed internationally through the Biocycle Magazine. This compost facility operator training course was designed to meet the personnel training requirements required by the Organic Matter Recycling Regulation for compost facility operators.

All aspects of the compost facility are to be prepared and reviewed by a qualified professional.

"qualified professional" means a person who

- (a) is registered in British Columbia with his or her appropriate professional association, acts under that
  professional association's code of ethics, and is subject to disciplinary action by that professional
  association, and
- (b) through suitable education, experience, accreditation and knowledge may be reasonably relied on to provide advice within his or her area of expertise as it relates to this regulation;

# Division 2 — Construction and Operation of Composting Facilities Plans and specifications

24 (1) A discharger must have a qualified professional prepare plans and specifications for

(a) the construction and operation of a new composting facility, or

- (b) any modification of an existing composting facility that results in an increase in the annual production capacity of more than 10 percent or more than 20 000 cubic metres.
- (2) The plans and specifications required by subsection (1) must include, but are not limited to, all of the following:

(a) all works to be constructed on the site;

(b) design capacity of the composting facility;

- (c) a leachate management plan which stipulates how leachate generated from any and all stages of the composting process will be minimized, managed, treated or disposed;
- (d) an odour management plan which stipulates how air contaminants from the composting facility will be discharged in a manner that does not cause pollution;

(e) an operating and closure plan for the composting facility.

(3) The discharger must ensure that

(a) the qualified professional

- (i) affixes his or her professional seal or signature, or both, to the plans and specifications for the composting facility, and
- (ii) makes a signed statement certifying that the composting facility has been constructed in accordance with the plans and specifications,
- (b) a copy of the plans and specifications for the composting facility are kept at the composting facility at all times, and are available for inspection at any time,

(c) the plans and specifications are submitted to a director upon request, and

- (d) the composting facility is operated in compliance with the plans and specifications required by subsection (1).
- (4) The director may request additional information with respect to the plans and specifications that he or she considers necessary for the protection of human health and the environment, and may specify particular concerns or questions that the plans and specifications must address.

Pilot Grove Farms Compost Facility is designed to produce up to 20,000 tonnes of compost annually, and consists of the following components:

- 70 ft wide by 100 ft long enclosed receiving and mixing building. All potentially odorous waste is received inside this enclosed building and processed within 24 hours. It has the following key features:
  - a) Impermeable floor of asphalt or concrete to eliminate leaching potential
  - b) Sloped receiving area to contain any excess liquids that may be received
  - c) Tipping area design that prevents contamination of the truck tires
  - d) Concrete walls to contain the material and prevent damage of the building walls from loader activity
  - e) Corrosion resistant truss design (hot dipped galvanized trusses with tarpaulin cover)
  - f) High speed doors to minimize air escape
  - g) Negatively ventilated and exhausted through a biofilter
- a 180 ft wide by 300 ft long enclosed and active composting building where the organic material will be composted for six weeks, using a combination of mixing and

aeration in a flow through turned and aerated windrow composting process in windrows that are 26 ft wide and up to 10 ft high. This process that will create the highest quality compost in the shortest period of time. This building has the following key features:

- a) Impermeable floor construction consisting of concrete and asphalt
- b) Contoured floor designed to collect and manage potential leachate
- c) Two aeration tubes underneath each of the six aerated windrow to provide consistent aeration to minimize odor production by encouraging aerobic decomposition rather than anaerobic decomposition
- d) Aeration blowers controlled by timers and temperature feedback to provide the consistent aeration required, and to prevent excess temperature accumulation
- Corrosion resistant building construction consisting of hot dipped galvanized trusses with tarpaulin covers
- f) Entire building negatively ventilated and exhausted through a biofilter
- g) A compost turner that turns the 26 ft wide and 10 ft high windrow and moves it back 25 to 30 ft with each pass, with adjustment to maintain windrow size throughout the six week composting process.
- 3) a prescreening process after the active composting process to remove plastic contamination if it is present. If plastic contamination is present, this will consist of a star screening system equipped with vacuum plastic removal features.
- 4) a curing and storage area consisting of up to six 50 ft wide windrows that are covered with Compostex, a breathable fabric that repels precipitation and prevents contamination by weed seeds and other potential contamination.
- 5) a biofilter system for the receiving building, and the active composting building that will eliminate any potential odor produced from the receiving and composting process. The biofilter will have the following features:
  - a) have an impervious floor to collect any excess condensate
  - b) have a grid of plastic pipe to distribute the exhaust air evenly throughout the biofilter bed. These pipes will be in a bed of gravel, covered with a porous polyethylene material
  - have a blend of woodchips and finished compost, and will ensure a residence time of 45 seconds in the biofilter to ensure enough time to ensure odor compound removal
  - d) have a sprinkler system to reduce drying during the summer
  - e) a condensate collection system to manage any excess moisture in the biofilter
- 6) a screening system to prepare the final compost for market
- 7) a scale system to record material quantities entering facility

