Elmwood Farms

Section 8 - NMP AMENDMENT

NARRATIVE RATE
NUTRIENT MANAGEMENT PLAN

Illinois General NPDES Permit IL0074705

Prepared for:

Elmwood Farms, L.L.C.

Prepared by:

MAURER-STUTZ
ENGINEERS SURVEYORS

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Peoria, IL 61604
309.693.7615

Date:

February 2013

MSI Project No. 23804006.11

Table of Contents

The terms of the NMP with respect to rates of application of manure, litter, and process wastewater include the following:

- The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field.
- The crops to be planted in each field or any other uses such as pasture or fallow fields (including alternative crops identified in accordance with 40 CFR part 122.42(e)(5)(ii)(B).
- The realistic yield goal for each crop or use identified for each field.
- The nitrogen and phosphorus recommendations from sources specified by the Director for each crop or use identified for each field.
- The methodology by which the NMP accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied:
  - Results of soil tests conducted in accordance with protocols identified in the NMP, as required by 40 CFR part 122.42(e)(1)(vii).
  - Credits for all nitrogen in the field that will be plant available.
  - The amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied.
  - Consideration of multiyear phosphorus application.
  - Accounting for all other additions of plant-available nitrogen and phosphorus to the field.
  - The form and source of manure, litter, and process wastewater.
  - The timing and method of land application.
  - Volatilization of nitrogen and mineralization of organic nitrogen.

- Alternative crops that are not in the planned crop rotation but that are listed, by CMU, where the plan includes the realistic crop yield goals and the nitrogen and phosphorus recommendations for each such crop.

The following projections in the NMP are not terms of the NMP:

- The planned crop rotations for each field for the period of permit coverage.
- The projected amount of manure, litter, or process wastewater to be applied.
- Projected credits for all nitrogen in the field that will be plant available.
- Consideration of multiyear phosphorus application.
- Accounting for all other additions of plant-available nitrogen and phosphorus to the field.
- The predicted form, source, and method of application of manure, litter, and process wastewater for each crop.

Timing of application for each field, as far as it concerns the calculation of rates of application.

Executive Summary

The purpose of this amendment to the manure management plan is to detail updated information for Elmwood Farms, LLC of Elmwood, IL (f/k/a Inwood Dairy, New Horizons Dairy, Hill Crest Dairy, L.L.C.).

This amendment contains provisions for a narrative rate nutrient management plan and updates to facility contacts in the Section 1 General Information and Section 3 Emergency spill recovery plan.

Elmwood Farms, LLC is a large Dairy CAFO. Replacement stock (heifers) and some dry cows are raised off site. The dairy plans to continue applying manure to crop land at agronomic rates.

For the number of animals at the facility, refer to the manure management plan submitted August 2010. The facility animal numbers/capacity have not changed.

The facility is operated by Scott Etcher. Manure Systems and handling is managed by Alberto Medrano, the farm manager.

Manure nutrient content is determined from laboratory analysis. Mineralization rates for organic nitrogen have been calculated according to MWPS-18 Table 10-5, 0.35 for anaerobic liquid and 0.30 for solid manure. Application rates will be based on the annual agronomic nitrogen of the crops to be grown. Furthermore, manure application is not planned for fields where the bray 1 phosphorus soil tests are more than 300 lb/acre (none exist).

Manure Source	Amount	Units	PAN lb/unit	P2O5 lb/unit	K20 lb/unit
DAIRY ANAEROBIC LIQUID INJECTED	18500	1000 gal	8.44	2.80	8.2
DAIRY SOLIDS SOLID BROADCAST W/ INCORP	5100	Ton	5.34	2.80	3.70

***** Nutrient values calculated above are based on past manure analysis.

Approximately 528 acres are available for use by this facility for land application of manure and process wastewater. Based on facility manure and process wastewater production volumes and planned crop rotations, approximately 520 acres are needed for land application.

