December 12, 2025

Nehemias Chalma
Compost Operations Manager
Natural Selection Farms, Inc.
P.O. Box 419
Sunnyside, WA 98944

RE: Compost Liner Evaluation Approval (HSW2018-00009).

Dear Nehemias Chalma,

On September 5, 2025, The Yakima Health District (YHD) and Washington State Department of Ecology (Ecology) received, and have now reviewed, the *Compost Pad Geotechnical Testing* memorandum prepared by Inland Earth Sciences on behalf of Natural Selection Farms. Based on Ecology recommendation, YHD approves this evaluation which supports the compost liner provides sufficient protection of groundwater. Ecology's approval letter is enclosed as Enclosure 1.

Further, Ecology recommends the liner is evaluated for permeability every five (5) years to ensure the pad is continuing to meet the performance standards and protect groundwater. YHD agrees and is willing to discuss this requirement with the facility prior to the renewal of the solid waste handling permit in 2026.

If you have any questions, contact steven.newchurch@co.yakima.wa.us or (509) 249-6504.

Sincerely,

Steven Newchurch, REHS
Environmental Health Coordinator
Yakima Health District

cc: Washington State Department of Ecology

Enclosure(s): (1) *Natural Selection Farms – Test Results Regarding WAC 173-350-225(4)(f)(v)* from Ecology to YHD dated December 9, 2025.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Central Region Office
1250 West Alder St., Union Gap, WA 98903-0009 • 509-575-2490

December 9, 2025

Steven Newchurch
Yakima Health District
1210 Ahtanum Ridge Drive
Union gap, WA 98903

Re: Natural Selection Farms – Test Results Regarding WAC 173-350-225(4)(f)(iv)

Steve Newchurch:

Washington Administrative Code (WAC) 173-350-225(4)(f) requires a pad to be constructed of materials such as concrete, or asphalt. The jurisdictional health department may allow pads to be designed with materials other than those listed above provided the applicant demonstrates in the engineering report that the pad provides sufficient protection to meet the performance standards of WAC 173-350-040.

Natural Selection Farms' (NFS) compost pad is constructed of lime-stabilized soil. Ecology performed a study to examine the on-site permeability of the lime-stabilized soil and produced a report titled *Permeability Test of Lime-Stabilized and Natural Soils used as a Pad for Composting Organic Materials* dated June 2002. Ecology has no record of any testing of the pad between 2002 and 2024. Since NFS has a pad that is designed with materials other than concrete or asphalt Ecology recommended that the pad to tested.

NFS hired Inland Earth Sciences (IES) to develop a scope of work to define how to test the pad. IES completed 10 test pits each to a depth of 4 feet. Samples were obtained from the sidewalls of each test pit at depths of 0-1 foot, 1-2 feet and 2-3 feet below the ground surface (bgs). The samples were combined according to their depth into three composite samples representing 0-1 foot, 1-2 feet and 2-3 feet bgs. The report states the soil in the sidewalls of the test pits was dry and dense. The report states that the soil was not saturated. Compaction and hydraulic conductivity tests were completed on the 0–1-foot bgs composite sample. The other 2 composite samples were stored for further testing if needed. IES presented the results in a Technical Memorandum dated August 29, 2025.

The lime-stabilized soil was categorized as a low plasticity clayey silt (ML). After Standard Proctor analysis three samples were prepared for saturated hydraulic conductivity testing at 90, 95 and 100 percent compaction effort according to the Standard Proctor analysis results. The range for the saturated hydraulic conductivity results is $1.55x10^{-5}$ cm/s at 90 percent compaction to $1.12x10^{-6}$ cm/s at 99.9 percent compaction.

The average permeability of concrete ranges from approximately $1x10^{-5}$ to $1x10^{-6}$ cm/s (https://cellularconcretetechnologies.com/wp-content/uploads/2014/07/CSLM-Permeability.docx). The permeability test results for the lime-stabilized soil at 90 percent compaction are equivalent to a concrete pad.

Ecology approves the submitted Technical Memorandum to meet the requirements of WAC 173-350-225(4)(f)(iv). Ecology suggests that NFS tests the pad every 5 years. This can be completed by testing the compaction in the upper 0–1-foot bgs at 5 random locations to meet the 90 percent compaction. We recommend collecting soil samples at each location for a composite soil classification test. If the compaction is above 90 percent and the classification is consistent with the ML classification, then the pad meets the requirements according to the WAC 173-350-225(4)(f)(iv)..

If you have any questions, you may contact me at megan.rounds@ecy.wa.gov or 509-385-8497.

Sincerely,

Megan Rounds

Megan Rounds, PE
Environmental Engineer
Solid Waste Management Program
Central Regional Office
Washington State Department of Ecology

CC: Ecology Records