



Iowa Department of Natural Resources
Solid Waste Land Application
Permit Application Form



Application for a solid waste land application must be accompanied by the plans, specifications and additional information required by the applicable solid waste rules under Iowa Administrative Code 567 Chapter 121.

Send completed applications with attached information to Becky.Jolly@dnr.iowa.gov, or:

Iowa Department of Natural Resources
Land Quality Bureau
Solid Waste Section
502 E 9th St
Des Moines, IA 50319-0034

For questions concerning this application please contact the Department at 515-721-7979.

☒ New Permit

☐ Permit Renewal # _____ -SDP- _____ -LAN

Section 1. Contact Information

Solid Waste Generator Name: Seaboard Triumph Foods Phone: (712) 226-7800
Address: 5555 Seaboard Triumph Parkway City, State, Zip: Sioux City, IA, 51111
Email: Brad.Harris@stfmail.com Fax: _____

Physical Location of Generating Facility:

Address: 5555 Seaboard Triumph Parkway City, State, Zip: Sioux City, IA, 51111

Responsible Official Name: Frank Koekkoek Phone: (712) 226-7800
Address: 5555 Seaboard Triumph Parkway City, State, Zip: Sioux City, IA 51111
Email: Frank.Koekkoek@stfmail.com Fax: _____

Certified Professional Agronomist Name: Gage Agronomy Services (Andy Gage) Phone: (712) 226-9648
Address: 19274 25th St City, State, Zip: Whiting, IA 51063
Email: gageagronomyservices@gmail.com License #: _____ Fax: _____

Consultant Name (if any): Josh Reis Phone: (712)210-4243
Address: 1270 S Derby Lane City, State, Zip: North Sioux City, SD, 57049
Email: josh@rpconstructors.com Fax: _____

Section 2. Waste Type

Does the material to be land applied contain free liquids¹? ☐ Yes ☒ No

If the material is a sludge, is it generated by a:

- ☒ Commercial or industrial wastewater treatment facility
☐ Water supply treatment facility
☐ Air pollution control facility
☐ Other; Please elaborate: _____

Expected weight (tons) of solid waste to be land applied per year by the facility: _____

¹ The presence of free liquids is determined by the paint filter test. The paint filter test is done by placing a 100-milliliter or 100-gram representative sample of the material into a standard mesh number 60 (fine mesh size) conical paint filter for five minutes. Any free liquid visible below the funnel indicates sample failure.

Section 3. Permit Application Checklist

The following items must be attached. If the permit is being renewed and there is no change from what was submitted with previous applications, the Doc Id# may be listed in lieu of resubmitting the document. Analytical results and a cost closure estimate (for facilities storing material at the application sites) must be submitted with each renewal. Checking the appropriate boxes below certifies that the documents submitted in conjunction with this application form are complete and in compliance with the applicable chapters of Iowa Administrative Code. If an application is found by the DNR to be incomplete, it may be denied and returned to the applicant.

Required Documents		Attached or Doc Id#	
Executive Summary (<i>permit renewals only</i>) <ul style="list-style-type: none"> Summary of each special provision of the current permit to determine if it is to remain the same, be revised or be removed. Summary of each permit amendment, if any, that occurred during the current permit cycle to determine if it shall be included with the renewed permit, be revised or be removed. Provide documentation and certification as required for new permit amendment requests and new variance requests from Iowa Administrative Code, if any. 			NA
Description of the material including source, quantity and method of treatment prior to land application	567 IAC 121.7(1)"a"(11)	<input checked="" type="checkbox"/>	
Description of the land application process, including method of application, when application will take place, and equipment to be used	567 IAC 121.7(1)"a"(13) 567 IAC 121.7(1)"a"(14)	<input checked="" type="checkbox"/>	
Analytical results	567 IAC 121.7(1)"a"(12)	<input checked="" type="checkbox"/>	NA
Evidence waste application will not cause adverse effects	567 IAC 121.7(1)"a"(15) through 567 IAC 121.7(1)"a"(17)	<input checked="" type="checkbox"/>	
Site Operation Plan	567 IAC 121.7(1)"a"(18)	<input checked="" type="checkbox"/>	
Emergency Response and Remedial Action Plan	IAC 567 102.14	<input checked="" type="checkbox"/>	
Site Closure Plan	IAC 567 102.12(10)	<input checked="" type="checkbox"/>	
Proof of financial assurance and closure cost estimate (only if material will be stored at application sites)	567 IAC 121.8	<input checked="" type="checkbox"/>	NA
Table of land application sites. Include the following for each application site: <ul style="list-style-type: none"> Site ID County and township Legal description of site Total acres in site Acres eligible for land application Name of landowner 	567 IAC 121.7(1)"a"(4)	<input checked="" type="checkbox"/>	
For each <u>new</u> application site, include the following:			
Aerial photograph with the application area(s) designated	567 IAC 121.7(1)"a"(1)	<input checked="" type="checkbox"/>	NA
Soil map	567 IAC 121.7(1)"a"(2)	<input checked="" type="checkbox"/>	NA
Water table levels	567 IAC 121.7(1)"a"(10)	<input checked="" type="checkbox"/>	NA
Location of wells within one mile of the site	567 IAC 121.7(1)"a"(5)	<input checked="" type="checkbox"/>	NA
Evidence of Natural Resources Conservation Service (NRCS) review and soil loss information	567 IAC 121.7(1)"a"(3) 567 IAC 121.7(1)"a"(6) through 567 IAC 121.7(1)"a"(8)	<input checked="" type="checkbox"/>	NA
Site soil testing	567 IAC 121.7(1)"a"(9)	<input checked="" type="checkbox"/>	NA
Proof of ownership or legal entitlement to use the site (agreement with the land owner)	567 IAC 121.7(1)"b"(6)	<input checked="" type="checkbox"/>	NA

Section 4. Applicant Certification

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I further certify that the construction and operation of the above described facility will be in accordance with the plans, specifications, reports and related communications accepted by the Iowa Department of Natural Resources and on file in its office; and in accordance with conditions imposed in the permit issued by the Iowa Department of Natural Resources.

Signature: _____

Date: _____

Printed Name: _____

Title: _____

10/29/25

Frank Koekkoek Sr.

VP/GM



October 17, 2025

Re: Seaboard Triumph Foods – Solid Waste Land Application

To Whom It May Concern,

Enclosed are supporting documents for Seaboard Triumph Foods' (STF) request to land apply solid waste generated from their wastewater treatment facility onto adjacent farmland leased and owned by STF.

To verify compliance with Iowa DNR Chapter 121, Civil Engineers & Constructors (CEC) collected and reviewed laboratory-tested soil samples from the two solid waste source areas:

- North Pond
- South Pond

Based on laboratory testing results and regulatory criteria, CEC has determined that the solid waste is suitable for land application.