Application Methods

Three methods of manure application are utilized. Solid wastes will be spread using Slinger-type manure spreaders. Liquid manure will be applied using an Aerway application/incorporation when applying to hay, pasture, or other multi-year crops. Liquid manure will be subsurface injected on all grain crop land (corn silage, wheat, soybeans, etc.). All Manure applied to fields in sections 19, 30, and 31 will be injected or incorporated within three (3) hours.

Elmwood Farms, L.L.C. plans to continue to sample and lab test manure. Using historical lab test results and verifying the consistency of nutrient content to specific containments, we are planning future applications based on updated historical data.

SECTION I. GENERAL INFORMATION

Owner Information

Site Name	Elmwood Farms
Owner Name	Hill Crest Dairy, L.L.C.
Operator Name	Elmwood Farms, L.L.C.
Address	1422 576th Avenue
City, State, Zip	Lovilia, IA 50150
Phone #	641-891-7122

Manager/Operator Information

Site Manager	Scott Etcher, Alberto Medrano
Certification #	LM
Address	23318 W. Taggert Rd.
City, State, Zip	Elmwood, IL 61529
Phone #	309-742-2040 / Cell 641-233-7512

Facility Information

Address	23318 W. Taggert Rd. Elmwood, IL 61529
Plat Location	W 1/2 of the NW 1/4 - Section 29 T9N R5E - 4th P.M.
Directions from nearest post office	Highway 78 South out of Elmwood approx. 2 miles. Turn Left onto Taggert Road, and the dairy is at the dead end.
Phone #	309-742-2040

Emergency Contacts

State Agency	IEPA thru IL Emergency Management
Phone #	1-800-782-7860
Spill Recovery Personnel	Scott Etcher
Phone #	309-742-2040 / cell 641-891-7122
Spill Recovery Personnel	Alberto Medrano
Phone #	309-742-2040 / cell 641-233-7512
Spill Recovery Personnel	Terry L. Feldmann / Jason E. Olmstead
Phone #	Office: 309-693-7615 / Cell: 309-251-6962

Section 2. Site Specific Information

Fields available for land Application

CMU #	Sub Id	Fields ID	Total Spreadable Acres
CMU 1 207.3 ac	INWOOD NORTH 1-8, 10-11	Inwood North 2 (T4186-2)	4.05
		Inwood North 1 (T4185-1)	49.33
		Inwood North 2 (T4185-2)	2.66
		Inwood North 3 (T4185-3)	12.39
		Inwood North 4 (T4185-4)	18.16
		Inwood North 5 (T4185-5)	3.12
		Inwood North 6 (T4185-6)	31.83
		Inwood North 7 (T4185-7)	20.52
		Inwood North 8 (T4185-8)	1.85
		Inwood North 10 (T4185-10)	6.02
		Inwood North 11 (T4185-11)	57.33
CMU 2 99.2 ac	INWOOD SOUTH 1-5	Inwood South 1 (T4187-1)	89.64
		Inwood South 2 (T4187-2)	3.69
		Inwood South 3 (T4187-3)	2.19
		Inwood South 4 (T4187-4)	0.71
		Inwood South 5 (T4187-5)	2.97
CMU 3 42.9 ac	INWOOD SOUTH 1S, 3S, 4S	Inwood South 1S (T4660-1)	16.08
		Inwood South 3S (T4660-3)	1.60
		Inwood South 4S (T4660-4)	25.26
CMU 4 55.7 ac	ZELLER CREST	Zeller's Crest (T1815-1)	34.63
		Zeller's Crest (T1815-2)	9.47
		Zeller's Crest (T1815-3)	11.56
CMU 5 63.4 ac	65 ACRES	65 Acres 1 (T4188-1)	33.62
		65 Acres 3 (T4188-3)	10.47
		65 Acres (T4659-2)	12.88
		65 Acres (T4659-4)	6.42
CMU 6 5.93 ac	INWOOD SOUTH 1S-S, 5S, 6S, 7SN & C	Inwood South 1S-S (T4660-1S)	0.87
		Inwood South 5S (T4660-5)	1.95
		Inwood South 6S (T4660-6)	1.01
		Inwood South 7SN (T4660-7N)	0.73
		Inwood South 7SC (T4660-7C)	1.37
CMU 7 36.5 ac	INWOOD SOUTH 7SB	Inwood South 7SB (T4660-7B)	36.49
CMU 8 17.33 ac	Graham Chapel Road	Inwood Farms (T4271-1)	4.97
		Inwood Farms (T4271-2)	3.18
		Inwood Farms (T4271-3)	5.35
		Inwood Farms (T4271-4)	2.65
		Inwood Farms (T4271-5)	1.18