8) a weather station to record weather conditions at the site

In order to increase the operational efficiency of the Pilot Grove Compost Facility, and to comply with leachate management requirements, all activities will occur on an impervious surface consisting of concrete or asphalt. The receiving, mixing and active composting process will occur inside a building structure, and the curing and stored windrows will be covered with a water resistant cover. Floors will be designed to collect potential leachate inside or underneath the composting material, and to reduce the risk of water entering the building or compost piles.

There will be no precipitation or run-on that will enter the receiving or active composting building. The curing windrows will be designed to allow precipitation to drain freely without going into the compost under the covers.

# Division 3 — Leachate Management for Composting Facilities Composting facility requirements

- 26 (1) In this section, curing area means an area where organic matter which has undergone the rapid initial stage of composting is further matured into a humus-like material.
  - (2) The receiving, storage, processing and curing areas of a composting facility must comply with all of the following:
    - (a) be located on asphalt, concrete or another similar impermeable surface that is capable of withstanding wear and tear from normal operations and that will prevent the release of leachate into the environment;
    - (b) have a roof or cover, or a prepared surface, designed to prevent
      - (i) the surface collection of water around the base of organic matter and compost, and
    - (ii) run-off water from entering the receiving, storage, processing and curing areas;
    - (c) have a leachate collection system designed, constructed, maintained and operated to reuse leachate, or to remove leachate, from the receiving, storage, processing and curing areas.
  - (3) Leachate that is not collected and reused in the composting process must not be discharged into the environment unless authorized under the Act.
  - (4) Despite subsections (2) and (3), an impermeable surface, roof, cover, prepared surface or leachate collection system is not necessary if a qualified professional can demonstrate through an environmental impact assessment that the environment will be protected and appropriate water quality criteria satisfied through the use of alternative leachate management processes.
  - (5) A director may request additional information with respect to the environmental impact assessment that he or she considers necessary for the protection of human health and the environment, and may specify particular concerns, questions, standards or monitoring that the assessment must address.

All water on the site will directed through an active wetland that will allow any potential excess nutrients and BOD to be eliminated. This will provide a storm water management system to reduce the amount of water entering waterways at any one time, and to ensure that any potential nutrients and BOD are removed through the production of actively growing plants in the wetland system.

The wetland and stormwater management system will have an impermeable membrane.

The capacity of the Pilot Grove Composting Facility is 20,000 tonnes of compost, therefore there will never be more than this amount of product at this facility at any one time, as outlined in the regulation. This regulation ensures that this facility will actually be an active compost facility, rather than an organic waste "dump"

## Division 4 — Capacity of Composting Facilities

Capacity for organic matter

27 The amount of organic matter in a composting facility must not at any time exceed the total design capacity of the facility.

Capacity for compost

28 At least half of the compost stored at a composting facility must be removed annually from the facility beginning in the third year after facility start-up.

Capacity for residuals

29 (1) Residuals from the composting process must

(a) be stored so as to prevent vector attraction, and

(b) be disposed of on a regular basis in accordance with the Act.

(2) Residuals that are stored at a composting facility must not at any time exceed 15 cubic metres in total.

