

KANSAS GEOLOGICAL SURVEY

1930 Constant Ave., Campus West
The University of Kansas
Lawrence, Kansas 66047-3726
Phone: 785-864-3965
Fax: 785-864-5317

Mr. Bob Mizell
Mizell Farms, Inc.
511 N. Peabody
Nickerson, KS 67561

January 18, 2006

Dear Mr. Mizell,

I am writing in response to your request for comment concerning the compost facility permit for your farm. I spoke with Lance Ohnmacht to obtain some further information concerning your application.

Overall the concept of the compost facility seems feasible. Many of the points I mentioned above most likely have been addressed by your work with the NRCS. I did not receive much of the background information for the project.

My main concerns about the project involve soil permeability issues, protection of ground- and surface-water in the area, and leaching of nitrogen and/or phosphate from the compost once it is spread on the fields.

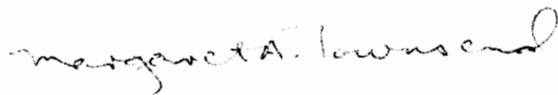
- The soils in your area are predominantly sandy loams composed principally of sand. Construction details of the composting pad areas need to address the issue of highly permeable soils and the potential for liquid from the compost area escaping and leaching into the ground water and then moving towards Bull Creek. The scenario in which I can see something like this happening includes major rainfall during the spring.
- Nitrogen leaching either from excessive water released from the composting pads during the rainy season or from the compost application causing contamination to the ground water in the area.
- Where the compost will be applied if soil testing indicates and excess of nutrients in the soil?
- Depth to water is between 8 to 9.5 feet below land surface. Protection of this resource from nitrogen leaching is necessary. Wells in other sections in your township show nitrate-N values of approximately 5 ppm. These values suggest that nitrogen sources are impacting the water in your area. The list below indicates the locations of wells that have been measured in the past:

COUNTY	LOCATION	NO3-N
RN	22-07W-02	5.2
RN	22-07W-10	5.0
RN	22-07W-11	4.5
RN	22-07W-17	5.6

- Previous work that has been done in Reno County by the KGS suggests that areas with highly permeable soils are likely to become contaminated with nitrate-N. I would suggest that you work with the NRCS to locate several places where monitoring wells could be installed downgradient from your compost pads and also between your site and Bull Creek.
- I would also recommend collection of surface- and ground-water samples for background nutrient concentrations (particularly nitrogen and phosphorous) prior to the installation of your facility. I would also recommend collecting additional water samples on a schedule decided upon by you and the personnel at the NRCS office. Perhaps the same schedule that you will use for your nutrient sampling would be appropriate.

This review of the project only concerns those aspects for which the KGS has information available. There may be other aspects to the project that the KGS does not have information for or the expertise to evaluate.

Sincerely,

A handwritten signature in cursive script that reads "Margaret A. Townsend".

Margaret A. Townsend
Hydrogeologist

December 29, 2005

Kansas Geological Survey
1930 Constant Ave.
Lawrence, KS 66047-3726

Dear Kansas Geological Survey Staff:

Subject: Composting Facility

We have been retained by Mizell Farms Inc. to prepare an application for a compost facility permit. One of the requirements is to check with several agencies to determine if they have any information about the proposed site.

The proposed compost facility would be located on 5.9 acres in the Northeast quarter of section 6, township 22, range 7 in Reno County Kansas. A location map and preliminary site layout plan are attached. We request a response from your agency indicating any issues you may be aware of regarding this proposed land use, please.

Thank you for your consideration in this matter. If you have any questions about this request, please contact me at 620-422-5244, or Lance Ohnmacht at 620-669-8161 ext. 271.

Sincerely



Bob Mizell

Mizell Farms Inc.

cc: NRCS- South Hutchinson
Lance Ohnmacht
18 E 7th Ave
South Hutchinson, Ks 67561



Start Up Plan

1. Site History

Owner and Location

Bob Mizell
511 N Peabody
Nickerson, Ks 67561
(620) 422-5244
NW ¼ S6-T22S-R7W Reno County

Refer to location maps and engineering plans for further location information.

Description

The purpose for this facility is to utilize livestock mortalities, manure and other wastes, to provide a usable material to apply on poor soils on cropland. The site is primarily composed of sandy loam soils (refer to soils map of site and soils investigation) and is located in the FEMA 100 year flood-plain. A floodplain fill permit will be applied for from the Division of Water Resources. The nearest surface water resource is over 3200 feet down gradient of the composting facility. Feeder cattle are kept on the tract during winter months. The cattle are all unconfined and a feedlot assessment worksheet has been filled out by the producer and NRCS together. The site under present operation does not pose as a potential pollution risk. This site is the producer's center of operations.