Total Spreadable Acres = 528.2

Nutrient Management Plan – Narrative Rate

(Insert Narrative Rate Table)

Fields available for land application			Timing limitations for a land application	Outcome of the assessment of the potential for nutrient		Crop year	Planned crops or other use	Realistic annual yield goal		Max lbs N derived from all sources	Max lbs P2O5 derived from all sources	Max lbs K2O derived from all sources	Alternative crop					
Field	Sub-field	Total acres		P loss risk	Allowable manure application rate								Alternative crop	Yield goal		Total N recommendation	Total P2O5 recommendation	Total K2O recommendation
CMU 1	INWOOD NORTH 1-8, 10-11	207.26	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Wheat Silage	10	ton/ac	Double Crop	Double Crop	Double Crop	Alfalfa	7	ton/ac	265	84	350
							Corn Silage	26	ton/ac	Wheat sillage followed	Wheat sillage followed	Wheat sillage followed	Soybeans	45	bu/ac	195	38	58
				Medium		2014	Wheat Silage	10	ton/ac	by Corn Silage	by Corn Silage	by Corn Silage	Wheat Silage	10	ton/ac	145	52	160
							Corn Silage	26	ton/ac	340 lbs N/acre	122 lbs P2O5/acre	342 lbs K2O/acre	Corn Silage	26	ton/ac	195	70	182
				Medium		2015	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
				Medium		2016	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
				Medium		2017	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
				Medium		2018	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
CMU 2	INWOOD SOUTH 1-5	99.2	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Wheat Silage	10	ton/ac	Double Crop	Double Crop	Double Crop	Alfalfa	7	ton/ac	265	84	350
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							Corn Silage	26	ton/ac									
				Medium		2018	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
CMU 3	INWOOD SOUTH 1S, 3S, 4S	42.94	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Wheat Silage	10	ton/ac	Double Crop	Double Crop	Double Crop	Alfalfa	7	ton/ac	265	84	350
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				Medium		2017	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
				Medium		2018	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									
CMU 4	ZELLER CREST	55.66	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Wheat Silage	10	ton/ac	Double Crop	Double Crop	Double Crop	Alfalfa	7	ton/ac	265	84	350
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				Medium		2018	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac									