The following information is included in this submittal:

- Description of the material (source, quantity, and treatment prior to application)
- Description of the land application process (method, timing, and equipment)
- Analytical laboratory results
- Evidence that land application will not cause adverse environmental impacts
- Site Operation Plan
- Emergency Response and Remedial Action Plan
- Site Closure Plan
- Table of proposed application site(s)
- Aerial imagery
- Soil maps
- Water table information
- Location of wells within one mile of the site
- NRCS review and soil loss data
- Site soil testing results
- Proof of land ownership and authorization to use the land

Sincerely,

RP CONSTRUCTORS, LLC | CIVIL ENGINEERS & CONSTRUCTORS, LLC

Josh Reis, P.E.

Vice President of Engineering

October 21, 2025

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Description of the Material

(Source, Quantity, and Method of Treatment Prior to Land Application)

Seaboard Triumph Foods proposes to land apply solid waste materials sourced from two areas: the North Pond and South Pond. Figure 1 identifies the locations of these areas relative to the industrial facility.

Figure #1: Sourced Locations



These materials originated primarily from incidental spills of organic material and wastewater within the plant. CEC has estimated the quantities of solid waste from each area as summarized in Table 1 below.

Table #1: Estimated Quantity of Material

AREA	NORTH POND	SOUTH POND
DRY TONS	1,470	3,730

CEC estimates a total of approximately **5,200 dry tons** of solid waste material.

RP Constructors (RP), the sister construction company to CEC, dewatered, dredged, and excavated the solid waste materials from the North and South Ponds. The South Pond materials were spread on adjacent land directly west of the pond and east of the existing lagoons to allow for screening. Material from the North Pond was stockpiled to the east of the pond (see STF Area Map in Aerial Imagery section for approximate locations).

Due to the high presence of engineering fabric and rock within the South Pond material, RP performed screening operations to remove non-soil debris using root-raking equipment and gorilla bars.

Preliminary testing indicates that the solid waste contains a high proportion of native sand and soil.

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Midwest Laboratories, which conducted analytical testing of the samples on behalf of CEC, was unable to perform viscosity testing due to the material's solid state. Additionally, once exposed to oxygen, the material from both ponds changed in color from dark black to light sand. This color change indicates oxidation and natural stabilization as the material transitioned from anaerobic (submerged) to aerobic conditions.

Based on laboratory results and field observations, the material is considered stable, manageable, and suitable for handling and land application.

Description of the Land Application Process

(Method, Timing, and Equipment)

A licensed land applicator will perform the land application activities under the supervision of Civil Engineers & Constructors (CEC) to ensure compliance with Iowa DNR Chapter 121 and all site-specific environmental requirements. The solid waste material will be applied in a controlled manner to adjacent agricultural land to the west and north (Parcel ID#884824151006) leased and owned by Seaboard Triumph Foods (STF).

Method of Application:

The material will be applied by spreading and incorporating it evenly across the approved agricultural fields using standard earthmoving and tillage equipment, including bulldozers, tractors, and disc harrows. Application will occur at agronomic rates consistent with soil nutrient needs and loading limits established through laboratory analysis and NRCS review. It is anticipated that the material will be incorporated into the top 2 inches of soil to promote blending and prevent runoff or surface accumulation.

Timing of Application:

Land application will be conducted during dry-weather conditions when field access is suitable, and soil moisture levels allow for proper incorporation. Application is planned during the fall season following the 2025 harvest period, with potential for additional application in the spring of 2026 if conditions require. No material will be applied during periods of precipitation, saturated soil conditions, or frozen ground.

Equipment Used:

The following equipment is anticipated for use in the land application process:

- Excavators and bulldozers for material loading and placement
- Tractors with manure spreaders or scrapers for transport and surface application
- Disc harrows or similar tillage implements for incorporation into the soil
- Support vehicles for monitoring and site control

Environmental Controls:

CEC personnel will oversee application activities to confirm that all buffer distances, setback requirements, and soil limitations are met in accordance with Iowa DNR Chapter 121. No material will be applied within 500 feet of wells and 200 feet of waterways, drainage paths, and bodies of water. Dust control measures and erosion prevention practices will be implemented as needed during spreading and incorporation.

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Analytical Laboratory Results

Attached are laboratory sample reports from **Midwest Laboratories**. Three soil samples were collected from each of the identified areas: the North Pond and the South Pond. These were analyzed for parameters outlined in **Iowa DNR Chapter 121**.

The testing evaluated nutrient composition, metals, and general soil characteristics to determine suitability for land application. Results confirm that the solid waste material is primarily composed of native sand, silt, and organic matter with no concentrations exceeding applicable regulatory thresholds. All tested parameters fall within acceptable limits for agricultural land application.

REPORT NUMBER

25-275-4258

REPORT DATE

Oct 02, 2025

RECEIVED DATE

Sep 26, 2025

SEND TO

61225

RP Constructors
Tanner Lambert
1270 S Derby Ln.
North Sioux City SD 57049



13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770
www.midwestlabs.com

REPORT OF ANALYSIS

For: (61225) RP Constructors
SEABOARD TRIUMPH FOODS

ISSUE DATE
Oct 02, 2025

Analysis	Level Found			Reporting		Analyst- Date	Verified- Date
	As Received	Dry Weight	Units	Limit	Method		
Sample ID: N POND Lab Number: 70695306 Date Sampled: 2025-09-24 1200							
Total Kjeldahl nitrogen (TKN)	2980	4300	mg/kg	100	PAI-DK01	pes0-2025/09/30	mgn8-2025/09/30
Phosphorus (total)	1536	2216	mg/kg	10.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Potassium (total)	400.8	578.4	mg/kg	20.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Calcium (total)	7278	10500	mg/kg	25.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Sulfur (total)	2480	3580	mg/kg	15.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Magnesium (total)	1520	2193	mg/kg	10.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Sodium (total)	169.5	244.6	mg/kg	20.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Iron (total)	4953	7147	mg/kg	10.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Manganese (total)	55.1	79.5	mg/kg	1.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Zinc (total)	237.5	342.7	mg/kg	2.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Ammoniacal Nitrogen	414	597	mg/kg	10.0	SM 4500-NH3 C-(2021)	pes0-2025/09/29	mgn8-2025/09/30
Nitrate/Nitrite nitrogen	< 1.0	< 1.0	mg/kg	1.0	EPA 353.2	nam7-2025/10/01	mgn8-2025/10/01
Arsenic (total)	1.67	2.41	mg/kg	0.50	EPA 6020	nio7-2025/10/01	trh1-2025/10/02
Barium (total)	120	173	mg/kg	0.50	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Cadmium (total)	< 0.20	< 0.20	mg/kg	0.20	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Chromium (total)	31.7	45.7	mg/kg	1.00	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Copper (total)	12.0	17.3	mg/kg	1.0	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Lead (total)	< 5.00	< 5.00	mg/kg	5.00	EPA 6010	ras7-2025/09/30	trh1-2025/10/02
Mercury (total)	< 0.05	< 0.05	mg/kg	0.05	EPA 7471	ras7-2025/09/30	trh1-2025/10/02