## Closure of a composting facility

30 Before the closure of a composting facility,

(a) all compost must be applied or distributed in accordance with this regulation, and

(b) all unprocessed organic matter must be removed from the facility and dealt with in accordance with the Act.

Residuals, as outlined in point 29 of Division 4, is non organic waste. This can include contamination by plastic or other waste that is disposed of at a landfill.

A closure plan is also required for this facility, to ensure compliance with point 30 in Division 4.

A pathogen reduction process is required to ensure that any potential pathogenic organisms are killed during the composting process, and that the resulting compost is indeed safe.

#### Schedule 1 Pathogen Reduction Processes

4 One of the following pathogen reduction processes specified in paragraphs (a) to (c) is required to produce Class A compost:

(a) the windrow composting method whereby organic matter is processed in a windrow involving periodic aeration and mixing of the windrow, with a temperature of not less than 55° Celsius maintained for at least 15 days and not fewer than 5 turnings of the windrow made during the high temperature period to promote uniform exposure of the compost to thermophilic temperatures;

(b) the static aerated pile composting method consisting of a compost process involving mechanical aeration of the compost pile, with the compost pile insulated and a temperature of not less than 55° Celsius maintained throughout the compost pile for at least 3 consecutive days;

(c) the enclosed vessel method consisting of a confined compost process involving mechanical aeration of compost under controlled environmental conditions, with a temperature of not less than 55° Celsius maintained for at least 3 days during the composting process.

5 To produce Class A compost from yard waste alone, a turning process can be used whereby the pile is turned on a periodic basis to aerate the yard waste, maintain optimum temperatures, and reduce pathogens.

6 The director may provide approval for an alternative process on a specific basis if the director is satisfied that the alternative process in that case will provide a Class A compost equivalent in quality as that produced by the process described by section 4 (a) to (c). The potential pathogen reduction process exceeds that outlined in the regulation. The active composting process will be a minimum of four weeks in the turned and aerated windrow system. Although this system is also defined as an in-vessel system, and therefore only requires 3 days at 55 C, we recognize that this is not adequate for potential pathogen removal. This is because we do not account for the material on the floor, or at the edges or top of the windrows that may not reach 55 C. Many composting technologies do not take this into account.

Pilot Grove Farms will be ensuring that the goal of the pathogen reduction process is met, which is ensuring that all of the composting material reaches the temperatures required for potential pathogen kill.

In addition to the potential pathogen reduction process required, there is also a vector attraction reduction process. This process is to ensure that the compost does not further attract vectors, such as birds, insects or other animals that may be attracted by partially decomposed material.

## Schedule 2 Vector Attraction Reduction

- 2 One of the following vector attraction reduction processes are required for Class A compost:
  - (a) Class A compost must be treated in an aerobic process for 14 days or longer. During that time, the temperature of the compost must be higher than 40° Celsius and the average temperature of the compost must be higher than 45° Celsius. After the vector attraction reduction process is completed the carbon to nitrogen ratio of the compost must be greater than or equal to 15:1 and less than or equal to 35:1;
  - (b) Class A compost must be retained in curing piles for at least 21 days. After the 21 day period, the carbon to nitrogen ratio of the Class A compost must be greater than or equal to 15:1 and less than or equal to 35:1 and must not re-heat, upon standing, under the following conditions:
    - (i) compost is aerated and formed into a pile no smaller than 3 metres in diameter and 2 metres high with compost having a moisture content between 35 percent and 60 percent;
    - (ii) the pile must be formed in a location where the ambient temperature remains in the range of 5° to 30° Celsius;
    - (iii) 3 days after the pile has been formed, the temperature of the compost is measured at a depth of 60 cm into the pile from the outside surface of the pile;
    - (iv) the compost must not re-heat upon standing to greater than 20° Celsius above ambient temperature.

The active composting process is a six week process, which ensures that both the potential pathogen reduction process and the vector attraction reduction process are achieved inside one building. In addition to that, the compost will be cured after the six week active composting process for a minimum of 30 days, and more likely a minimum of 90 days to ensure a quality compost product.

We will be using the Solvita maturity test for determining compost stability and maturity. Although this test is not recognized as a maturity test in the BC Regulations, it is used worldwide and is a very effective and simple tool to measure maturity.

