

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ROCK RIVER WATER RECLAMATION)
DISTRICT)
)
Petitioner,)
)
v.)
)
ILLINOIS ENVIRONMENTAL)
PROTECTION AGENCY)
)
Respondent.)

PCB No. 13-11
(Permit Appeal-Water)

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STATE OF ILLINOIS
Pollution Control Board

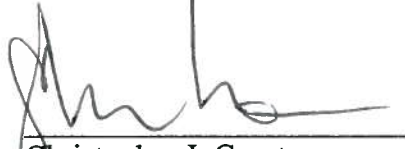
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NOTICE OF ELECTRONIC FILING

PLEASE TAKE NOTICE that on November 2, 2012, Respondent filed its Motion to Supplement Record, a copy of which is attached here to and served upon you.

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By LISA MADIGAN
Attorney General of the
State of Illinois



Christopher J. Grant
Assistant Attorney General
Environmental Bureau
69 W. Washington Street
Suite 1800
Chicago Illinois, 60602
(312)814-5388

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ROCK RIVER WATER RECLAMATION)	
DISTRICT)	
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Petitioner,)	
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v.)	PCB No. 13-11
)	(Permit Appeal-Water)
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MOTION TO SUPPLEMENT RECORD.

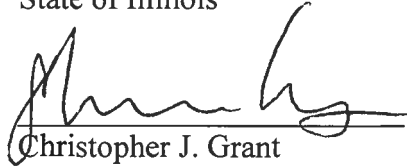
Now comes Respondent, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (“Illinois EPA”), by LISA MADIGAN, Attorney General of the State of Illinois, and requests that the Board allow it to supplement the record in this matter. In support thereof, Respondent states, as follows.

1. The record of Illinois EPA’s permit decision was filed on October 15, 2012. Hearing is now scheduled for November 28, 2012.
2. Respondent has determined that a draft memorandum prepared by Bill Buscher, Illinois EPA Bureau of Water, Groundwater Section, should be included in the record in this matter. The draft memorandum consists of six (6) pages, bate stamp numbers 867-872.
3. Accordingly, Respondent moves the Board to allow it to supplement the record in PCB 13-11 with these materials.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

by LISA MADIGAN
Attorney General of the
State of Illinois

A handwritten signature in black ink, appearing to read "Christopher J. Grant", written over a horizontal line.

Christopher J. Grant
Assistant Attorney General
Environmental Bureau
69 West Washington Street
Suite 1800
Chicago, Illinois 60602
(312) 814-5388

PC 13-11

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DRAFT RRWRD-Huff response 8 23 2011

The District proposes to impound raw sewage from excess flow events in a pond with an estimated maximum depth of 10 feet. In addition the District has proposed to use the pond for polishing secondary effluent. Secondary effluent polishing is proposed to be done 180 days out of the year. Initial applications rates are reported to average two inches per week (56,000 gallons per day) and are proposed to be adjusted up wards after demonstration of the performance of the wetlands. Application rates of Secondary effluent are estimated to e on the order of 2 inches per week. Excess flows are estimated to be received on an average of once a year with a maximum head of approximately 10 feet. The pond is proposed to be constructed on a site located in the flood plain of the Rock River which largely consists of alluvial sands and gravels situated below some finer grained cohesive soils. The finer grained cohesive soils will for the most part be removed during construction of the waste pond. The infiltration rates are predicted to be 6 inches per day for two days for each wet weather loading event. Dry weather hydraulic loading is expected to an average of two inches per week. The bottom of the pond is proposed to be completed at an elevation of 690 (AMSL) feet which is three feet above the typical non flood river elevation which was repirte dto be 687 feet (AMSL). Under 35 Il adm code Section 370.930 the standards for a pond of this type include but are not limited to the following: Top soil used in constructing the pond bottom (not including the seal) should be relatively incompressible and tight. Porous topsoil should be removed. Porous areas, such as gravel or sandy pockets, should be removed and replaced with well compacted clay. The pond bottom and embankments need to be sealed such that seepage loss through the seal is as low as possible. Seals consisting of soils, bentonite or synthetic liners may be used, provided that the permeability, durability and integrity of the proposed material is demonstrated for anticipated conditions. A seal consisting of soil materials shall have a thickness of at least 24 inches and a permeability of less than 1×10^{-7} cm per second. Provision shall be made in the specifications for demonstrating the permeability of the seal after completion of construction and prior to filling the pond.