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ISSUE DATE
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Analysis	Level Found		Reporting		Analyst- Date	Verified- Date
	As Received	Dry Weight	Units	Limit		
Sample ID: N POND Lab Number: 70695306 (con't)						
Molybdenum (total)	4.80	6.93	mg/kg	1.00	ras7-2025/09/30	trh1-2025/10/02
Nickel (total)	17.1	24.7	mg/kg	1.00	ras7-2025/09/30	trh1-2025/10/02
Silver (total)	< 1.00	< 1.00	mg/kg	1.00	ras7-2025/09/30	trh1-2025/10/02
Selenium (total)	1.26	1.82	mg/kg	0.50	nto7-2025/10/01	trh1-2025/10/02
Percent solids	69.3		%	0.01	Ppj2-2025/09/29	jdb5-2025/10/01
pH	7.4		S.U.	0.1	dsn7-2025/09/29	jdb5-2025/10/01
Phosphate P2O5 (calculated)	3520	5080	mg/kg	10	Auto-2025/10/01	Auto-2025/10/02
Potash K2O (calculated)	483	697	mg/kg	10	Auto-2025/10/01	Auto-2025/10/02
Total volatile solids (TVS)	11.0		%	0.01	Ppj2-2025/09/29	jdb5-2025/10/01
Organic nitrogen	< 0.01	< 0.01	mg/kg	0.01	Auto-2025/09/30	Auto-2025/10/02
Nitrogen (total)	0.44	0.63	%	0.01	jmr5-2025/09/29	ta19-2025/09/30
Hexane extractable materials (HEM)	34400		mg/kg	400	atk5-2025/10/02	mgn8-2025/10/02
Bulk Density	0.74		g/cm³	0.01	kae1-2025/09/26	eas2-2025/09/26
Sample ID: S POND Lab Number: 70695307 Date Sampled: 2025-09-24 1200						
Total Kjeldahl nitrogen (TKN)	728	901	mg/kg	100	pes0-2025/09/30	mgn8-2025/09/30
Phosphorus (total)	423.6	524.2	mg/kg	10.0	ras7-2025/09/30	trh1-2025/10/02
Potassium (total)	615.5	761.8	mg/kg	20.0	ras7-2025/09/30	trh1-2025/10/02
Calcium (total)	4182	5176	mg/kg	25.0	ras7-2025/09/30	trh1-2025/10/02
Sulfur (total)	1560	1930	mg/kg	15.0	ras7-2025/09/30	trh1-2025/10/02

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For: (61225) RP Constructors
SEABOARD TRIUMPH FOODS

ISSUE DATE
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Analysis	Level Found		Reporting		Analyst- Date	Verified- Date
	As Received	Dry Weight	Units	Limit		
Sample ID: S POND Lab Number: 70695307 (con't)						
Magnesium (total)	2452	3035	mg/kg	10.0	ras7-2025/09/30	trh1-2025/10/02
Sodium (total)	105.5	130.6	mg/kg	20.0	ras7-2025/09/30	trh1-2025/10/02
Iron (total)	6341	7848	mg/kg	10.0	ras7-2025/09/30	trh1-2025/10/02
Manganese (total)	50.4	62.4	mg/kg	1.0	ras7-2025/09/30	trh1-2025/10/02
Zinc (total)	78.0	96.5	mg/kg	2.0	ras7-2025/09/30	trh1-2025/10/02
Ammoniacal Nitrogen	60	74.2	mg/kg	10.0	pes0-2025/09/29	trh1-2025/10/02
Nitrate/Nitrite nitrogen	< 1.0	< 1.0	mg/kg	1.0	mgn8-2025/09/30	mgn8-2025/09/30
Arsenic (total)	1.78	2.20	mg/kg	0.50	nam7-2025/10/01	mgn8-2025/10/01
Barium (total)	111	137	mg/kg	0.50	nto7-2025/10/01	trh1-2025/10/02
Cadmium (total)	< 0.20	< 0.20	mg/kg	0.20	ras7-2025/09/30	trh1-2025/10/02
Chromium (total)	6.99	8.65	mg/kg	1.00	ras7-2025/09/30	trh1-2025/10/02
Copper (total)	6.8	8.4	mg/kg	1.0	ras7-2025/09/30	trh1-2025/10/02
Lead (total)	< 5.00	< 5.00	mg/kg	5.00	ras7-2025/09/30	trh1-2025/10/02
Mercury (total)	< 0.05	< 0.05	mg/kg	0.05	ras7-2025/09/30	trh1-2025/10/02
Molybdenum (total)	1.48	1.83	mg/kg	1.00	Mab7-2025/10/02	trh1-2025/10/02
Nickel (total)	7.24	8.96	mg/kg	1.00	ras7-2025/09/30	trh1-2025/10/02
Silver (total)	< 1.00	< 1.00	mg/kg	1.00	ras7-2025/09/30	trh1-2025/10/02
Selenium (total)	1.48	1.83	mg/kg	0.50	ras7-2025/09/30	trh1-2025/10/02
Percent solids	80.8		%	0.01	nto7-2025/10/01	trh1-2025/10/02
					Ppj2-2025/09/29	jdb5-2025/10/01
						SM 2540 G-(2015) *

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Analysis	Level Found			Reporting		Analyst- Date	Verified- Date
	As Received	Dry Weight	Units	Limit	Method		
Sample ID: S POND Lab Number: 70695307 (con't)							
pH	5.9		S.U.	0.1	EPA 9045D	dsn7-2025/09/29	jdb5-2025/10/01
Phosphate P2O5 (calculated)	970	1200	mg/kg	10	Calculation	Auto-2025/10/01	Auto-2025/10/02
Potash K2O (calculated)	741	917	mg/kg	10	Calculation	Auto-2025/10/01	Auto-2025/10/02
Total volatile solids (TVS)	2.05		%	0.01	SM 2540 G-(2015) *	Ppj2-2025/09/29	jdb5-2025/10/01
Organic nitrogen	< 0.01	< 0.01	mg/kg	0.01	Calculation	Auto-2025/09/30	Auto-2025/10/02
Nitrogen (total)	0.09	0.11	%	0.01	AOAC 993.13 (mod)	jmr5-2025/09/29	tai9-2025/09/30
Hexane extractable materials (HEM)	1040		mg/kg	400	EPA 9071B	atk5-2025/10/02	mgn8-2025/10/02
Bulk Density	1.00		g/cm³	0.01	WC 069	kae1-2025/09/26	eas2-2025/09/26

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Evidence That the Land Application Will Not Cause Adverse Environmental Impacts

CEC has reviewed all analytical data, site conditions, and regulatory criteria to evaluate the potential for environmental impacts associated with the proposed land application of the solid waste material. Based on laboratory results, field observations, and Iowa DNR Chapter 121 guidelines, the material and proposed application areas are suitable for beneficial reuse and are not expected to cause adverse impacts to soil, surface water, or groundwater quality.