Fields available for land application			Timing limitations for a land application	Outcome of the assessment of the potential for nutrient		Crop year	Planned crops or other use	Realistic annual yield goal		Max lbs N derived from all sources	Max lbs P2O5 derived from all sources	Max lbs K2O derived from all sources	Alternative crop					
Field	Sub-field	Total acres		P loss risk	Allowable manure application rate								Alternative crop	Yield goal		Total N recommendation	Total P2O5 recommendation	Total K2O recommendation
CMU 5	65 ACRES	63.39	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Wheat Silage	10	ton/ac	Double Crop	Double Crop	Double Crop	Alfalfa	7	ton/ac	265	84	350
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				Medium			Corn Silage	26	ton/ac									
						2018	Wheat Silage	10	ton/ac									
				Medium			Corn Silage	26	ton/ac									
CMU 6	INWOOD SOUTH 1S-S, 5S, 6S, 7SN & C	5.93	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Alfalfa	7	ton/ac	Double Crop	Double Crop	Double Crop	Soybeans	45	bu/ac	195	38	58
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							Corn Silage	26	ton/ac									
				Medium		2016	Alfalfa	7	ton/ac	Alfalfa=265 lb N/acre	Alfalfa=84lb P2O5/acre	Alfalfa=350 lb K2O/acre						
				Medium		2017	Alfalfa	7	ton/ac									
				Medium		2018	Alfalfa	7	ton/ac									
CMU 7	INWOOD SOUTH 7SB	36.49	Liquids shall be injected and solid wastes shall be incorperated within three (3) hours after application and all in a manner that prevents runoff and odor.	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Alfalfa	7	ton/ac	Double Crop	Double Crop	Double Crop	Soybeans	45	bu/ac	195	38	58
				Medium		2014	Alfalfa	7	ton/ac	Wheat sillage followed	Wheat sillage followed	Wheat sillage followed	Wheat Silage	10	ton/ac	145	52	160
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				Medium		2017	Wheat Silage	10	ton/ac	Alfalfa=265 lb N/acre	Alfalfa=84lb P2O5/acre	Alfalfa=350 lb K2O/acre						
							Corn Silage	26	ton/ac									
				Medium		2018	Alfalfa	7	ton/ac									
CMU 8	Graham Chapel Road	17.33	Manure may only be surface applied to these field(s) when the ground is frozen, snow covered or saturated if one of the following conditions exists: 1. Where manure storage capacity is insufficient and failure to surface apply creates a risk of an uncontrolled release of manure 2. On an emergency basis	Medium	Manure shall not be applied in excess of the nitrogen needs of the crop. Manure shall not be applied in excess of two times the crop phosphorus removed with crop harvest over the period of the crop rotation	2013	Alfalfa	7	ton/ac	Double Crop	Double Crop	Double Crop	Soybeans	45	bu/ac	195	38	58
				Medium		2014	Alfalfa	7	ton/ac	Wheat sillage followed	Wheat sillage followed	Wheat sillage followed	Wheat Silage	10	ton/ac	145	52	160
				Medium		2015	Wheat Silage	10	ton/ac	by Corn Silage	by Corn Silage	by Corn Silage	Corn Silage	26	ton/ac	195	70	182
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				Medium		2016	Wheat Silage	10	ton/ac									
							Corn Silage	26	ton/ac	Alfalfa=265 lb N/acre	Alfalfa=84 lb P2O5/acre	Alfalfa=350 lb K2O/acre						
				Medium		2017	Alfalfa	7	ton/ac									
				Medium		2018	Alfalfa	7	ton/ac									

Methodology

The methodology by which the NMP accounts for the following factors when calculating the amounts of manure, litter, and process wastewater to be land applied:

— Results of soil tests conducted in accordance with protocols identified in the NMP, as required by 40 CFR part 122.42(e)(1)(vii).
— Credits for all nitrogen in the field that will be plant available.
— The amount of nitrogen and phosphorus in the manure, litter, and process wastewater to be applied. Consideration of multiyear phosphorus application. Accounting for all other additions of plant-available nitrogen and phosphorus to the field. The form and source of manure, litter, and process wastewater. The timing and method of land application. Volatilization of nitrogen and mineralization of organic nitrogen MWPS-18.

Storage & Application Losses

	Liquid Manure	Solid/Composted Manure
Storage type	Lagoon/Holding Pond	Dry Stack
Ammonia application loss	2% (Injection)	5% (broadcast with incorporation within 5 days)
Organic nitrogen mineralization factor	30%	35%
Phosphorus (P) mineralization rate	90%	93%
Potassium (K) mineralization rate	93%	98%

- Nitrogen production values, Nitrogen storage losses, Ammonia nitrogen losses, and organic nitrogen mineralization factors are taken from ASAE D384.2 MAR2005 table 1.b sec 3, MWPS 10-1, 10-2, and 10-5, respectively.
- Phosphorus & Potassium mineralization rates 210-AWMFH Chapter 11 Tables 11-5,

Example Manure Application Rate Calculation:

Step 1: Estimate the Available Nutrients (NPK) from manure source.