The submission provided by the District did not address these issues. These issues will need to be addressed in the Districts permit application.

SAND BOX

B Section 370.930 Waste Stabilization Ponds and Aerated Lagoons>>

- a) Supplement To Engineer's Report
 - 1) The engineer's report shall contain pertinent information on location, geology, soil conditions, area for expansion, and any other factors that will affect the feasibility and

- 1) Organic Loading
 - A) Waste Stabilization Ponds

The organic loading on each cell shall not exceed the loadings listed below. If more accurate design information for the particular type waste is not submitted and supported by the engineer, subsequent cells shall be sized for an organic loading of 25% of each preceding cell.

 - i) North of Illinois Highway 116 (Pontiac) 22 lbs. BOD per acre per day.
 - ii) Between Illinois Highway 116 and U.S. Highway 50, 26 lbs. BOD per acre per day.
 - iii) South of U.S. Highway 50 (Salem-Carlyle) 30 lbs. BOD per acre per day.
 - B) Aerated Lagoons

The organic loading for aerated lagoons shall not exceed 0.5 lb. BOD[5] day per 1,000 cu. ft. first cell nor 0.3 lb. BOD[5] day per 1,000 cu. ft. on any subsequent cells. If more accurate design information for the particular type waste is not submitted and supported by the engineer, the second and third cells shall be sized for an organic loading of 25% of each preceding cell.
- 2) Depth
 - A) Waste Stabilization Ponds

The minimum operating liquid depth for waste stabilization ponds should be 2 feet. The maximum operating liquid depth shall be based on design storage requirements and shall not be less than 5 feet.
 - B) Aerated Lagoons

The design water depth for aerated lagoons should be 10 to 15 feet. This depth limitation may be altered depending on the aeration equipment, waste strength, climatic and geological conditions.
- 3) Aeration Requirements For Aerated Lagoons
 - A) Aeration systems shall be designed to provide, with the largest unit out of service, a minimum of 1,500 cu. ft. of air/lb. of BOD[5] in the raw waste (1.5 lbs. of oxygen/lb. of BOD[5] plus oxygen required to oxidize the ammonia present in the raw waste). The aeration equipment shall be located to ensure proper mixing and distribution of oxygen in proportion to oxygen demand in multiple cells. Splash type aerators with motors above the water surface may not be used.
 - B) Where hose type diffusers are used, the holes shall be of sufficient size to prevent plugging by dissolved solids incrustation.
- 4) Multiple Cells

A minimum of two cells to be operated in series or parallel should be provided for all waste stabilization ponds when they are utilized as a part of the primary and secondary treatment process. The number of cells required for aerated lagoons are dependent upon the degree of treatment required. Refer to subsection (c)(6).
- 5) Pond Shape

The shape of all primary cells should be such that there are no narrow or elongated portions. Round, square, or

rectangular ponds with a length not exceeding 3 times the width are considered most desirable. No islands, peninsulas, or coves should be permitted. Dikes should be rounded at corners to minimize accumulations of floating materials.

6) Solids Removal

All lagoon systems shall include effective solids removal facilities. Design criteria for acceptable solids removal facilities are contained in Subpart K. Other solids removal facilities may be approved in accordance with Section 370.520(b).

d) Construction Details

1) Embankments and Dikes

A) Material

Embankments and dikes shall be constructed of relatively impervious materials and compacted to at least 90% Standard Proctor density to form a stable structure. Vegetation and other unsuitable material shall be removed from the area upon which the embankment is to be placed.

B) Top Width

The minimum embankment top width should be 8 feet to permit access of maintenance vehicles. Lesser top widths will be considered for very small installations.