Analytical Findings:

Laboratory testing performed by Midwest Laboratories indicates the material consists primarily of native sand and soil. Concentrations of nutrients and metals are also well below Iowa DNR regulatory thresholds, confirming that the material is non-hazardous and agriculturally compatible. Key findings include:

- Nutrient concentrations are within acceptable agronomic ranges
- Low levels of trace metals and inorganic compounds
- Absence of volatile or semi-volatile organic contaminants
- pH values within neutral to slightly alkaline range, consistent with local soils

Soil and Hydrogeologic Conditions:

CEC evaluated NRCS soil survey data, topographic mapping, and site-specific sampling for each proposed application field. The receiving soils exhibit moderate to high permeability, low runoff potential, and adequate depth to groundwater, providing natural protection against leaching or ponding. Water table measurements confirm sufficient vertical separation between applied materials and groundwater.

Setbacks and Protective Buffers:

All proposed application areas comply with the minimum buffer distances required by Iowa DNR Chapter 121, including:

- A minimum **500-foot setback** from all private or public wells
- A minimum **200-foot setback** from surface waters, drainage ditches, or waterways
- A minimum **200-foot setback** from any inhabited dwellings not owned or leased by STF

Environmental Controls and Assurance:

The material's composition, high in native soil and sand, minimizes odor, runoff, and wind-erosion potential. Incorporation into the soil immediately after spreading further reduces migration risks and stabilizes nutrients within the topsoil layer. With these safeguards and oversight by CEC personnel, the proposed land application is not anticipated to cause adverse effects on the surrounding environment, groundwater, or agricultural productivity.

Site Operation Plan

The following plan outlines how land application activities will be managed to ensure compliance with Iowa DNR Chapter 121 and to prevent any environmental or operational issues during the handling, transport, and incorporation of the solid waste material.

1. Site Supervision and Oversight

All land application activities will be performed by a **licensed land applicator** under the supervision of **Civil Engineers & Constructors (CEC)**. A qualified site representative will be present at all times

October 21, 2025

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during application to monitor compliance with approved procedures, setback requirements, and field conditions.

2. Access and Traffic Control

Access to the land application areas will be limited to authorized personnel and equipment operators. Entry points will be clearly designated, and traffic patterns will be established to minimize compaction and disturbance to adjacent farmland. Support vehicles will be used to maintain site control and assist with monitoring during operations.

3. Material Handling and Application

The solid waste material will be transported from the stockpile areas to the designated fields using scrapers or spreaders. Application rates will be based on laboratory results and agronomic recommendations to prevent nutrient overloading. Following placement, the material will be incorporated into the upper 2 inches of soil using disc harrows or equivalent tillage equipment to promote uniform blending and minimize surface exposure.

4. Weather and Seasonal Restrictions

Application will only occur during dry-weather conditions when soils are firm and field access is suitable. No application will occur on frozen, saturated, or snow-covered ground, or during active precipitation. In the event of unexpected rainfall during operations, activities will be temporarily suspended until the site is stable and conditions are favorable.

5. Monitoring and Recordkeeping

CEC will maintain detailed records of all land application activities, including:

- Dates and times of material application
- Quantities and locations of material applied
- Weather and field conditions during application
- Names of supervising personnel and operators
- Equipment used and any maintenance performed

These records will be retained for a minimum of five years and made available to the Iowa DNR upon request.

6. Erosion and Runoff Prevention

Erosion control measures will be implemented as necessary to prevent off-site migration of material. This may include silt fencing, straw wattles, or temporary berms along field perimeters. The material's high sand and soil content allows for natural stabilization once incorporated, reducing runoff risk.

7. Odor and Dust Control

Given the stable, soil-like composition of the material, no significant odors are expected. However, if minor odor or dust generation occurs during handling, operations will be temporarily paused and additional mitigation measures such as moisture application or adjusted working methods will be implemented.

8. Post-Application Inspection

Following completion of each land application event, CEC will conduct a final inspection to confirm that all material has been properly incorporated, buffer zones maintained, and no visible residue or runoff remains. Inspection findings will be documented and kept on file.

Emergency Response and Remedial Action Plan

This plan outlines the procedures to be followed in the event of an accidental release, equipment malfunction, severe weather event, or any condition that could result in potential environmental impact during land application activities. The intent is to ensure immediate containment, mitigation, and reporting in accordance with Iowa DNR Chapter 121 and applicable local regulations.

1. Purpose and Scope

The Emergency Response and Remedial Action Plan (ERRAP) provides a structured approach for responding to unplanned incidents such as spills, erosion, or off-site migration of material. All personnel involved in land application activities will be trained on these procedures before work begins.

2. Emergency Contacts

In the event of a release or incident, the following parties will be notified immediately:

- **RP Constructors (RP)**
Todd Lowe (Safety Officer)
605-212-5082
toddl@rpconstructors.com
- **Civil Engineers & Constructors (CEC)**
Josh Reis, PE (Vice President)
712-210-4243
joshre@rpconstructors.com
- **Seaboard Triumph Foods (STF)**
Brad Harris (Environmental & PSM Manager)
605-214-7700
Brad.Harris@stfmail.com
- **Iowa Department of Natural Resources (DNR)**
Regional Field Office #3
Office: 712-262-4177
Environmental Reporting Hotline: 515-725-8694

A complete contact list with phone numbers and emails will be maintained onsite and in project vehicles at all times.

3. Spill and Release Response Procedures

If a release of material occurs outside the designated application area or into a drainage path:

1. Immediately cease operations and identify the source of the release.
2. Contain the affected area using berms, silt fence, or absorbent materials as appropriate.
3. Recover any spilled or displaced material and return it to the designated field area.
4. Inspect surrounding soils and water features to verify containment.
5. Notify CEC and STF environmental staff for documentation and regulatory communication.

