

IOWA DEPARTMENT OF NATURAL RESOURCES**ENVIRONMENTAL SERVICES DIVISION**

Field Office #5

502 E 9th Street, Des Moines, IA 50319

Phone: (515) 725-0268 FAX: (515) 725-0218

SITE SURVEY

SURVEY DATE:	October 31, 2019		
APPLICANT:	Cargill, Inc. 17540 Monroe Wapello Rd Eddyville, IA 52553	ENGINEER:	HR Green, Inc. 8710 Earhart Lane SW Cedar Rapids, IA 52404
REPRESENTATIVE:	Steven Phillips	PROJECT OFFICER:	Jerry Phipps, PE
NPDES PERMIT #:	6800100		
SUBJECT:	Site Survey for Construction of the Sanitary WWTF Upgrade for Cargill, Inc.		

GENERAL DESCRIPTION:

On the above date, a site survey was conducted for the proposed wastewater treatment facility to determine compliance with required separation distances as specified in 567 IAC 64.2 (455B). The project is described as the replacement of the existing aerated lagoon system used to treat sanitary wastewater with a new mechanical package treatment plant and ultraviolet (UV) disinfection system.

SITING REQUIREMENTS:

The Iowa Administrative Code, Section 567-64.2(3), requires a separation distance from the treatment units of 1,000 feet from the nearest inhabitable residences, other inhabitable structures, commercial buildings, and public shallow wells; a separation distance of 400 feet from public deep wells, private shallow wells, and lakes and public impoundments; and a separation distance of 25 feet from property lines and rights-of-way. However, if these separation distances cannot be maintained for an expansion/upgrade of an existing facility, which this is, then separation distances must be maintained at no less than 90 percent of the existing separation distances on the site.

The proposed location of the treatment facility is in an industrial area and is greater than 2,000 feet from a residence or a non-Cargill owned inhabitable structure.

All identified public wells are located greater than 1,000 feet from the proposed treatment plant site. All other wells are located greater than 400 feet from the proposed site, with the closest being a well owned by Cargill located approximately 412 feet east of the proposed site. No public impoundments or lakes were identified in the vicinity of the proposed site. The facility owns ample ground around the treatment plant to maintain the required separation to the property lines and the rights-of-way.

CONCLUSIONS:

As proposed, this site appears to meet the site requirements in Iowa Administrative Code 567-64.2(3) by maintaining the required separation distances.

AUTHENTICATION

INSPECTOR	NAME/TITLE: TOM ATKINSON, ENVIRONMENTAL SPECIALIST SENIOR 	DATE: 11/12/2019
REVIEWER	NAME/TITLE: JANET GASTINEAU, ENVIRONMENTAL SPECIALIST SENIOR 	DATE: 11/13/2019



Exhibit 11A
Iowa Department of Natural Resources
Wastewater Section
Construction Permit Application
SCHEDULE A, Construction Permit Application

APPLICANT	ENGINEER
Owner: <u>Cargill Inc.</u>	Firm: <u>HR Green, Inc.</u>
Address: <u>17540 Monroe Wapello Rd, Eddyville, IA 52553</u>	Address: <u>8710 Earhart Lane SW, Cedar Rapids, IA 52404</u>
Representative: <u>Steven Phillips</u>	Project Officer: <u>Jerry Phipps, P.E.</u>
Phone Number: <u>641-969-3918</u>	Phone Number: <u>319-841-4379</u>
Email: <u>steven_phillips@cargill.com</u>	Email: <u>gphipps@hrgreen.com</u>
Project Identification: <u>Sanitary WWTP Improvements</u>	
Estimated Start Date*: <u>Feb 2021</u> Estimated Completion Date: <u>Dec 2021</u>	

