

Appendix H

Letters of support for a safe product

UBC:

The project outcomes suggest that GSA's process is able to produce the required time and temperature to achieve effective elimination of human and horse pathogens. Hence, the dried and recycled horse bedding product may be deemed safe for both human and animals. Eventually, GSA could assure their potential customers in BC, Canada and North America that the recycled horse bedding product can provide an economic benefit and it is safe to use without adversely affecting animal and human health. Furthermore, GSA is currently in the process of designing its pelletizing process. Results in terms of the characterization of the materials can be used by GSA to assist with the modification and improvement of the pellet production system at their pilot plant.

By signing below I agree that the information contained in this Final Report is an accurate reflection of this Mitacs Accelerate Internship. I understand that Mitacs may share the Executive Summary portion of this document with government funding agencies, partners, and prospective partners of the Mitacs-Accelerate Program.

Intern Signature

Supervisor Signature

Organization Partner Signature

March 14, 2014

GreenScene Agritek Inc.
40874 Yale Rd.
Chilliwack, BC
V2R 4J2

Subject: Fecal Coliforms as an Indicator Organism

With respect to monitoring your sterilization process for horse bedding for bacterial contamination, I would like to offer the following technical justification for using Faecal Coliform bacteria as an indicator organism for testing the end product. To be an effective indicator organism, the microorganism must be a) likely to be present in significant quantities in the process feedstock, b) be at least as resistant to the heat treatment as other, less numerous species and c) be able to be tested in an accurate manner.

As the coliform group includes genera that originate in feces as well as other, non-fecal, sources they are virtually guaranteed to be present in large quantities in all sources of used horse bedding. The test methods for this group of bacteria are well characterized and known to be reliable and being thermotolerant, they should reflect the "kill rate" of other bacterial populations that may be present from time to time. Thus the absence of these bacteria will always indicate a decontamination of the product rather than an absence of the bacteria in the input material. In addition, the results will also confirm the destruction of non-fecal pathogens such as the Mycobacterium tuberculosis complex that may or may not be present in the source material.

Sincerely,



Walter Brandt
Operations Manager
Silliker JR Laboratories

PRELIMINARY REPORT

Silliker, JR Laboratories

12-3871 North Fraser Way, Burnaby, BC V5J 5G6
Tel. 604/ 432 9311 Fax. 604/ 432 7768

Report No.:	PRE-1125-0
Supersedes:	None
Report Date	4/7/14
Page 1 of 1	

TO:

Mr. Paul Cross
General Manager
GreenScene Agritek Inc.
40874 Yale Road West
Chilliwack, BC V2R 4J2


Received From:	Chilliwack, BC
Received Date:	1/30/14

Location of Test: (except where noted) Burnaby, BC

Analytical Results

Desc. 1:	Recycled Bedding	Laboratory ID:	344928372
Desc. 2:	Sample 6	Condition Rec'd:	NORMAL
Desc. 3:	Date: 12/30/2013	Temp Rec'd (°C):	20
Desc. 4:	Temp IN: 556; Temp OUT: 190, Time 14:02		
Desc. 5:	Dryer HZ 40, Blower HZ 60		
Desc. 6:	Moisture 10.35%		
:	Non heated		

Analyte	Result	Units	Method Reference	Test Date	Loc.
Clostridium perfringens	<100	CFU/g	MFHPB 23	3/26/14	MRK
E. coli - 3 tube MPN	<3	MPN/g	Modified MFHPB-19	3/22/14	
Faecal coliforms	<3	MPN/g	Modified MFHPB-19	3/22/14	
Salmonella	Negative	/25g	MFHPB 20	3/24/14	
Staphylococcus aureus	<10	CFU/g	MFHPB 21	3/22/14	
Yeast and Mold			MFHPB 22	3/25/14	
Yeast	<10	CFU/g			
Mold	20 est.	CFU/g			


Cathy Shevchuk

Laboratory Director

Noted Test Locations: MRK-Silliker, Canada Co., 90 Gough Road, Unit 4, Markham, Ontario L3R 5V5