4. Equipment Malfunction or Leak

In the event of a hydraulic, fuel, or oil leak from construction or spreading equipment:

- Stop work immediately and shut down the equipment.
- Use absorbent pads or spill kits to contain and clean the affected area.
- Remove contaminated soil if necessary and dispose of it at an approved facility.

- Repair or replace the equipment before resuming operations.

5. Severe Weather Procedures

Operations will be suspended during heavy rainfall, high winds, or other conditions that could promote runoff or erosion. Material stockpiles will be stabilized with berms or silt fence, and temporary covers may be placed if prolonged rain is forecasted. Activities will resume only when conditions are dry and stable.

6. Remediation and Reporting

Any incident that results in off-site discharge or potential contamination will be documented by CEC and reported to the Iowa DNR within 24 hours, or sooner if required by regulation. A written incident summary will include the date, time, location, cause, response actions taken, and confirmation of remediation.

7. Training and Preparedness

All personnel working on-site will receive training on emergency response procedures prior to land application. Spill kits, fire extinguishers, and first-aid equipment will be maintained in all operating vehicles and machinery.

8. Review and Continuous Improvement

The Emergency Response and Remedial Action Plan will be reviewed at the start of each project phase and updated as necessary based on field conditions or regulatory feedback.

Site Closure Plan

The following plan outlines the procedures that will be implemented upon completion of all land application activities to ensure that the site is properly stabilized, documented, and verified in compliance with **Iowa DNR Chapter 121**. The objective of the Site Closure Plan is to confirm that no residual solid waste remains exposed, all material has been appropriately incorporated, and the site has been restored to suitable agricultural condition.

1. Final Inspection and Verification

Upon completion of land application, **Civil Engineers & Constructors (CEC)** will perform a detailed inspection of all application areas to verify that:

- All material has been fully incorporated into the soil profile.
- No visible accumulations or piles of material remain on the surface.
- All buffer zones and setback areas have been maintained and remain undisturbed.
- Erosion control measures are intact and functional.

Inspection findings will be documented through written reports, photographs, and field notes.

2. Stabilization and Erosion Prevention

If any areas are identified as disturbed or susceptible to erosion following application, **RP Constructors (RP)** will regrade and stabilize those locations using one or more of the following methods:

- Disking or compacting soil to promote surface stability.
- Seeding or cover cropping to establish vegetation.
- Installing temporary erosion control (silt fence, straw mulch, or wattles) if needed.

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Stabilization measures will be maintained until vegetation is established or until the site demonstrates stable conditions without erosion or runoff. If operations cease due to frost, material stockpiles will be seeded for stabilization.

3. Post-Application Monitoring

CEC will conduct a post-application monitoring review approximately 30 days after completion of land application to ensure continued stabilization and absence of runoff or ponding. Additional inspections may be conducted if requested by the **Iowa DNR** or site owner.

4. Documentation and Recordkeeping

CEC will compile a final closure report to include:

- Dates of land application and final inspection.
- Quantities and locations of material applied.
- Laboratory results and compliance summary.
- Photographic documentation of final site conditions.
- Copies of field logs and monitoring records.

This documentation will serve as verification of proper closure and will be retained by **Seaboard Triumph Foods (STF)** and **CEC** as required by regulation.

6. Long-Term Site Use

Following closure, the land may be returned to normal agricultural use. Because the material consists primarily of native sand and organic solids, no long-term restrictions on land use are anticipated. Future tillage or cropping activities may proceed as typical for the region.

Table of Proposed Application Sites

The proposed land application area is located on agricultural property leased and owned by **Seaboard Triumph Foods (STF)**, directly adjacent to the wastewater treatment facility. The site was selected based on its proximity to the source ponds, favorable soil composition, and compliance with setback and slope criteria established under **Iowa DNR Chapter 121**.

The parcel has been evaluated using **NRCS soil data**, **USGS mapping**, and **site reconnaissance** to confirm suitable drainage, slope (<5%), and accessibility for land application operations.

Table 2: Proposed Land Application Sites

SITE ID	LOCATION DESCRIPTION	APPROX. AREA (ACRES)	APPLICATION METHOD	RECEIVING SOIL TYPE
583128	Parcel: 884824151006	200**	Surface spreading and incorporation	Modale complex, Blake silty clay loam, Onawa silty clay, Grable-Morconick complex, Haynie silt loam

**Table 2 information sourced from Beacon Schnieder and USDA data*

***Industrial facility included in parcel area*

Total Estimated Needed Area: 95 Acres

Total Estimated Material: 5,200 Dry Tons

Site Selection Rationale:

- The site is located on STF-owned property with restricted access.
- Soils exhibit moderate permeability and low erosion potential.
- There is ample buffer space from wells, drainage ditches, or surface water bodies to not be concerned about operations conflicting with minimum setback distances.
- Slopes are low and generally under 5% and suitable for incorporation using standard agricultural equipment.

CEC elects to begin application directly west of the stockpile locations on adjacent STF-owned farmland on Parcel ID#884824151006 for ease of accessibility, short trucking time, and low flooding potential. CEC will instruct land applicator to other areas within the parcel if material exceeds what is estimated.

Application Controls:

CEC and RP will ensure that all sites adhere to regulatory spacing, loading limits, and operational best practices.

Aerial Imagery and Soil Maps

Included in this section are aerial maps and figures identifying the proposed land application area, adjacent features, and compliance boundaries. These figures were developed using recent **aerial imagery, published GIS data, and government-sourced topographic and soil information** from the USDA, FEMA, and Woodbury County databases.

Aerial Overview:

The aerial maps illustrate the locations of the **North Pond**, and the **South Pond** relative to the Seaboard Triumph Foods facility. They also identify the adjacent fields proposed for land application and the areas used for stockpiling or screening of material. Boundaries, access routes, and nearby infrastructure are clearly delineated to confirm that all operations remain within STF-owned or leased property.

Topography and Drainage:

USGS and site-grade data were reviewed to assess general surface slopes and drainage patterns. The topography across all proposed application sites is gently rolling (less than 5%), providing suitable drainage away from surface waters and minimizing runoff or ponding potential.

Soil Mapping and Classification:

Soil maps generated from the **NRCS Web Soil Survey** identify the dominant soil types within the proposed application areas as defined in Table 2. These soils exhibit moderate permeability, low erosion potential, and are commonly used for agricultural production—making them suitable for land application and nutrient incorporation.

Water Table Information

Flood information data from **FEMA** indicate that groundwater is well below the surface across all proposed land application areas, providing adequate vertical separation between the applied materials and the underlying aquifer.

The combination of well-drained native soils and low groundwater elevations ensures that the land application will not impact subsurface water quality. Refer to the proceeding page for the FEMA flood map of the application area.