Schedule 3 of the OMRR regulation sets the parameters for fecal coliform levels in the compost to ensure that the pathogen reduction process has been successful. Pilot Grove Farms will be following this protocol as outlined in the regulation, but will also be measuring Salmonella sp. As required for compost material by the Canadian Food Inspection Agency.

Schedule 3 Pathogen Reduction Limits

- 1 Fecal coliform levels must be determined to be < 1 000 MPN per gram of total solids (dry weight basis) for
  - (a) Class A biosolids, and
  - (b) Class A compost (not produced from yard waste alone).
- 2 Determination of fecal coliform levels is not required for Class A compost produced from yard waste alone.
- 3 For Class A biosolids or Class A compost (not produced from yard waste alone), 7 representative samples must be taken
  - (a) from every 1 000 tonnes dry weight, or
  - (b) once per year,
  - whichever occurs first.
- 4 The required fecal coliform levels must be met in all 7 representative samples.
- 5 Fecal coliform levels for Class A biosolids and Class A compost (not produced from yard waste alone) must be met either before, or at the same time as, the vector attraction reduction requirements are met.

## Schedule 4 Quality Criteria

1 Substance concentrations, expressed in µg/g dry weight must not exceed the limits set out in the following table:

	Column 1
Substance	Class A compost
Arsenic	13
Cadmium	3
Chromium	100
Cobalt	34
Copper	400
Lead	150
Mercury	2
Molybdenum	5
Nickel	62
Selenium	2
Zinc	500

- 2 Retail-grade organic matter and managed organic matter must have
  - (a) foreign matter content less than or equal to 1 percent dry weight, and
  - (b) no sharp foreign matter, such as glass or metal shards, in a size and shape that can cause injury

Schedule 4 of the OMRR sets the quality criteria for the finished compost. The goal of this quality criteria is only to ensure that the compost will be safe, but does not outline the nutritional and microbial value of the compost.

In addition to these mandatory quality requirements for OMRR, Pilot Grove Farms will have the compost tested for total and available nutrients to provide more beneficial information on how this compost can be used. Some of the composts may also be tested for microbial activity such as total and active bacteria and fungi. This is helpful to further understand the quality of the compost product.

The protocols and frequency of sampling is outlined in Schedule 5. This sampling protocol exists to ensure that any compost produced is safe and will not cause harm to persons or the environment.

## Schedule 5 Sampling and Analyses - Protocols and Frequency

1 All required analyses for

(a) Class A biosolids and Class B biosolids,

(b) biosolids growing medium,

(c) Class A compost that is not solely produced from yard waste, and

(d) Class B compost,

must be carried out at intervals of

(e) at least every 1 000 tonnes dry weight of organic matter, or

(f) once per year,

whichever occurs first.

2 A director may increase the frequency of sampling required based on provincial organic matter sampling guidelines.

3 Analyses must be in accordance with the procedures described in "British Columbia Laboratory Methods Manual: 2003 — for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples", (2003, Ministry of Water, Land and Air Protection), or by suitable alternate procedures authorized by a director.

Schedule 6 of the OMRR sets out the record keeping requirements of the regulation. Pilot Grove Farms will be measuring and recording temperatures during the six week active composting phase on an hourly basis. This period will cover the pathogen reduction requirements and the vector attraction reduction requirements. All of this information will be available as per the OMRR requirements.

## Schedule 6 Record-keeping

1 Temperatures and retention times must be monitored and recorded each working day during the production of

(b) Class A compost (not produced from yard waste alone) and Class B compost.

- 2 Temperature and retention time records must be kept at the facility for at least 36 months and must be made available for inspection by an officer, or sent to a director or an inspector or officer authorized under the Agricultural Land Reserve Act, the Soil Conservation Act or the Forest Land Reserve Act, upon request.
- 3 The results of analysis required by this regulation must be kept at the facility for at least 36 months after the production of

(c) Class A compost (not solely produced from yard waste), and

(d) Class B compost.

