

Please arrange to have the following public notice(s) printed in the legal column of the designated newspaper(s) as close to 5/31/2018 as possible

The Affidavit of Publication and billing notice should be sent to: North Dakota Department of Health, Judicial Wing, Division of Accounting, 600 East Boulevard Ave, Bismarck ND 58505.

Name of the Newspaper: Oakes Times

**North Dakota Department of Health Public Notice
Reissue of an AFO Permit**

Public Notice Date: 5/31/2018

Purpose of Public Notice

The Department intends to reissue the following Animal Feeding Operation AFO Permit under the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information

Public Notice Number: ND-2018-017
Application Date: 5/15/2018 Application Number: NDAFO0733
Applicant Name: Roney Farm
Mailing Address: 9227 104th Ave SE, Oakes, ND 58474
Telephone Number: 701.783.4532
Proposed Permit Expiration Date: 7/31/2023

Facility Description

The reapplication is for a beef feedlot facility that is located four miles south, six miles west and $\frac{3}{4}$ of a mile north of Oakes, ND, in the NE $\frac{1}{4}$ of Section 17, Township 130 N, Range 60 W, in Dickey County.

Additional information may be obtained upon request by calling (701) 328-5210 or by writing the above address. The complete application, draft approval, and related documents are available for review and reproduction at the Department. Copies of the draft approval and related items are also available for review at the Auditor's Office in Ellendale, ND and Post Office in Oakes, ND.

Tentative Determinations

The submitted application and supporting documentation have been reviewed by the Department. They assure that State Water Quality Standards will be protected, and the system will be constructed and can be operated in compliance with the North Dakota state requirements for storage and handling of manure and wastewater for an Animal Feeding Operation.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. Comments or requests should be directed to the ND Dept of Health, Div of Water Quality, 918 East Divide Ave, Bismarck ND 58501-1947 or by calling 701.328.5210.

All comments received by July 2, 2018 will be considered prior to finalizing the permit. If there is significant interest, a public hearing will be scheduled. Otherwise, the Department will issue the final permit within sixty (60) days of this notice. If you require special facilities or assistance relating to a disability, call TDD at 1.800.366.6868.

LIVESTOCK FACILITY FACT SHEET FOR

Roney Farm

Applicant:	Mitch & Scott Roney, Owners.
Location:	NE ¼ of Section 17, Township 130 N, Range 60 W in Dickey County 4 miles south, 6 miles west and ¾ of a mile north of Oakes, ND.
Existing:	The current permit is for 210 beef cattle on a contained open lot system. The drainage is contained in two runoff containment ponds.
Planned:	The new application is proposing to add an additional hoop barn to the existing permitted open lot system. The proposed expansion will have a maximum of 1,200 beef feeders with an average weight of 750 lbs and 300 beef cows with an average weight of 1,350 lbs.

Groundwater and Surface Water

Geology:	The facility lies in the Glaciated Plains section of the Central Lowland physiographic province. This area consists of collapsed glacial sediment that has been modified by numerous streams. Stratified and ice-contact drift occurs as kames, eskers, disintegration ridges and outwash. The facility is located in an area covered mainly by deltaic outwash deposits, wind blown sediment and ground moraines.
Topography:	This area is characterized by broad areas of low to moderate relief. Surface topography of the till upland is gently undulating with poorly integrated drainage and local relief generally less than 10 feet per mile.
Slope:	Slope is 5% in lot area.
Runoff:	7.8 acres of runoff to be contained in runoff ponds.
Elevation:	United States Geological Service (USGS) Quadrangle maps show an approximate elevation of 1,375 feet.
Site Drainage:	This facility drains towards wetlands in all directions, which are part of a network that is connected to the James River a Class IA stream. The river is at an elevation of 1,285 feet. The elevation difference from the facility to the James River is ninety feet over three and a half miles.
Water bodies:	The James River is located about three and a half miles east of the site.
Soils:	The primary soils at the site, as indicated by National Resource Conservation Services (NRCS) soil survey, include Barnes-Svea loams, Svea loam, and Hamerly-Tonka-Parnell complex. These soils consist mostly of clay of low plasticity (CL), CL- silt (ML), and clay of high plasticity (CH) materials. (See Appendix B)
Aquifers:	The facility is not located over a glacial drift aquifer.
Public Wells:	There are no public wells or irrigation wells located within two miles of the site. The facility uses rural water and an artesian well to obtain water for the feedlot. There are 3 North Dakota State Water Commission observation wells.
Private Wells:	Within two miles of the site there are 14 private wells. Private wells in the general area are from 30 feet to 1,250 feet deep. The owner's well is approximately 238 feet deep.