Location of Wells Within One Mile of the Site

According to records from the **Iowa Department of Natural Resources (DNR)**, there are several wells located within one mile of the proposed land application site. Each well is identified below with its corresponding owner, permit number, and basic information.

STF AREA MAP

Legend

Seaboard Triumph Foods

STF OWNED LAND
APPROXIMATE
AREA

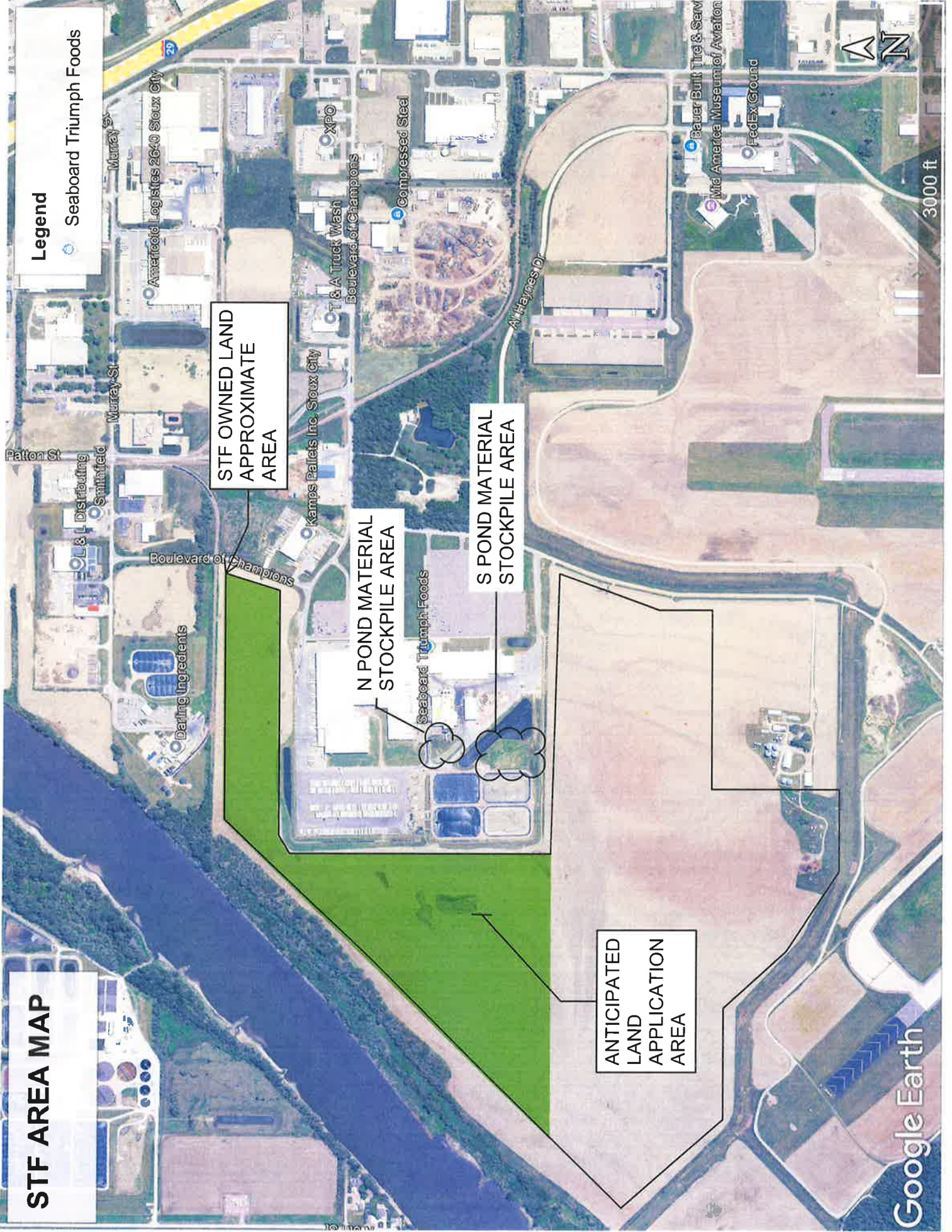
N POND MATERIAL
STOCKPILE AREA

S POND MATERIAL
STOCKPILE AREA

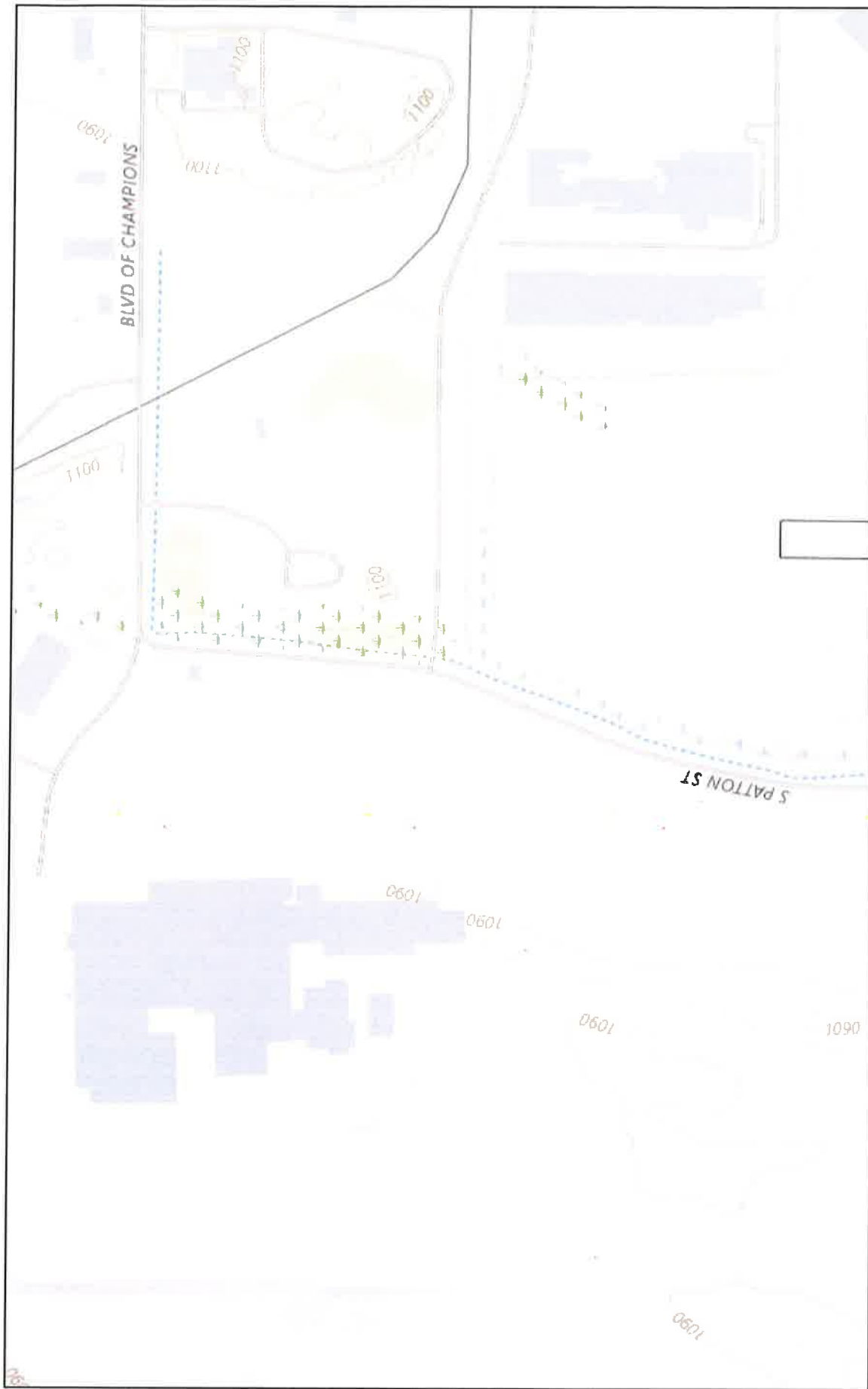
ANTICIPATED
LAND
APPLICATION
AREA

Google Earth

3000 ft



USDA soil map



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1:9,028

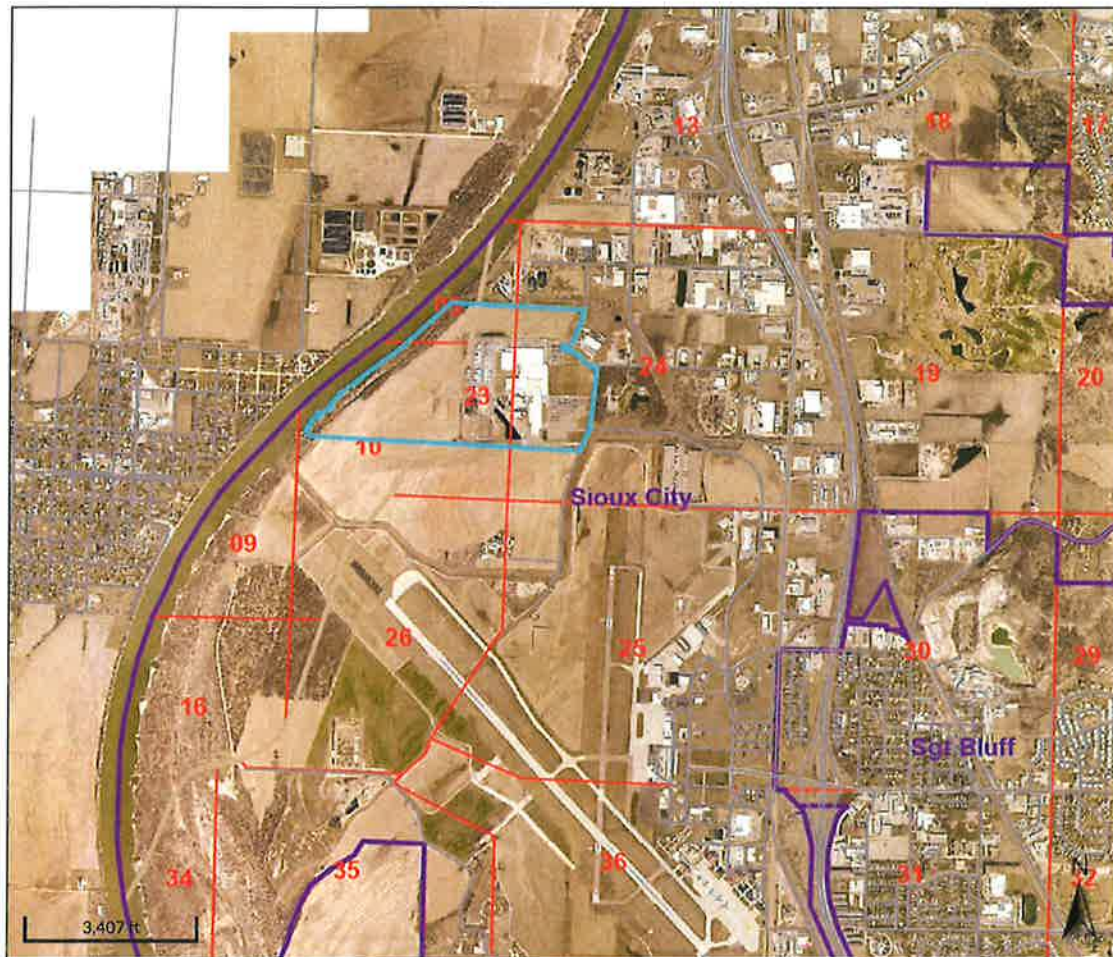
0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography

**Beacon**TM

Woodbury County, IA / Sioux City



Overview



Legend

- Roads
- Corp Boundaries
- Townships
- Sections
- Parcels

