



# STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR  
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES  
CHUCK GIPP, DIRECTOR

October 14, 2013

Sunrise Farms, Inc.  
Terry Hudgens, General Manager  
2060 White Avenue  
Harris, IA 51345

SUBJECT: Wastewater Treatment Facility Inspection  
NPDES Permit #7200802

Dear Mr. Hudgens:

Attached is a copy of the report resulting from the wastewater treatment facility inspection on August 5, 2013. Your attention is directed to the summary portion of the report.

If you have any questions, or feel this report does not represent the conditions at your facility, please call me at 712-262-4177.

Sincerely,

A handwritten signature in cursive script that reads "Sheila Kenny".

Sheila Kenny, Environmental Specialist  
sheila.kenny@dnr.iowa.gov  
Field Services and Compliance Bureau

SK:lw

c: -5<sup>th</sup> Floor Records Center, DNR, Wallace Building, Des Moines  
-Andy Nesseth, Extended Ag Services, Inc., 507 Milwaukee Street, Lakefield, MN 56150

enc: -Inspection Report

ww13/72su1014-ins.docx

**IOWA DEPARTMENT OF NATURAL RESOURCES  
WASTEWATER TREATMENT FACILITY INSPECTION**

NPDES Permit #7200802

Page 1 of 4

<b>FACILITY</b>	NAME: Sunrise Farms		OWNER: Sunrise Farms		
	ADDRESS: 2060 White Ave	CITY: Harris	STATE: Iowa	ZIP: 51345	PHONE: 712-735-6010
<b>RECEIVING STREAM</b>	STREAM NAME: N/A - Land Application Only				
<b>INSPECTION DATE AND TIME</b>	DATE THIS INSPECTION: 8/5/13	TIME OF INSPECTION: 10am	DATE LAST INSPECTION: 4/7/10		
<b>PLANT GRADE</b>	<input type="checkbox"/> WW-I <input type="checkbox"/> WW-II <input type="checkbox"/> WW-III <input type="checkbox"/> WL-I <input type="checkbox"/> WL-II <input type="checkbox"/> WW-IV				


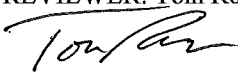
<b>TREATMENT PROCESS</b>	<input type="checkbox"/> Trickling filter <input type="checkbox"/> Activated sludge <input type="checkbox"/> RBC <input checked="" type="checkbox"/> Lagoon <input type="checkbox"/> Disinfection <input type="checkbox"/> Other:		
<b>DESIGN CAPACITY</b>	MGD: 0.055	POUNDS BOD/DAY: 2500	PE (BOD): 14,970
<b>NOW TREATING</b>	MGD (average daily): 0.056	POUNDS BOD: 1627	PE (BOD): 9742
<b>SIGNIFICANT INDUSTRIAL CONTRIBUTORS:</b>	INDUSTRIAL CONTRIBUTORS <input checked="" type="checkbox"/> No Significant Contributors <input type="checkbox"/> Treatment Agreement Required <input type="checkbox"/> Treatment Agreement on File		INDUSTRIAL MONITORING RESULTS <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory

<b>OPERATOR CERTIFICATION</b>	OPERATOR CERTIFICATION UPDATE: <input type="checkbox"/> Compliance Form Included <input type="checkbox"/> Form on File    No changes		PROPERLY CERTIFIED OPERATOR <input type="checkbox"/> YES <input type="checkbox"/> NO
<b>RESPONSIBLE OPERATOR</b>	NAME:	GRADE:	CERTIFICATION NUMBER:
<b>PERSONS INTERVIEWED</b>	NAME: Andy Nesseth Terry Hudgens Brett Young		TITLE: Consultant General Manager Farm Crop Manager

PERMIT COMPLIANCE SUMMARY			
<b>EFFLUENT LIMITATIONS</b>	SELF-MONITORING RESULTS: <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory*		SAMPLES THIS INSPECTION <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory*
<b>SAMPLES COLLECTED</b>	TYPE: <input type="checkbox"/> 24 Hour Composite <input type="checkbox"/> Grab <input checked="" type="checkbox"/> None		LAB DATA ATTACHED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>SELF-MONITORING</b>	OPERATION REPORTS SUBMITTED: <input type="checkbox"/> Sat. <input checked="" type="checkbox"/> Unsat.*	REQUIRED DATA ON REPORT: <input checked="" type="checkbox"/> Sat. <input type="checkbox"/> Unsat.*	TESTING ADEQUACY: <input checked="" type="checkbox"/> Sat. <input type="checkbox"/> Unsat.*
<b>OBSERVATIONS</b>	VISUAL APPEARANCE OF EFFLUENT:  N/A	VISUAL APPEARANCE OF RECEIVING STREAM:  N/A	