* Page reference for North Dakota Department of Health Guidelines for Permitted Livestock Manure Systems

Manure Handling and Disposal

<p>Manure Handling Description:</p>	<p>The lot areas will be split in three parts with the north and east lots draining to the north pond. The south lot area will drain towards the west into the south runoff pond. All runoff will pass through a solid separator before it enters either pond.</p> <p>The hoop barn will have a manure stacking pad built on the west end of the barn. Manure from the barn will be scraped and stockpiled on the stacking pad until it is spread on the fields.</p> <p>Clean water will be diverted around the facility into its respective natural drainage.</p>
<p>Expected Manure Quantities:</p>	<p>Open lot system – North Holding Pond <u>Runoff quantities from Design plans:</u></p> <p>25-year, 24-hour runoff: <u>3.0 in</u> 25-year, 24-hour rainfall: <u>4.1 in</u> 365-day Runoff: <u>3.9 in</u> 365-day Rainfall: <u>19.0 in</u> 365-day Evaporation: <u>32 in</u> Sludge: $0 \text{ yd}^3 \times 5.3 \text{ acres} = 0 \text{ yd}^3 \text{ or } 0 \text{ ft}^3$ **A screened settling basin will act as a solid separator.</p> <p>365-day runoff: <u>162,864 ft³/year or 1.2 Mgal</u></p> <p>Open lot system – South Holding Pond <u>Runoff quantities from Design plans:</u></p> <p>25-year, 24-hour runoff: <u>3.0 in</u> 25-year, 24-hour rainfall: <u>4.1 in</u> 365-day Runoff: <u>3.9 in</u> 365-day Rainfall: <u>19 in</u> 365-day Evaporation: <u>32 in</u> Sludge: $0 \text{ yd}^3 \times 2.5 \text{ acres} = 0 \text{ yd}^3 \text{ or } 0 \text{ ft}^3$ **A screened settling basin will act as a solid separator.</p> <p>365-day runoff: <u>87,858 ft³/year or 0.66 Mgal</u></p>
<p>Mortality Disposal:</p>	<p>Animal mortality must be buried on the owner's land at a depth of at least four feet below the ground level and covered with dirt to that depth. Animal mortality cannot be buried in an area where there could be surface or groundwater impact such as along river banks or in sandy soils with high water tables. The best locations for burying are on higher areas with heavy clay soil that are away from water and drainage ways.</p>

Odors

<p>Potential Sources:</p>	<p>The most significant source of potential odors appears to be the storage pond. Odors from the lots may be minimized with good house-keeping practices. Land application may present a source of short term odor problems. As the county does regulate the nature, scope, and location of this operation, the state setbacks do not apply.</p>
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Nearby Residence:	Type	Distance	Direction from facility
	1 Farm	1.2 miles	North
	1 Farm	2 miles	Northwest
	1 Farm	1.2 miles	Northwest
	1 Farm	0.4 miles	Southwest
	3 Farms	1.4 miles	Southwest
	1 Farm	2 miles	Southeast
	2 Farms	1.4 miles	Southeast
	1 Farm	1.6 miles	Southeast