PLEASE RESPOND TO ALL QUESTIONS		Yes	No
1. Has an engineering report, facilities plan or other information previously been submitted for this project?		☐	☐
If Yes: Project Identity: _____ Date Submitted: _____			
2. Does the project and construction permit application, as submitted, follow the recommendations, design loadings, construction schedule, permit limits, and conclusions of the approved engineering report or facilities plan?		☐	☐
If No: Provide the design basis and technical information Justifying all changes.			
3. Are there three complete sets of plans and specifications accompanying this application?		☐	☐
For a minor gravity sewer extension within the meaning of 455B.183.3 Code of Iowa and Design Standard 11.1, two complete sets will be adequate for expeditious approval. For more complex projects, three sets of plans and specifications may be requested.			
4. Are approved standard specifications a part of this application?		☐	☐
If Yes: Approved Standard Specifications of _____ Date Approved: _____ (municipality or firm):			
5. Does each set of plans and specifications or engineering report accompanying this application contain a "professional engineering seal" executed in conformance with 542B.16, Code of Iowa?		☐	☐
If No: Processing will be delayed pending receipt of applicable design schedules and certified plans, specifications or engineering report.			
6. Is this a joint wastewater and water supply project?		☐	☐
If Yes: A construction permit application for the water supply project should be submitted separately to the Water Supply Section. A Water Supply permit fee may be required.			
7. Is the applicant to provide treatment of effluent resulting from this construction?		☐	☐
If No: A Sewage Treatment Agreement executed by the authority providing treatment must accompany this form.			
8. Is a new or amended operation permit necessary to use the facilities described in this application?		☐	☐
If Yes: A new or amended permit to operate may be requested prior to the receipt of a construction permit.			
9. Is any waterline located within 10 feet; or any private or public well, lake, or public recreation area located within 400 feet of the proposed construction?		☐	☐
If Yes: Identify and locate the facility(ies) relative to the proposed construction.			
10. Will construction inspection be conducted by a licensed engineer employed by the applicant?		☐	☐
If No: Name of Engineering Firm Conducting Inspection: _____			
11. Will this project utilize CWSRF loan funds?		☐	☒

APPLICANT	ENGINEER
I certify that I am the authorized representative of the owner and state that the project identified above is approved by the owner.	I certify that all aspects of the design included in this application conform to applicable standards contained in Chapter 567 IAC 64, or that an explanation and justification for any proposed variations from such standards is attached. I am familiar with the information contained in this application and, to the best of my knowledge, such information is complete and accurate.
Signature <u>[Signature]</u> Date <u>10/7/19</u>	Signature <u>[Signature]</u> Date <u>9/30/19</u>
*Estimated Construction Start Date: Complete applications must be submitted at least 120 days in advance of the date for starting construction in accordance with Rules 567 IAC 60.4 and 64.2	

Please complete the Schedule Checklist on the following page of this form.



Iowa Department of Natural Resources
Wastewater Section
Construction Permit Application
SCHEDULE F, Treatment Project Site Selection, Exhibit 11B

DNR USE ONLY

Project No.

Permit No.

Date Prepared

Sept 2019

Date Revised

Project Identity

Cargill Eddyville Sanitary WWTP Improvements

1. Project Location: County Monroe Section 12 Township 73N Range 16W

Is this a: ☐ New Site ☒ Existing Site ☐ Expansion of Existing Site

2. Provide the following as attachments:

- a) General plat layout of area within a five mile radius of proposed treatment works, noting all important features (USGS map may be used).
- b) Site layout of area within a 1,500 foot radius of the proposed treatment works with a scale of 1 inch equal to 200 feet, noting proposed treatment works, existing treatment works and all features listed in Subrule 567 IAC 64.2(3): inhabitable residences, commercial buildings, inhabitable structures, public shallow wells, public deep wells, private wells, lakes and public impoundments, property lines and rights-of-way, etc. The radius distance from lagoons shall be measured from the water surface.

3. Does the project lie in a floodplain? ☒ Yes ☐ No

Elevation of 100 year flood (MSL): 672 Elevation of 25 year flood (MSL): _____

Will the treatment works structures, including the electrical and mechanical equipment, be protected from physical damage by the 100-year flood? ☒ Yes ☐ No

Will the plant remain operational during the 25 year flood? ☒ Yes ☐ No

Method of flood protection: Grade at project site will be above 500-year flood.