<b>COMPLIANCE SCHEDULE</b>	COMPLIANCE WITH SCHEDULE: <input type="checkbox"/> Sat. <input type="checkbox"/> Unsat.* <input checked="" type="checkbox"/> None	NEXT ITEM DUE:	DATE DUE:
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\* See comments

<b>AUTHENTICATION</b>	INSPECTOR: Sheila Kenny 	DATE: 10/10/13	REVIEWER: Tom Roos 	DATE: 10/14/13
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### **SUMMARY**

1. All monthly operation reports must be submitted within 15 days after the end of the month. An official copy of each MOR should be printed, signed and dated, and maintained at the facility.
2. If laboratory results are reported as less than (<) values, they should be entered as such on the monthly reports as well.
3. Review the reported data and submit necessary corrections by December 20, 2013.
4. Daily cooling tower flow values should be utilized when calculating influent flow to the lagoon. It is recommended that the quantity of domestic wastewater produced be verified.
5. Ice must be used in the composite sampler to cool samples during collection.
6. Immediately repair the non-functioning surface aerators.
7. A more accurate means of cell depth monitoring must be provided for all three cells no later than December 1, 2013 and written notification submitted upon completion.

### **GENERAL FACILITY DESCRIPTION**

Sunrise Farms operates an egg laying and breaking operation. Wastewater from this facility is stored in a five cell waste stabilization lagoon which consists of two aerated cells with synthetic liners and three earthen quiescent cells. All wastewater is disposed of by irrigation to the surrounding cropland. The restroom and shower waste from this facility is handled by an on-site septic system.

The facility currently has two approved application areas in Allison Township (T99N, R39W), Osceola County. These areas are as follows:

Area A: approximately 80 acres in the S ½ of the SW ¼ of Section 34

Area B: approximately 247 acres in the S ½ of Section 27 and the N ½ of Section 34

### **EFFLUENT LIMITATIONS**

#### **Self Monitoring Results**

All wastewater is disposed of by land application; therefore, there have been no effluent limit violations.

### **SELF MONITORING**

#### **Operation Reports Submitted; Required Data Entered on Reports**

The operation reports were submitted and included the required data; however, the majority of the monthly reports were submitted 1 to 5 days past the due date. One violation letter was also issued for failure to submit the January 2012 report. **As a reminder, Rule 567 IAC 63.7(455B) requires that records of operation be submitted to this Department within 15 days of the end of the reporting period. Please resume timely submission of all Monthly Operation Reports (MORs).**

Mr. Nesselth maintains both electronic and paper copies of all records. Electronic copies are also provided to and maintained by Sunrise Farms. It appears that the proper records are being kept for this facility; however, **an official copy of each MOR should be printed, signed and dated by an authorized representative, and maintained at the facility.**

While reviewing the data submitted, it was noted that the same monitoring well and quarterly effluent data was repeatedly reported over several months or reported in the wrong place on the MOR. There were also some unexplained fluctuations in the cell depth data. Mr. Nesselth has lab records showing that samples are being collected every three months in accordance with the permit, but there were some errors in the data when it was submitted on the MORs. It was also noted that some of the lab results (i.e. fecal coliform for the monitoring wells) was reported as less than (<) values. **Whenever this is the case, these values should be entered as less than values on the MOR as well.**

A copy of the reported data for these parameters was provided to Mr. Nesseth by e-mail on August 9, 2013. **Please review the reported data, make corrections as needed, and resubmit the erroneous MORs by December 20, 2013.**

## **FACILITY EVALUATION**

### **Flow Monitoring**

Influent flow to the lagoon has been calculated by subtracting the cooling tower and domestic waste from the facility's total water usage. Mr. Nesseth reported that they have been subtracting the average monthly flow for the cooling tower each day. **As daily readings are available for the cooling tower, the actual daily values should be used in this calculation rather than the monthly average.** Mr. Nesseth also reported that they subtract 1600 gallons per day for the shower and restroom waste that goes to the septic system, but Mr. Nesseth and Mr. Hudgens were uncertain where this number originated. **There are no flow monitoring devices for this flow, but it is recommended that the industry either install flow measurement or at least periodically verify that this value is still an appropriate estimate for the domestic loading.**

The flow volume land applied is calculated by multiplying the rated capacity of the effluent pump (500gpm) by the length of time the pump is operated.