Specifications

Manure Storage Structures	
Required Manure Storage:	<p>Type: North Runoff Pond</p> <p>Pond Dimensions Design Volume: <u>193,644 ft³ or about 1.45 Mgal</u> Dimensions are irregular. Volume was calculated using the area and the depth of each area. The bottom has a surface area of 22,663 ft² and a top liquid area of 41,883 ft². Planned Freeboard: <u>2.5 ft</u> Surface area: <u>Approx 0.96 ac or 41,883 ft²</u></p> <p>Type: South Runoff Pond</p> <p>Pond Dimensions Design Volume: <u>122,634 ft³ or about 0.92 Mgal</u> Dimensions: Length <u>135 ft</u> Width <u>115 ft</u> Depth <u>8 ft</u> Planned Freeboard: <u>3.5 ft</u> Surface area: <u>Approx 0.61 ac or 28,811 ft²</u></p> <p>The facility has the capacity to store the designed runoff from the 5.3 and 2.5 acre lots.</p> <p>Type: Manure Stacking Pad</p> <p>Pad Dimensions Design Surface Area: <u>1,501.4 ft²</u> Design Volume: <u>625 ft³</u> Required 25-year, 24-hour Volume: <u>513 ft³</u></p> <p>The facility has the capacity to store manure from the confined hoop barns.</p>

<p>Earthen runoff Pond:</p>	<p><u>Location:</u></p> <p>The proposed location appears suitable based on soil survey and ground water survey information. Soil borings were completed by the facility's engineer. The borings indicate that the Unified Classification for the subsoil at the site is generally CL to a depth of about 12 feet. The soil was moist, but a water table was not encountered. The bottoms of the proposed ponds are to be at relative elevations of 86 and 87 feet. See Appendix C at end of document.</p> <p><u>General Requirements:</u></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"><u>Embankments:</u></td> <td style="width: 50%;"><u>Pond Design:</u></td> </tr> <tr> <td>Inside Slope</td> <td>4:1</td> </tr> <tr> <td>Outside Slope</td> <td>4:1</td> </tr> <tr> <td>Top Width</td> <td>10 feet</td> </tr> <tr> <td>Compaction & Settling Factor</td> <td>32% combined total</td> </tr> </table>	<u>Embankments:</u>	<u>Pond Design:</u>	Inside Slope	4:1	Outside Slope	4:1	Top Width	10 feet	Compaction & Settling Factor	32% combined total
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Compaction & Settling Factor	32% combined total										
<p>Clay Liner Construction Testing:</p>	<p><u>Liner:</u></p> <p>A clay liner is not required in any of the ponds however if unsuitable material is located under a portion of the pond, the engineer has indicated this area will be over excavated and replaced with 2 foot of compacted clay material.</p> <p>Liner Materials NA</p> <p>Density & Moisture content NA</p> <p>Permeability NA</p>										
<p>Manure Transfer Components: * pg 37</p>	<p><u>Manure Storage Structure Considerations:</u></p> <p>The facility has incorporated two solid separators into the design; all the runoff will go through the separators. The solids separators will be constructed from reinforced concrete with a base thickness of five inches and a wall thickness of eight inches. The walls will be connected to the base with reinforcement bars and a key way to reduce the amount of seepage at the joint. The separator will have a 20 foot by 20 foot base with a four-foot wall along three sides. The solid separator will have removable plastic screens to retain solids and to ease cleaning. There are two underground pipes that take the dirty water from the solid separators to their respective runoff ponds.</p> <p>The facility has incorporated a permanent manure stacking pad into the design. All the manure from the hoop barn will be stacked on the pad until it is applied to the fields. The pad must be designed to contain a 25-year, 24-hour rainfall event on the pad.</p>										
<p>Inlet Lines and Outlet Structures:</p>	<p>Inlet Aprons in Earthen Manure Storage Ponds must be provided. The aprons are to be made from concrete or riprap. For bottom inlets, the apron must be at least 6 ft². For inlets on a side slope, the apron must direct manure to the pond bottom and be shaped to prevent erosion to the slope or bottom.</p>										
<p>Plumbing:</p>	<ul style="list-style-type: none"> - The minimum required pipe diameter is 10 inches for gravity drain, except when another size is recommended by a manufacturer for an appropriate equipment application. - All pipes must be made from corrosion resistant material. - Pipe must be sloped to allow good drainage and minimize plugging. 										