4. Minimum distance to high water table: Approximately 15 feet.

5. Describe geology of area: Wisconsinan Loess, Pre-Illinoian Paleosol, Pre-Illinoian Glacial Till, Bedrock elevation 658 to 664 +/-

6. Describe soil conditions: Silty clay

7. State the minimum distances and directions from proposed treatment works to:

- a) Public shallow wells >1000 feet e) Lakes and public impoundments >400 feet
>25 ft (1,263 ft
NW - 117th
Lane)
- b) Public deep wells >400 feet f) Property lines and rights-of-way 412 SE -
Cargill-owned g) Other >1,000 ft
(2,060 feet SE,
nearest non-
Cargill owned
structure)
- c) Private wells Cargill-owned

d) Inhabitable residences, commercial buildings, or other inhabitable structures _____

8. Where any of the separation distance criteria of Subrule 567 IAC 64.2(3) will not be met, state the basis for requesting site approval (e.g. a written agreement with the owner of the inhabitable building has been obtained, the proposed separation distance is at least 90% of the existing separation distance and a problem has not existed or will be created, etc.)
not applicable

9. Direction of the prevailing winds: Varies, NW to SE, S to N

10. Sulfate content of the raw water supply source: 76 mg/L. Identify source: Rathbun Regional Water

11. Is this area available for expansion? ☒ Yes ☐ No If yes, how much? Over 1 acre

SE corner of corn milling

Location of area: facility site Identify owner of property: Cargill

12. Will site be accessible via an all-weather access road? ☒ Yes ☐ No Type: gravel

13. Source of STP water supply: Maintenance/Cleanup Rathbun Regional Water Potable? ☒ Yes ☐ No

Laboratory/Sanitary

Rathbun Regional Water

Potable? ☒ Yes ☐ No

Potable? ☐ Yes ☐ No

14. Receiving Stream: Miller Creek tributary to: Des Moines River

7-day 10-year Low Flow: 0 cfs. Source of stream flow data: WLA

Drainage area above site: 30.3 square miles

Is stream: ☐ intermittent ☒ continuous flow (perennial)

Describe use designation of receiving stream: A2, B(WW-2)

Instructions for Schedule F

1. Identify the project and location.
2. Important features which include public shallow wells, public deep wells, private wells, inhabitable residences, commercial buildings, or other inhabitable structures, lakes, public impoundments, and other public use or recreation areas, property lines, and rights-of-way, and any other feature affected by the water quality shall be included on the 1500 foot radius site layout.

Site layout shall indicate final proposed layout (location) of all proposed treatment works.

3. Completely describe any adverse impact on the treatment facility caused by high water.
4. Indicate minimum distance to typical wet weather groundwater level.
5. Self-explanatory.
6. Self-explanatory.
7. See subrule 567 IAC 64.2(3) of the Iowa Administrative Code for the required separation distances. When the separation distances in the referenced subrule cannot be maintained for the expansion, upgrading or replacement of existing facilities, the separation distances shall be maintained at no less than 90 percent of the existing separation distance on the site, providing no data is available indicating that a problem has existed or will be created. If requesting the 90 percent exception, the proposed separation distance from each potentially affected item or structure shall be identified on Schedule F or an attachment to the form.

The 90 percent exception criteria does not apply to new treatment plants at a new site.

8. Self-explanatory.
9. Self-explanatory.
10. Self-explanatory.
11. Self-explanatory.
12. Self-explanatory.
13. Self-explanatory.
14. Self-explanatory.

NOTE: Complete a separate Schedule F for each separate project site.