Parcel ID	884824151006	Alternate ID	583128	Owner Address	SEABOARD TRIUMPH FOODS LLC
Sec/Twp/Rng	n/a	Class	I		5555 SEABOARD TRIUMPH PKWY
Property Address	5555 SEABOARD TRIUMPH PKWY	Acres	n/a		SIOUX CITY, IA 51111
	SIOUX CITY				
District	0089				
Brief Tax Description	SC/SC COMM 88-48 AN IRREG TCT BEING PT OF LOTS 1, 2 & 3 OF BRASSFIELDS ISLAND 24-88-48, PT OF LOTS 1 & 2 OF BRASSFIELDS ISLAND 23-88-48 AND PT OF ACCRETED LANDS THERETO ACCORDING TO THE PLAT OF BRASSFIELDS ISLAND DESCRIBED AS BEG AT SW COR OF LOT 2 OF THE RE				
	(Note: Not to be used on legal documents)				

Date created: 10/16/2025

Last Data Uploaded: 10/15/2025 10:03:12 PM

Developed by SCHNEIDER
GEOSPATIAL

Woodbury County, IA / Sioux City

Summary

Parcel ID	884824300006
Gross Acres	99.91
ROW Acres	0.00
Gross Taxable Acres	99.91
Exempt Acres	0.00
Net Taxable Acres	99.91
Average Unadjusted CSR2	32.25
(Gross Taxable Acres - Exempt Land)	
(3221.57 CSR2 Points / 99.91 Gross Taxable Acres)	