<p>Diversions:</p>	<p>This facility will utilize road ditches as clean water diversions. The watershed area varies in each ditch. The slope in this facility will direct water into its respective drainage.</p> <p>Design Criteria: Sizing Expected runoff from a 25-year storm event Freeboard 0.3 feet (minimum) Side Slopes 3:1 max Ridge width 4 feet minimum Settlement Factor 32%</p> <p>The channel grade must be designed such that the velocity will not cause excessive erosion for the type of soil and vegetation or other lining. The maximum acceptable channel velocity may range from 2.0 ft/sec on sandy soils with no vegetation to 3.5 ft/sec on clayey soils with vegetation.</p>
<p>Earth Fill:</p>	<p>The design plans indicate vegetation and organic material will be stripped and removed from the footprint of the embankment. Organic materials or frozen soil will not be used in fill material. Class C compaction shall be used for earth fill unless otherwise noted. Appropriate topsoil as deemed by the engineer will be used as cover material on the outside slopes of the embankment. The embankment will be seeded to a shallow rooted perennial grass.</p>
<p>Groundwater Monitoring Plan: * pg 51</p>	<p>Ground water monitoring wells will not be required at the site at this time. If conditions are shown otherwise, then the installation of monitoring well will be required.</p>
<p>Operation & Maintenance Plan:</p>	<p>The operation and maintenance plan calls for cleaning of settling areas and repair as needed to maintain original condition. The runoff containment ponds must be pumped down when they reach the marker to maintain capacity. Earth work must be inspected annually and repaired as needed. Drains and diversions must be mowed and maintained when soil is dry and firm. Sediment build-up or erosion in drainage ways must be cleaned and re-graded to designed specifications. Manure shall be removed annually and applied in accordance with the nutrient management plan.</p>

Nutrient Management Plan & Manure Application

<p>General Conditions:</p>	<p>Manure shall be handled to ensure surface waters are not impacted and minimize nuisance concerns for nearby residents. Factors to consider when choosing methods of management and application include but are not limited to: the volume of manure, the topography, location of surface and ground water sources, and distance from neighboring residents.</p>
<p>Manure application:</p>	<p>Manure will be scraped from the lots and barns and will be land applied in both the spring and fall by broadcasting with a spreader. Manure will be incorporated. Manure will be land applied at a rate not to exceed high phosphorus levels, so it will be utilized for crop production and so manure will not get into waters of the state.</p>