### **Facility Expansion**

Since the last inspection, the average influent flow reported for this facility was approximately 0.056 MGD, which slightly exceeds the design flow of 0.055 MGD (based on 222 days of storage). This facility is also in the process of expanding to 8 million birds. There are 23 existing barns and 2 more are under construction. One new barn should be ready to populate in about December and the other in mid-2014. Sunrise Farms should ensure that they have adequate storage capacity for this expansion. Mr. Hudgens indicated that there may be a slight increase in wastewater from the interior washing of the trucks, but did not anticipate a large increase in process wastewater. They process more shell eggs in the winter to reduce the quantity of wastewater generated, and do more egg breaking during the summer months when ground is available for application of the waste. Furthermore, they are no longer accepting waste from Siouxpreme Egg Products in Sioux Center or from any other outside sources.

Construction of the new confinement barns reduces the number of acres available for application in approved Area A; therefore, Sunrise Farms has decided to discontinue use of Area A and is currently seeking approval for two new application areas, as follows:

Area C: 125.7 acres in the SE ¼ of Section 33, Allison Township (T99N, R39W), Osceola County  
Area D: 146.5 acres in the NE ¼ of Section 33, Allison Township (T99N, R39W), Osceola County

The center pivots for these areas were previously approved when the construction permit (CP-A2013-025) was issued for expansion of the confinement. However, a site survey was conducted in conjunction with this inspection to determine if the land application areas meet all applicable separation distances. Approval of these sites was recommended provided that the 50-foot separation distance is maintained between the wetted disposal area and all property lines and provided that proper perimeter signs are posted.

The center pivot equipment from Area A was disconnected at the end of July. This irrigation equipment is now in place and ready to be utilized for Area C, pending approval. Six new monitoring wells are also in place around Areas C and D. These wells are located on the northwest, northeast, north central, southwest, southeast, and south central portions of the application area.

#### Composite Sampling Technique

A portable composite sampler is now used to collect 24-hour composites in accordance with the permit. The tubing in the sampler should be watched closely for bacterial growth as dirty lines may lead to higher sample results that are not representative of the typical wastewater at this facility. Mr. Hudgens stated that the tubing is replaced as needed to ensure that representative samples are collected. **While collecting composites, the samples must be cooled to 4°C. Since the sampler is not refrigerated, ice should be placed in the sampler to cool the samples during the collection period.**

#### Lagoon Operation & Maintenance

At the time of this inspection, one surface aerator in each of the two aerated cells was not functioning. **To ensure proper aeration, these aerators should be repaired as soon as possible.** Mr. Hudgens stated that new motors have been ordered to repair these units.

The ponds themselves appeared clear with no signs of odor or septic conditions and the grounds and dikes appeared to be well maintained. Mr. Hudgens reported that they mow periodically and spray as necessary to help control terrestrial vegetation along the berms. No aquatic vegetation was noted in the lagoon, and no animal burrows, trees or woody vegetation were observed on the berms. The cells have an adequate amount of riprap and no erosion problems were noted at this time. Mr. Hudgens also reported that they exercise all gates and valves three times a year (spring, summer, and fall) to keep them in full working order and ensure that no leaks are found.

Overall, the lagoon appears to be well maintained and operated.

#### Cell Depth Monitoring

Cell depth monitoring is required once every two weeks for the three quiescent cells. The two large cells have poles with the depth markings; however cell 3 does not have any depth marker. Mr. Hudgens reported that the same level is maintained in all three cells at all times. They further stated that the poles sometimes become frozen in the ice on top of the ponds in the winter. Rather than remain fixed, the poles then rise along with the ice layer as the liquid levels increase. When this occurs, they have just been estimating the cell depth.

Failure to provide equipment necessary to perform required monitoring is a violation of the Iowa Administrative Code (IAC). **Therefore, Sunrise Farms must provide a more accurate means of cell depth measurement for all three cells.** The poles in the two larger cells may be anchored in place and a third one installed for cell 3, or alternative markers may be installed in all cells, such as concrete pads along the inner berms with markings indicating the depth. **Cell depth indicators must be installed no later than December 1, 2013 and written notification submitted upon completion.**