Step 1 (a) Liquid Manure Source

Manure Tests Results:

Nutrients	lb/1000 gal
Total N	12
Ammonium N	7
Organic N	5
P2O5	2
K2O	12

Estimated nutrients available:

Ammonium N = 7 x 0.98 = 6.9 lb/1000 gal
Organic N = 5 x 0.30 = 1.5 lb/1000 gal
Total PAN = 6.9 + 1.5 = 8.4 lb/1000 gal

Total P2O5 = 2 x 0.90 = 1.8 lb/1000 gal
Total K2O = 12 x 0.93 = 11.2 lb/1000 gal

Step 1 (b) Solid Manure Source

Manure Tests Results:

Nutrients	lb/1000 gal
Total N	7
Ammonium N	3
Organic N	4
P2O5	2
K2O	5

Estimated nutrients available:

Ammonium N = 3 x 0.95 = 2.8 lb/1000 gal
Organic N = 4 x 0.35 = 1.4 lb/1000 gal
Total PAN = 2.8 + 1.4 = 4.2 lb/1000 gal

Total P2O5 = 2 x 0.93 = 1.9 lb/1000 gal
Total K2O = 5 x 0.98 = 4.9 lb/1000 gal

Step 2 Determine Required Nutrients for planned crop.

Crop	N	P2O5	K2O
Wheat –Corn	**340**	**122**	**342**
Alfalfa	**265**	**84**	**350**

Note: See section 2 Narrative rate nutrient management plans for planned crops.

Step 3 Estimate Manure Application Rate.

Selected Crop: Wheat-Corn (See Step 2)
Selected Manure Source: Liquid manure (See Step 1)

Nitrogen Based:

$$\frac{\text{Crop lb N/ac}}{\text{Availble lb PAN/1000 gal}} = \text{Appl. rate (1000 gal/ac)}$$

$$\frac{340\text{ lb N/ac}}{8.4\text{ lb PAN/1000 gal}} = 40{,}000\text{ gal/ac}$$

Phosphorus Based:

$$\frac{\text{Crop } P_2O_5\text{ lb/ac}}{\text{Availble } P_2O_5\text{ lb/1000 gal}} = \text{Appl. rate (1000 gal/ac)}$$

$$\frac{122\text{ lb } P_2O_5\text{ / ac}}{1.8\text{ lb } P_2O_5\text{/1000 gal}} = 67{,}000\text{ gal/ac}$$

Potassium Based:

$$\frac{\text{Crop lb } K_2O\text{/ac}}{\text{Availble lb } K_2O\text{/1000 gal}} = \text{Appl. rate (1000 gal/ac)}$$

$$\frac{342\text{ lb } K_2O\text{ / ac}}{11.2\text{ lb } K_2O\text{/1000 gal}} = 30{,}000\text{ gal/ac}$$

Maximum application rate:

40,000 gal/ac (Nitrogen Based)
*Multiple Application will be required to match available water holding capacity at time of application(s).

Land Application Regulations & Recommendations

Provisions for Waste Application

All fields operated by Elmwood Farms, L.L.C. where manure or process wastewater is applied must follow these previsions. A listing of the fields is attached with the application rate calculations for each source type. No manure will be applied on fields unless the soil phosphorus test (Bray 1 or Mechlich) is 300 lb/acre or less.

The provisions of 35 IAC 506.303 (o) through (u) shall be met or exceeded when applying waste. These and other restrictions are identified on the attached aerial photos or other field maps.

o) Waste applied within 1320' of any residence not owned by Elmwood Farms, L.L.C. shall be injected or incorporated on the day of application.

p) Waste shall not be applied within:
   1. 200' of surface water unless the water is up-gradient or there is adequate diking to prevent runoff, and
   2. 150' of a potable water supply well.

q) Waste shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.

r) Livestock waste shall not be applied in waterways.

s) Waste that is spread on frozen or snow-covered land shall be limited to areas which:
   1. Land slope is 5% or less, or
   2. Adequate erosion control practices exist

t) The certified livestock manager shall inspect all berm tops, exterior sides, non-submerged interior sides for evidence of erosion, burrowing animal activity, and other indications of berm degradation at least every two weeks and keep a record of inspections.