<p>Record keeping:</p>	<p>The facility must make the following records available to the department for review upon request for a minimum of 5 years from the date they are created:</p> <ul style="list-style-type: none"> • Document routine visual inspections of the production area and containment structures. • Maintain a rain gauge at the production area and record measurable rainfall events. • How, when and where the manure, litter, or process wastewater was reused or disposed. • Weather conditions at the time and 24 hours prior to manure application. • Mortalities management and practices used. • The date, time and estimated volume of any overflow outside of the containment area. • Annual nutrient sampling of: manure, litter and/or process wastewater and soil samples where manure has been applied that year. • An explanation of how the manure application rates were determined with calculations of the planned and actual total nitrogen and phosphorus to be applied to each field. • The crops grown and crop yields. • Inspection of manure application equipment including method, frequency, dates and repairs made if leaks were found. • Setbacks, vegetated buffers or other alternative practices used when land applying manure near surface water or potential conduits to surface water. • If manure, litter or process wastewater is transferred to other persons or entities; the recipient's name and address, approximate amount transferred, and the date of the transfer should be documented. • Any actions taken to correct deficiencies. 															
<p>Expected Manure Volumes & Nutrients:</p>	<p>Expected Manure Quantities:</p> <table border="0" data-bbox="354 976 1274 1134"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Daily</u></th> <th style="text-align: center;"><u>365 Days</u></th> </tr> </thead> <tbody> <tr> <td>Volume of animal manure</td> <td style="text-align: center;">8,549.6 gal/day</td> <td style="text-align: center;">3.1 Mgal</td> </tr> <tr> <td>Nitrogen (N)</td> <td style="text-align: center;">403.6 lbs./day</td> <td style="text-align: center;">147,332 lbs.</td> </tr> <tr> <td>Phosphorus (P₂O₅)</td> <td style="text-align: center;">304.7 lbs./day</td> <td style="text-align: center;">111,220 lbs.</td> </tr> <tr> <td>Potassium (K₂O)</td> <td style="text-align: center;">354.6 lbs./day</td> <td style="text-align: center;">129,424 lbs.</td> </tr> </tbody> </table> <p>Values from USDA Ag Manure Management Field Hand Book, Chapter 4</p> <p>Nitrogen losses anticipated:</p> <p style="margin-left: 40px;">Storage: 30% for manure pack and open pond Land apply method: 25% for surface applying and incorporating</p>		<u>Daily</u>	<u>365 Days</u>	Volume of animal manure	8,549.6 gal/day	3.1 Mgal	Nitrogen (N)	403.6 lbs./day	147,332 lbs.	Phosphorus (P ₂ O ₅)	304.7 lbs./day	111,220 lbs.	Potassium (K ₂ O)	354.6 lbs./day	129,424 lbs.
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<p>Land Application of Manure:</p>	<p>Estimate of land needed for manure application:</p> <p>If the nutrient management plan's phosphorus risk assessment indicates a medium to low risk of movement of phosphorus, facilities are allowed to apply at agronomic nitrogen rates in accordance with the phosphorus index.</p> <p>If the nutrient management plan's phosphorus risk assessment indicates a high potential for movement or if soil test show phosphorus levels in the high range, the facility is required to apply the manure at agronomic phosphorus rates.</p> <table border="0" data-bbox="649 525 1218 630"> <thead> <tr> <th style="text-align: center;"><u>Nutrient</u></th> <th style="text-align: center;"><u>Rate</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Phosphorus (w/no losses)</td> <td style="text-align: center;">*40 lbs. P₂O₅</td> </tr> <tr> <td style="text-align: center;">Nitrogen (w/ 47.5% losses)</td> <td style="text-align: center;">*100 lbs. N/acre</td> </tr> </tbody> </table> <p>Anticipated Crop grown: <u>Soybeans, Corn-Grain</u></p> <p>Risk Assessment for Phosphorus: <u>Low</u></p> <p>Amount of land estimated for spreading at agronomical rates: <u>773 acres</u></p> <p>Amount of land identified by applicant for land application: <u>1,682.3 acres</u></p> <p>The department realizes that the nitrogen in manure is not all available to the crop the first year and therefore the manure will typically be applied at rates higher than the rates listed above. However, the organic nitrogen becomes available the following years and so the manure cannot be applied at the same rate in subsequent years. These figures are used to estimate the total acres that would be needed over several years of application using proper rotation of crop-land and/or calculating nitrogen that is carried over to the following years.</p> <p>*Average rates, actual rates depend upon crops grown and projected yield</p>	<u>Nutrient</u>	<u>Rate</u>	Phosphorus (w/no losses)	*40 lbs. P ₂ O ₅	Nitrogen (w/ 47.5% losses)	*100 lbs. N/acre
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Phosphorus (w/no losses)	*40 lbs. P ₂ O ₅						
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<p>Permits:</p>	<p>The facility will require a State AFO Permit as well as an NDPDES Storm Water Permit.</p>						
<p>Disclaimer:</p>	<p>This design review is intended to assess a livestock facility's ability to contain, divert, store and properly apply manure and/or runoff water to meet department requirements, to prevent detrimental impacts the quality of waters of the state, and to minimize the potential for odor concerns from livestock facilities. It does not include an assessment of the structural integrity of livestock facilities or manure handling structures such as those made of concrete, metal, wood, plastic, or other material.</p>						

Approval Conditions:

1. The application indicated the facility will house **1,200 beef feeders, and 300 beef cows**. The Department must be notified in writing if there is an expansion in the number of livestock, change in ownership of the facility, significant changes in the physical operation of the facility or if the lot area where livestock are concentrated is expanded. Changes may require an update to the approval or issuance of a new approval.
2. Operation and Maintenance plans and standard operating procedures must be followed as submitted to the department. Changes to the Operation and Maintenance plan must be approved by the Department prior to being implemented. There must be regular and adequate maintenance and upkeep to prevent degradation of the structures, to ensure the

system continues to operate as designed, to ensure the storage pond does not overflow, and to ensure manure or waste water does not discharge into waters of the state. Operation and maintenance plans mean description of the equipment, methods, and schedules for: inspection, monitoring, operation and maintenance of the animal feeding operation (manure storage structures, water pollution control structures, and the production area); and controlling water pollution and air pollution including odors to protect the environment and public health. (Design manual, 6.7, page 42)