C) Maximum Embankment Slopes

i) Inner Slopes:

3 horizontal to 1 vertical.

ii) Outer Slopes:

3 horizontal to 1 vertical.

D) Minimum Embankment Slopes

i) Inner Slopes:

4 horizontal to 1 vertical. Flatter slopes are sometimes specified for larger installations because of wave action but have the disadvantage of added shallow areas conducive to emergent vegetation.

ii) Outer Slopes:

Outer slopes shall be sufficient to prevent surface runoff from entering the ponds.

E) Freeboard

Minimum freeboard shall be 3 feet except for very small installations 2 feet may be acceptable.

F) Erosion Control Requirements

For effective erosion control on the lagoon embankments, both seeding and riprap (or acceptable alternate) are required.

i) Seeding

Embankments shall be seeded from the outside toe to 1 foot above the high water line on the dikes, measured on the slope. Perennial type, low growing, spreading grasses that withstand erosion and can be kept mowed are most satisfactory for seeding of embankments. In general, alfalfa and other long rooted crops should not be used in seeding, since the roots of this type plant are apt to impair the water holding efficiency of the dikes. The County Agricultural Extension Agent

acceptability of the proposed treatment.

2) Supplementary Field Survey Data

The following information must be submitted in addition to that required in Section 370.111:

- A) The location and direction of all residences, commercial development, and water supplies within 1/2 mile of the proposed pond.
- B) Soil borings to determine surface and subsurface soil characteristics of the immediate area and their effect on the construction and operation of a pond located on the site.
- C) Data demonstrating anticipated percolation rates at the elevation of the proposed pond bottom.
- D) A description, including maps showing elevations and contours of the site and adjacent area suitable for expansion.
- E) Sulfate content of the water supply.
- F) Identification of the location, depth and discharge point of any field tile in the immediate area of the proposed site.

b) Location

1) Distance From Habitation

A pond site should be as far as practicable from habitation or any area which may be built up within a reasonable future period.

2) Prevailing Winds

If practicable, ponds should be located so that local prevailing winds will be in the direction of uninhabited areas. Preference should be given sites which will permit an unobstructed wind sweep across the ponds, especially in the direction of the local prevailing winds.

3) Surface Runoff

Adequate provisions shall be made to divert storm water around the ponds and otherwise protect pond embankments.

4) Ground Water Contamination

The requirements of the Illinois Groundwater Protection Act [415 ILCS 55] shall be taken into account in the siting of ponds. Ponds should not be located proximate to water supplies and other facilities subject to contamination or located in areas of porous soils and fissured rock formations. If conditions dictate using such a site, then the potential for and the means necessary to combat groundwater contamination shall be critically evaluated in the engineer's report. In such locations, the Agency will require groundwater monitoring wells.

5) Geology

Ponds shall not be located in areas subject to sink holes and mine subsidence. Soil borings and tests to determine the characteristics of surface soil and subsoil shall be made a part of preliminary pond site selection surveys. Gravel and limestone areas should be avoided; however, where conditions dictate locating ponds in such areas and the minimum separation between the pond bottom and gravel or limestone will be less than 10 feet, the Agency shall be contacted about the necessary precautions.

c) Basis Of Design

can usually advise as to hardy, locally suited permanent grasses which would be satisfactory for embankment seeding.

ii) Riprap

Riprap (or acceptable alternate) shall be placed on the inner slope of the embankments from 1 foot above the high water mark to 1 foot below the low water level. Riprap shall be comprised of a two-layer system consisting of a minimum 4-inch layer of coarse aggregate that meets the Illinois Department of Transportation (IDOT) Standard Specification for Road and Bridge Construction adopted January 1, 1997 for the gradations in the range of CA-6 through CA-10 and a minimum 12-inch layer of stone. The rock layer shall consist of evenly graded material with a maximum weight of 150 pounds per piece and shall meet the IDOT gradations for rock of either Grade No. 3 or 4.