Agriculture Caring

Sub Parcel Summary

Description	Acres	CSR2	Unadjusted CSR2 Points	Adjusted CSR2 Points
100% Value	97.91	32.62	3,193.36	3,193.36
Non-Crop	2.00	14.11	28.21	28.21
Total	99.91		3,221.57	3,221.57

Soil Summary

Description	SMS	Soil Name	CSR2	Adjusted Acres	Unadjusted CSR2 Points	Adjusted CSR2 Points
100% Value	137	Haynie silt loam, deep loess, 0 to 2 percent slopes, rarely	72.00	7.03	506.16	506.16
100% Value	1146	Onawa silty clay, 0 to 2 percent slopes, occasionally flooded	69.00	25.75	1,776.75	1,776.75
100% Value	1137	Haynie silt loam, 0 to 2 percent slopes, occasionally flooded	67.00	1.16	77.72	77.72
100% Value	515	Percival silty clay, 0 to 2 percent slopes, rarely flooded	45.00	3.51	157.95	157.95
100% Value	1238	Sarpy-Morconick complex, 0 to 2 percent slopes, occasionally	17.00	0.06	1.02	1.02
100% Value	237	Sarpy loamy fine sand, 0 to 2 percent slopes, rarely flooded	14.00	3.12	43.68	43.68
100% Value	1524	Morconick fine sandy loam, 0 to 2 percent slopes, occasional	11.00	4.49	49.39	49.39
100% Value	518	Morconick fine sandy loam, 0 to 2 percent slopes, rarely flo	11.00	52.79	580.69	580.69
Non-Crop	1238	Sarpy-Morconick complex, 0 to 2 percent slopes, occasionally	17.00	0.82	13.94	13.94
Non-Crop	237	Sarpy loamy fine sand, 0 to 2 percent slopes, rarely flooded	14.00	0.43	6.02	6.02
Non-Crop	518	Morconick fine sandy loam, 0 to 2 percent slopes, rarely flo	11.00	0.75	8.25	8.25
Total				99.91	3,221.57	3,221.57

Woodbury County, IA / Sioux City

Summary

Parcel ID	884826200006
Gross Acres	59.14
ROW Acres	0.00
Gross Taxable Acres	59.14
Exempt Acres	0.00
Net Taxable Acres	59.14
Average Unadjusted CSR2	23.24
(Gross Taxable Acres - Exempt Land)	
(1374.56 CSR2 Points / 59.14 Gross Taxable Acres)	

Agland Active Corfig

2025

Sub Parcel Summary

Description	Acres	CSR2	Unadjusted CSR2 Points	Adjusted CSR2 Points
100% Value	58.69	23.34	1,369.61	1,369.61
Non-Crop	0.45	11.00	4.95	4.95
Total	59.14		1,374.56	1,374.56

Soil Summary

Description	SMS	Soil Name	CSR2	Adjusted Acres	Unadjusted CSR2 Points	Adjusted CSR2 Points
100% Value	137	Haynie silt loam, deep loess, 0 to 2 percent slopes, rarely	72.00	7.41	533.52	533.52
100% Value	3513	Grable-Morconick complex, 0 to 2 percent slopes, rarely floo	46.00	0.35	16.10	16.10
100% Value	515	Percival silty clay, 0 to 2 percent slopes, rarely flooded	45.00	7.64	343.80	343.80
100% Value	518	Morconick fine sandy loam, 0 to 2 percent slopes, rarely flo	11.00	43.29	476.19	476.19
Non-Crop	518	Morconick fine sandy loam, 0 to 2 percent slopes, rarely flo	11.00	0.45	4.95	4.95
Total				59.14	1,374.56	1,374.56



Table 3: Well Location Table

Well Description	Owner / Permit Holder	Permit ID	Depth (ft)	Primary Use / Status
Charles Oehlerking Well	Charles Oehlerking	40165	300	Household
STF Well #3	Charles Oehlerking	2442	—	Water Use Permit Well
STF Well #2	Charles Oehlerking	2442	—	Water Use Permit Well
STF Well #1	Charles Oehlerking	2442	—	Water Use Permit Well
STF Dewatering Well #5	Lieber Construction	97-16-016	—	Dewatering
STF Dewatering Well #4	Lieber Construction	97-16-016	—	Dewatering
STF Dewatering Well #3	Lieber Construction	97-16-016	—	Dewatering
STF Dewatering Well #2	Lieber Construction	97-16-016	—	Dewatering
STF Dewatering Well #1	Lieber Construction	97-16-016	—	Dewatering
Well #2060319	City of Sioux City (AMW-10)	—	32	Plugged
Well #2060493	City of Sioux City (MW-609-2)	—	25	Plugged
Cloverleaf Cold Storage Well	Cloverleaf Cold Storage	8656	—	Active
Petrik Well	Petrik	18554 / 2011893	240	Active

Land application will occur **outside of the minimum setback distances** required by **Iowa DNR Chapter 121**:

NRCS Review and Soil Loss Data

Due to the **gentle topography** (slopes less than 5%) and the **thin layer of material** being applied, **CEC does not anticipate erosion or displacement** of the applied material.

The underlying soils, outlined in Table 2, exhibit low to moderate erodibility and are suitable for incorporation of nutrient-bearing solids.

Refer to the proceeding pages for native soil results on surrounding parcels.

Site Soil Testing Results

Laboratory analyses performed by **Midwest Laboratories** confirmed that background soil characteristics are consistent with regional agricultural conditions and exhibit no elevated nutrient or contaminant concentrations.

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Proof of Land Ownership and Authorization to Use the Land

Seaboard Triumph Foods (STF) has authorized **CEC and RP** and their licensed land applicator to land apply the solid-waste material on STF-owned land directly adjacent to the industrial facility.

This agreement establishes RP as the responsible party for dredging, screening, and land application operations in accordance with this plan and Iowa DNR Chapter 121.

See the proceeding page for further documentation.



Date: October 17, 2025

To Whom It May Concern,

This letter serves as formal confirmation that Seaboard Triumph Foods, LLC is the legal owner of the parcel of land located immediately south of our southern fence line, which is the subject of the current biosolids land application permit request.

We hereby authorize RP Constructors and Civil Engineers and Constructors, who are contracted to work on our behalf, to proceed with all necessary activities related to this project. This includes coordinating with a licensed biosolids applicator to apply biosolids to the aforementioned parcel in accordance with all applicable environmental and regulatory standards.

This authorization is provided to satisfy the requirements of the permit application process. Should you need further documentation or clarification, please contact Seaboard Triumph Foods directly.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frank Koekkoek'.

Frank Koekkoek
Vice President & General Manager
Seaboard Triumph Foods, LLC