3. Notice of Completion and all results of testing completed on the clay liner or the manure storage structures must be sent to the Department when construction is complete.
4. All embankments must be constructed of relatively impervious materials and compacted sufficiently to form a stable structure. An appropriate liner material must be used to prevent excess seepage from the storage pond. Seepage from the storage pond shall not exceed 1/16 inch per day and shall not detrimentally impact waters of the state.
5. Mortality must be disposed of in accordance with NDCC section 36-14-19, in a manner acceptable to the North Dakota Board of Animal Health, and so they will not impact waters of the state.
6. Land application of manure must be in accordance with the nutrient management plan. Manure must be applied in a manner, so it will not be washed into waters of the state. The Department may require immediately incorporating the manure into the soil or leaving a buffer distance to prevent impacts to waters of the state or impacts from odors.
7. The following records pertaining to nutrient management must be maintained for a minimum of three years: The crops grown and an expected realistic crop yields; the dates(s) manure, litter or process waste water is applied to each field; test results from testing of manure, litter, and process wastewater, that are not more than three years old, and test results of the soil where manure was applied that are not more than three years old; and setbacks, vegetated buffers or other alternative practices used when land applying manure near surface water or potential conduits to surface water. (Design manual, 7.7, number 4, page 50)
8. This approval shall in no way permit or authorize the discharge of any objectionable odorous air contaminant which is in excess of the limits established in North Dakota Administrative Code Ch. 33-15-16 of the North Dakota Air Pollution Control Rules. If the Department determines odors from the facility exceed limits, appropriate steps will be required, within a reasonable time, to control and reduce odors from the facility site. This may include requiring the installation of a cover on the ponds or other odor control measures.
9. This approval shall in no way permit or authorize the maintenance of a public nuisance or danger to public health or safety.
10. The Department must be notified if there is a change in address or other contact information for the facility.
11. The facility must maintain adequate storage capacity to contain a 25-year, 24-hour storm event.

12. Any deficiencies discovered during the inspections shall be corrected as soon as possible; chemicals or other contaminants handled on site shall not be disposed of in a structure used for storage or treatment of manure, process wastewater or storm water unless it is specifically designed for that purpose; and the operator of a livestock facility requiring a permit should maintain a rain gauge at the production area and record measurable rainfall events. (Design manual, 6.2, page 40)
13. There must be regular and adequate maintenance and upkeep to prevent degradation of the structures, to ensure the system continues to operate as designed, to ensure the containment system does not overflow, and to ensure manure or wastewater does not discharge into waters of the state.

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Appendix A Water Commission Well Data

Location	Use	Depth	Dia.	Aquifer
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13006017DA	Dom	232	4	-
13006017DAA	Dom	50	24	-
13006018DDC	Dom	163	4	-
13006021CD	Dom	1244	2	-
13006027BC	Dom, Stock	46	-	-
13006028CC	Dom, Stock	1210	2	-
13006112CBC	Observation	35	2	Guelph
13006112CCB	Observation	30	2	Guelph
13006112CCB	Observation	30	2	Guelph
13006112CD	Dom	53	4	Guelph
13006124BCB	Dom	70	3	-
13006125AA	Stock	1250	2	Dakota
13006125ACA	Stock	1250	2	Dakota
13006022	Stock	38	5"	-