Figure 1
General Plat Layout

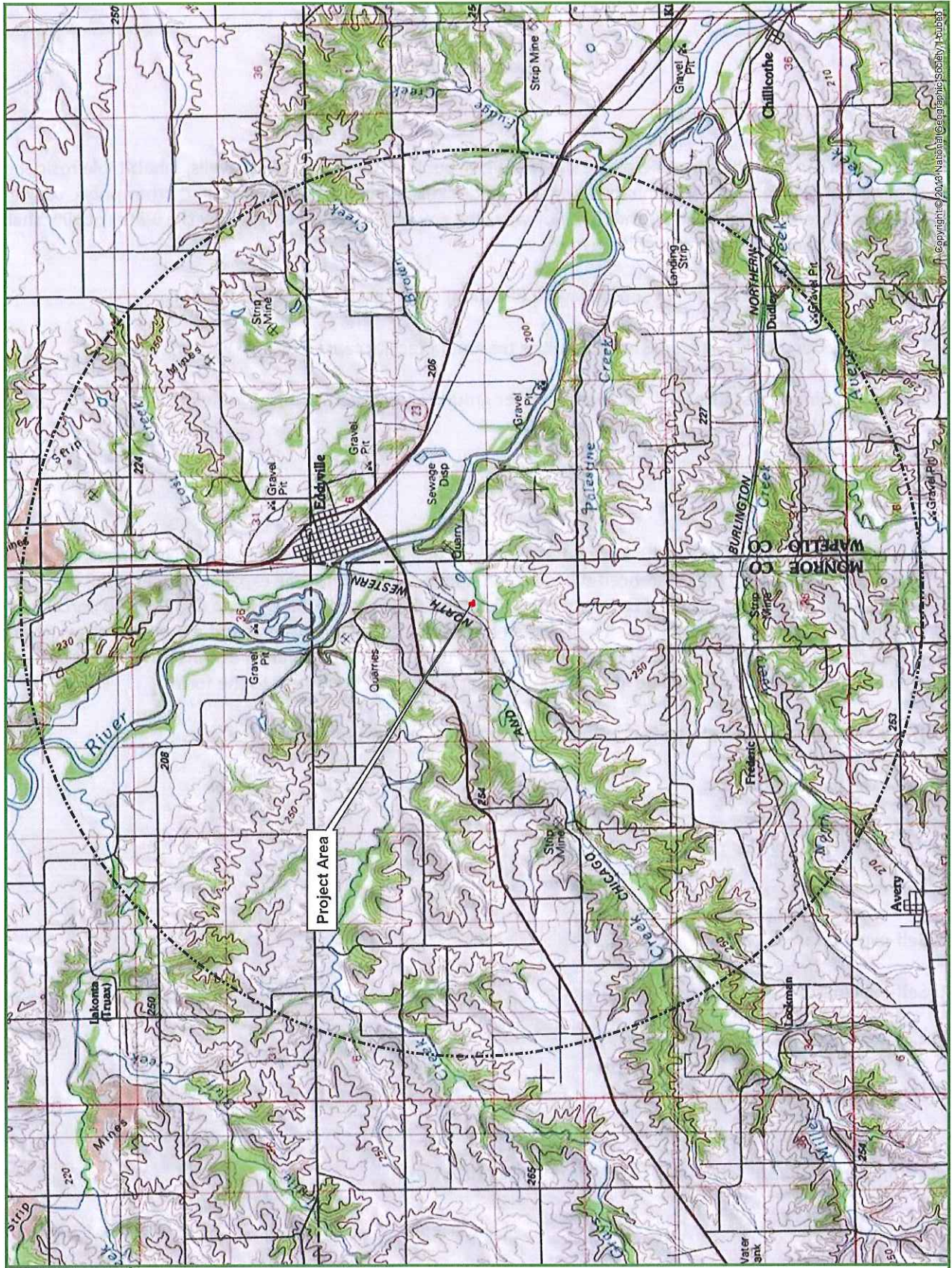


Figure 2 Site Layout

Page 1 of 4

Legend

All Wells

- IGS Well Database
- Registered abandoned wells

Roads



Project Area

Parcels (Approximate Extent)

400-ft Radius

1000-ft Radius

1500-ft Radius



N

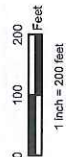


Figure 2 Site Layout

Page 2 of 4

Legend

- All Wells**
- Cargill Water Use Wells
 - IGS Well Database
 - Permitted private wells
 - Public Water Supply Wells
 - Registered abandoned wells
- Roads**
- Project Area**
- Parcels (Approximate Extent)**
- 400-ft Radius
 - 1000-ft Radius
 - 1500-ft Radius







Figure 3
Floodplain Map

Legend

- 100-year Floodplain Boundary
- 500-year Floodplain Boundary
- Project Area

Floodplain located within the
Project Area will be filled in.