4 The results of analysis must be made available for inspection by an officer or sent to a director or an inspector or officer authorized under the Agricultural Land Reserve Act, the Soil Conservation Act or the Forest Land Reserve Act, upon request. All records of the weights and types of incoming material will also be kept.

In addition to the accumulation and storage of records, Pilot Grove Farms welcomes an independent qualified professional, hired by the City of Surrey, and paid for by Pilot Grove Farms, to review the records and the operation annually to ensure compliance with the Organic Matter Recycling Regulation.

## Vanderhoek, Linda ENV:EX

From: Sent: Transform [transform@telus.net] Thursday, April 22, 2010 10:21 AM

To:

Vanderhoek, Linda ENV:EX

Cc: Subject: Richard Shatto composting facilities

Hi Linda,

I hope that you are well.

Just wanted to keep you up to date on what we are doing around the valley/province.

We are working on two large composting applications - one 40,000 tonne per year facility in Surrey, and one in Abbotsford. They are in the ALC zoning phase right now, so not yet at a point where we need to register them under OMRR.

TRANSFORM John Tout

Pilot Grove (Jake Geegen)

What we had suggested to both the City of Abbotsford and the City of Surrey, was to have an annual independent review of our facilities by another qualified professional to ensure that they meet the OMRR regulation.

The reason for this is that in our mind, we in BC have a very good regulation - the OMRR, but we recognize that Ministry of Environment is understaffed, and is not able to follow up on the OMRR to ensure that all players meet the regulation.

Speaking of which - we have been working with Action Environmental, trying to keep them compliant, but what about some of the larger players...? I hear that there are so many complaints about other operations in Metro Vancouver - but yet nothing is done about it. It kind of makes a joke of a regulation which is actually one that we should be proud of.

One of the composters now has the contract for the City of Vancouver foodwaste - but how are they planning to meet OMRR requirements, as they have only outdoor facilities at this time?

Our clients are looking to raise the bar on composting, because the reality is that if we cannot compost and meet environmental regulations, perhaps the foodwaste should stay in the landfill, because we are creating larger problems by trying to divert it.

We need to know that the Ministry of Environment is on board with us. You have created a great regulation. Lets work to see that our composting facilities meet our municipal, provincial and federal regulations. Our communities' health and safety depends on it.

Sincerely, John

John Paul, Ph.D. President Transform Compost Systems 3911 Mt Lehman Rd. Abbotsford, BC. Canada, V4X 2N1 Ph 604-856-2722 or 877-877-9655 Fax 604-856-8444 john@transformcompost.com www.transformcompost.com

## Vanderhoek, Linda ENV:EX

From: Sent:

Montes, Jesse ENV:EX

Monday, July 12, 2010 1:58 PM To: Vanderhoek, Linda ENV:EX

Subject:

FW: Follow-up: compost plant south surrey

Importance:

High

## Linda,

The correspondence unit is drafting an email response to a Mr. Terry McNeice from the South Surrey Ratepayers Association. Apparently the response is overdue, so they are in a bit of a hurry. They are looking to us for a few bullets specific to composting facilities. I think they probably should have contacted the region directly as you may be more familiar with site specifics, but I thought I would get started and develop a few bullets that may work. Can you read the email string below and determine if the bullets are suitable? If not, please feel free to amend and I will forward them on to Sheena Marshal who is drafting the letter with input from ourselves as well as MAL and EAO. Thanks!

Bullets regarding the construction of composting facilities under the Organic Matter Recycling Regulation (OMRR) under EMA:

s.13

#### Jesse Montes

Environmental Management Analyst

Environmental Protection Division Ministry of Environment 3rd Floor, 2975 Jutland Rd. Victoria, BC V8T 5J9 Tel: (250)356-0486 Email: Jesse Montes@gov.bc.ca http://www.gov.bc.ca/env/

From: Marshall, Sheena ENV:EX Sent: Wednesday, July 7, 2010 9:14 AM

To: Hughes, Janet ENV:EX

Subject: FW: Follow-up: compost plant south surrey

Janet,

I have MAL preparing wording with regard to ALR land, but as per Autumn's note below, they think the compost issue should be responded to by MoE. Would that be your group??