Appendix B Soil Survey Data

Map unit	Name	Description	Bedrock Depth	Seas. Water table	Unified soil class*	Perm in/hr	Lagoon Restrict.
15	Barnes - Svea loams, 1 to 3% slopes.	<p>The Barnes series consists of very deep, well drained, moderately or moderately slowly permeable soils that formed in loamy till. These soils are on till plains and moraines.</p> <p>The Svea series consists of very deep, well or moderately well drained soils that formed in calcareous till and local alluvium from the till. Permeability is moderate in the solum and moderate or moderately slow in the C horizon. These soils are on concave positions on till plains.</p>	0 - 60"	4 - > 6'	CL, CL- ML	0.6 - 2.0 0.2 - 0.6	Moderate: slope, seepage, wetness.
15B	Barnes - Svea loams, 3 to 6% slope	<p>The Barnes series consists of very deep, well drained, moderately or moderately slowly permeable soils that formed in loamy till. These soils are on till plains and moraines.</p> <p>The Svea series consists of very deep, well or moderately well drained soils that formed in calcareous till and local alluvium from the till. Permeability is moderate in the solum and moderate or moderately slow in the C horizon. These soils are on concave positions on till plains.</p>	0 - 60"	4 - > 6'	CL, CL- ML	0.6 - 2.0 0.2 - 0.6	Moderate: slope, seepage, wetness.
40	Hamerly-Tonka-Parnell complex, 0 to 3% slopes.	<p>The Hamerly series consists of very deep, somewhat poorly drained soils that formed in calcareous loamy till. Permeability is moderate in the upper horizons and moderate or moderately slow in the lower horizons. These soils are on flats on lake plains and on convex slopes surrounding shallow depressions and on slight rises on till plains.</p> <p>The Tonka series consists of very deep, poorly drained, slowly permeable soils that formed in local alluvium over till or glaciolacustrine deposits. These soils are in closed basins and depressions on till and glacial lake plains.</p> <p>The Parnell series consists of very deep, very poorly drained and poorly drained soils that formed in water-sorted sediments from glacial drift in depressions, swales and drainageways on glacial moraines. These soils have slow permeability.</p>	0 - 60"	0-4'	CL, CL- ML, CH	0.6 - 2.0 0.2 - 0.6 0.06 - 0.2	Severe: ponding, wetness.

70	Svea loam, 0 to 1% slopes.	The Svea series consists of very deep, well or moderately well drained soils that formed in calcareous till and local alluvium from the till. Permeability is moderate in the solum and moderate or moderately slow in the C horizon. These soils are on concave positions on till plains.	0 - 60"	4 - 6'	CL, CL- ML	0.6 - 2.0 0.2 - 2.0	Moderate: seepage, wetness.
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Appendix C Soil Boring Information:

Depth	TP 1	TP 2	TP 3	TP 4	TP 5	TP 6	TP 7
Elev	92	94	99	92	95	95	92
0 - 1	OL	OL	OL	OL	OL	OL	OL
1 - 2	CL	CL	OL	CL	CL	CL	CL
2 - 5	CL	CL	CL	CL	CL	CL	CL
5 - 6	CL Pond Btm @ 6'	CL	CL	CL	SP	CL	CL Pond Btm @ 6'
6 - 8	CL	CL	CL	CL	SP Pond Btm @ 8'	CL Pond Btm @ 8'	CL
8 - 12	CL	CL	CL	CL	CL	CL	CL
12 - 15	CL	---	---	---	CL	CH	CL
15 - 16	---	---	---	---	CL	CH	CL
16 - 18	---	---	---	---	CL	CH	---

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APPROVAL TO OPERATE

An Animal Feeding Operation

In compliance with Chapter 33-16-03.1 of the North Dakota Department of Health rules as promulgated under Chs. 61-28 and 23-25 of North Dakota Century Code (NDCC), approval of the **Roney Farm** livestock facility located in the NE $\frac{1}{4}$ of Section 17, Township 130 N, Range 60 W, in Dickey County, North Dakota is granted provided the following conditions are met:

1. The application indicated the facility will house **1,200 beef feeders, and 300 beef cows**. The Department must be notified in writing if there is an expansion in the number of livestock, change in ownership of the facility, significant changes in the physical operation of the facility or if the lot area where livestock are concentrated is expanded. Changes may require an update to the approval or issuance of a new approval.
2. Operation and Maintenance plans and standard operating procedures must be followed as submitted to the department. Changes to the Operation and Maintenance plan must be approved by the Department prior to being implemented. There must be regular and adequate maintenance and upkeep to prevent degradation of the structures, to ensure the system continues to operate as designed, to ensure the storage pond does not overflow, and to ensure manure or waste water does not discharge into waters of the state. Operation and maintenance plans mean description of the equipment, methods, and schedules for: inspection, monitoring, operation and maintenance of the animal feeding operation (manure storage structures, water pollution control structures, and the production area); and controlling water pollution and air pollution including odors to protect the environment and public health. (Design manual, 6.7, page 42)
3. Notice of Completion and all results of testing completed on the clay liner or the manure storage structures must be sent to the Department when construction is complete.
4. All embankments must be constructed of relatively impervious materials and compacted sufficiently to form a stable structure. An appropriate liner material must be used to prevent excess seepage from the storage pond. Seepage from the storage pond shall not exceed 1/16 inch per day and shall not detrimentally impact waters of the state.
5. Mortality must be disposed of in accordance with NDCC section 36-14-19, in a manner acceptable to the North Dakota Board of Animal Health, and so they will not impact waters of the state.
6. Land application of manure must be in accordance with the nutrient management plan. Manure must be applied in a manner, so it will not be washed into waters of the state. The Department may require immediately incorporating the manure into the soil or leaving a buffer distance to prevent impacts to waters of the state or impacts from odors.

7. The following records pertaining to nutrient management must be maintained for a minimum of three years: The crops grown and an expected realistic crop yields; the dates(s) manure, litter or process waste water is applied to each field; test results from testing of manure, litter, and process wastewater, that are not more than three years old, and test results of the soil where manure was applied that are not more than three years old; and setbacks, vegetated buffers or other alternative practices used when land applying manure near surface water or potential conduits to surface water. (Design manual, 7.7, number 4, page 50)
8. This approval shall in no way permit or authorize the discharge of any objectionable odorous air contaminant which is in excess of the limits established in North Dakota Administrative Code Ch. 33-15-16 of the North Dakota Air Pollution Control Rules. If the Department determines odors from the facility exceed limits, appropriate steps will be required, within a reasonable time, to control and reduce odors from the facility site. This may include requiring the installation of a cover on the ponds or other odor control measures.
9. This approval shall in no way permit or authorize the maintenance of a public nuisance or danger to public health or safety.
10. The Department must be notified if there is a change in address or other contact information for the facility.
11. The facility must maintain adequate storage capacity to contain a 25-year, 24-hour storm event.
12. Any deficiencies discovered during the inspections shall be corrected as soon as possible; chemicals or other contaminants handled on site shall not be disposed of in a structure used for storage or treatment of manure, process wastewater or storm water unless it is specifically designed for that purpose; and the operator of a livestock facility requiring a permit should maintain a rain gauge at the production area and record measurable rainfall events. (Design manual, 6.2, page 40)
13. There must be regular and adequate maintenance and upkeep to prevent degradation of the structures, to ensure the system continues to operate as designed, to ensure the containment system does not overflow, and to ensure manure or wastewater does not discharge into waters of the state.

The above conditions are considered part of the proper operation of the facility. If any of the above conditions are not met, the Department must be notified in writing, within five (5) days. Any noncompliance with the approval conditions or with state requirements must be reported to the Department as soon as possible after the facility becomes aware of the noncompliance condition. Failure to meet these requirements may result in monetary fines and/or revocation of this approval to operate.

Permission to begin construction becomes effective upon signature of this Approval by the Department. The approval is based on construction being completed as per the design plans reviewed by the Department. If any structural changes are made that are different than these design plan, the Department must be notified in writing and approval obtained, prior to making

these changes.

Authorized Department personnel shall be permitted access to the facility to determine compliance with Department rules and regulations. Department inspections will abide by all security measures implemented by the owner or operator to protect the health and safety of the workers and animals at the facility.

The owner/operator of this facility shall comply with all State and Federal environmental laws and rules, and shall also comply with all local building, fire, zoning and other applicable ordinances, codes, and rules.

This approval becomes effective when construction is completed, and Notice of Completion and results of testing completed on the clay liner or the manure storage structures are received by the Department.

I certify that I have read and understand the above information and agree to operate the facility in a manner that will meet all the conditions listed herein.

OWNER/OPERATOR CONSENT

FOR THE NORTH DAKOTA
DEPARTMENT OF HEALTH

By _____
(signature)

By _____

By _____
(print name here)

By Karl Rockeman, Director
Water Quality Division

Date _____

Date _____