2) Pond Bottom

A) Uniformity

Finished elevations shall not be more than 3 inches from the average elevation of the bottom. Shallow or feathering fringe areas usually result in locally unsatisfactory conditions.

B) Vegetation

The bottom shall be cleared of vegetation and debris. Organic material thus removed shall not be used in the dike core construction. However, suitable topsoil relatively free of debris may be used as cover material on the outer slopes of the embankment.

C) Soil

Soil used in constructing the pond bottom (not including the seal) shall be relatively incompressible and tight. Porous topsoil shall be removed. Porous areas, such as gravel or sandy pockets, shall be removed and replaced with well compacted clay. The entire bottom shall be compacted at or up to 4% above the optimum water content to at least 90% Standard Proctor density.

D) Seal

The pond bottom and embankments shall be sealed such that seepage loss through the seal is as low as possible. Seals consisting of soils, bentonite or synthetic liners may be used, provided that the permeability, durability and integrity of the proposed material is demonstrated for anticipated conditions. The results of a testing program that substantiates the adequacy of the proposed seal shall be incorporated into or accompany the engineering report. Standard ASTM procedures or similar accepted testing methods shall be used for all tests.

- i) A seal consisting of soil materials shall have a thickness of at least 24 inches and a permeability of less than 1×10^{-7} cm per second. Provision shall be made in the specifications for demonstrating the permeability of the seal after completion of construction and prior to filling the

pond.

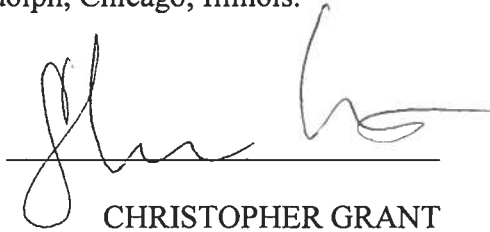
- ii) For a seal that consists of a synthetic liner, seepage loss through the liner shall not exceed a quantity equivalent to seepage loss through a soil seal as described above.

E) Prefilling

Prefilling the pond after completion of testing is recommended in order to protect the seal from weed growth, to prevent drying and cracking and to reduce odor during initial operation. The pond dikes must be completely prepared as described in subsection (d)(1)(F). Synthetic liners shall be protected from damage during installation and filling.

CERTIFICATE OF SERVICE

I, CHRISTOPHER GRANT, an attorney, do certify that I caused to be served this second day of November, 2012, Respondent's Motion to Supplement Record, and Notice of Filing, upon the persons listed below by placing same in an envelope bearing sufficient postage with the United States Postal Service located at 100 W. Randolph, Chicago, Illinois.



CHRISTOPHER GRANT

Mr. John Therriault
Assistant Clerk
Illinois Pollution Control Board
100 W. Randolph
Chicago, Illinois 60601
(by electronic filing)

Mr. Bradley P. Halloran
Hearing Officer
Illinois Pollution Control Board
100 W. Randolph
Chicago, Illinois 60601
(by hand delivery)

Mr. Roy M. Harsch
Drinker Biddle & Reath LLP
191 North Wacker Drive, Suite 3700
Chicago, IL 60606



OFFICE OF THE ATTORNEY GENERAL
STATE OF ILLINOIS

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NOV 05 2012

STATE OF ILLINOIS
Pollution Control Board

Lisa Madigan
ATTORNEY GENERAL

November 2, 2012

ORIGINAL
RETURN TO CLERK'S OFFICE

Mr. John Therriault
Illinois Pollution Control Board
100 W. Randolph, 12th floor
Chicago, Illinois 60601

Re: Rock River Water Reclamation District v. Illinois EPA, PCB 13011, additional documents for record

Dear Mr. Therriault:

I am attaching the original and four copies of a document to be included in the Permit Record in PCB 13-11. Also attached is a copy of the Motion filed today by electronic filing.

If you have any questions, please contact me.

Sincerely,

Christopher Grant
Assistant Attorney General
Environmental Bureau
69 W. Washington, #1800
Chicago, Illinois 60602
(312) 814-5388
cgrant@atg.state.il.us