u) Livestock waste shall not be applied during a rainfall or to saturated soil and conservative application rates shall be used in the case of a high water table or shallow earth cover to fractured bedrock. Caution shall be exercised in applying livestock waste, particularly on porous soils, so as not to cause contamination of the groundwater.

v) Dairy management and employees or professional waste applicators retained by the Defendant shall handle all wastes. For sections 19, 30 and 31 Elmwood Township, liquids shall be injected and solid wastes shall be incorporated within 3 hours after application and all in a manner that prevents runoff and odor. Alternative application methods may be used when approved by the Illinois EPA in writing prior to such practice. In Section 30, the Defendant shall not apply waste within 1/4 mile of Route 78. In Section 19, the Defendant shall not apply waste within 900 feet of Route 78 and within 1/4 mile of the intersection of Route 78 and Taggert Road. All land application of waste shall be performed in a manner that prevents runoff and odor and in accordance with all applicable regulations and NPDES Permit.

Waste Application Records

Records of waste application shall be kept and include all of the information on the attached forms including:

1. Field I.D.
2. Date of application
3. Waste source and type
4. Method of application
5. Application rate
6. Total acres applied to
7. Total amount of waste applied
8. Important notes or comments
9. Identification of application areas on field maps.

Manure Application Equipment and Practices

Applicator Name (self/custom)	CUSTOM & SELF
Custom Applicator Name	
Address	
City, State, Zip	
Phone #	
Agitation equipment	
Transport equipment	
Incorporation equipment	
Irrigation equipment	
Odor abatement practices	
Crop Fertility Advisor	
Phone #	

Section 3. Emergency Spill Recovery Plan and Reporting Protocol

Emergency Response Personnel

Name	Office Phone	Cell Phone	Pager
Scott Etcher	N/A	641-891-7122	N/A
Alberto Medrano	309-742-2040	641-233-7512	N/A
Terry L. Feldmann	309-693-7615	309-251-6962	N/A

Recovery equipment

Equipment	Location
Limestone	On site
Backhoe	
IT loader	On site
Excavator	
Fire Department	Elmwood FPD
Doda pump	On site
Pit Pal pumps & Houle pump	On site
Houle tank	
Sand bags	On site

Spill Reporting

If there is a release of more than 25 gallons or if waste ***HAS ENTERED*** surface or ground water, notify the Illinois Emergency Management Agency within 24 hours by calling **800-782-7860 or 217-782-7860.**

Also notify the following persons ASAP.

Name	Office	Cell Phone	Pager/Mob.
Scott Etcher	N/A	641-891-7122	N/A
Alberto Medrano	309-742-2040	641-233-7512	N/A
Terry L. Feldmann, PE	309-693-7615	309-251-6962	N/A

Attached Maps

1. Locations of all supply lines used to transport manure to fields
2. Local road map showing all routes used to transport manure on public use roadways.

Custom Applicator

"I have received and agree to follow this emergency spill recovery plan and reporting protocol. I will land apply the manure from this facility using Best Management Practices. I agree to monitor all application equipment and prevent runoff due to the application process. In the event of a spill I will follow the procedures outlined by this plan."

Custom Applicator_____ Date_____

Owner/Operator_____ Date_____

Written Reports

All spills must be reported to management personnel and include the following information.

1. Spill Reporter Name and phone number
2. Date, time, and duration of release
3. Location of spill (County, distance and direction from the nearest town, village or municipality
4. Estimate of the quantity in gallons of the release and the flow rate in gallons per minute if the release is ongoing
5. Area to which the release occurred (field, ditch, stream, or other description) and description of the apparent environmental impacts
6. Names and phone numbers of those who may be contacted for further information
7. Dangers to health or the environment resulting from the release
8. What action was taken to respond to, contain, and mitigate the release?

Name and mailing address of the facility.