#### Sheena

From: Evans, Megan J EAO:EX

Sent: Wednesday, July 7, 2010 9:09 AM

To: Marshall, Sheena ENV:EX

Subject: Follow-up: compost plant south surrey

Hi Sheena,

After consulting with one of our waste sector managers, we believe that this letter could be responded to by MOE. Please see the explanation/background details below & attached.

Thank you,

Megan Evans

Project Administrative Assistant
Environmental Assessment Office
2nd Floor 836 Yates Street
Victoria BC V8W 9V1
Phone: (250) 387-1409
Fax: (250) 387-2208

Please consider the environment before printing this email

From: Cousins, Autumn EAO:EX Sent: Tuesday, July 6, 2010 4:25 PM To: Evans, Megan J EAO:EX

Cc: Hamilton, Chris EAO:EX

Subject: RE: Question: compost plant south surrey

Hi Megan,

I have been in discussion with this gentleman as he also sent EAO a note on June 11 after he sent the note below to the Minister on June 9. Based on the information he provided me about this proposed project, it is not reviewable under the Reviewable Projects reg. As such, I suggested he speak with MoE about the approval process and any concerns he may have. I've attached my response (which I reviewed with Kathy as Chris is away) as well as an email he forwarded me re: his discussion with the Agricultural Land Commission.

Given that there has been back and forth between the EAO and this gentleman since he sent the original note below to the Minister, my suggestion is that MoE could respond about the ALR question and about the approval process for a compost facility of this size. I believe I have already answered all of his questions about the EAO side of things — through two phone calls and the attached email. Please let me know if you need anything further from me on this.

Cheers Autumn

From: Evans, Megan J EAO:EX Sent: Tuesday, July 6, 2010 2:29 PM

To: Cousins, Autumn EAO:EX

Subject: Question: compost plant south surrey

Hi Autumn,

As waste sector back-up, Marlene asked me to check with you regarding the request below. Do you know if our office should respond to this or should it be someone at MOE?

Thank you,

Megan Evans

Project Administrative Assistant
Environmental Assessment Office
2nd Floor 836 Yates Street
Victoria BC V8W 9V1
Phone: (250) 387-1409
Fax: (250) 387-2208

Please consider the environment before printing this email

From: Marshall, Sheena ENV:EX Sent: Tuesday, July 6, 2010 8:01 AM To: Evans, Megan J EAO:EX

Subject: FW: compost plant south surrey

Megan,

Is the incoming below something that EAO could respond to? I have inquired with Susan Harrigan at MAL regarding "removing land from the ALR for a compost plank" so I'll be sure to let you know what they come back with.

Please advise if EAO could respond.

Thanks!

#### Sheena Marshall

A/Senior Correspondence Assistant Ministry of Environment Phone: 250 356-7191 | Fax: 250 356-1176 Email: Sheena.Marshall@gov.bc.ca

From: Minister, ENV ENV:EX

Sent: Tuesday, June 29, 2010 11:12 AM To: Correspondence Unit ENV:EX Subject: FW: compost plant south surrey

Reply direct

Kellie O'Brien A/Administrative Coordinator to the Honourable Barry Penner Minister of Environment Ph: 250-387-1187 Fax: 250-387-1356 Email: Kellie.Obrien@gov.bc.ca

The information in this e-mail is confidential and may be privileged. If you are not the intended recipient, please destroy this e-mail and notify the sender immediately - you should not retain, copy, distribute or use this e-mail for any purpose, nor disclose any of its contents to any other person.

From: McNeice, Terry [mailto:wcmill@shaw.ca]
Sent: Wednesday, June 9, 2010 2:35 PM

To: Minister, ENV ENV:EX

Subject: compost plant south surrey

There is a compost plant proposed for the Hazelmere & South Surrey area. Can we request an Environmental Assessment & what are the procedures to initiate this? What is the position of the MOE in removing land from the ALR for a compost plant? Best Regards,

Terry D. McNeice South Surrey Ratepayers Association

Office: (604) 535 8412 Fax: (604) 535 8402 wcmill@shaw.ca