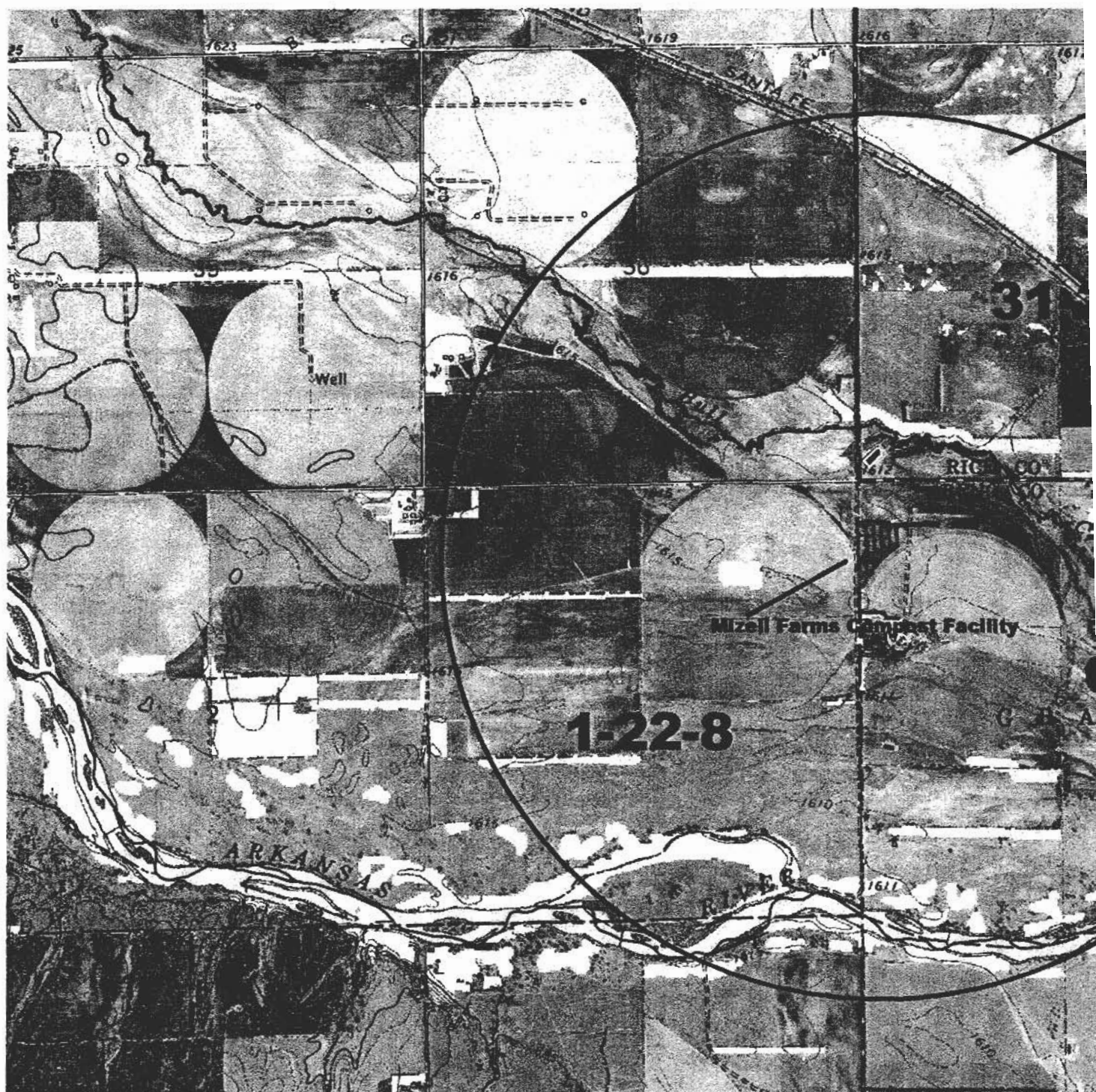
This plan is for a waste composting facility. The benchmark condition of the facility consists of dryland crop ground. Composting of wastes has been done on a small scale on this tract. The drainage area of the compost pads is 1.6 acres to the south and 4.3 acres to the north. All runoff will be collected from the facility via earthen waterway (and or) filtered across seasonal cropland (winter- Rye, summer Corn).

1 Mile

Bob Mizell

Reno County Conservation District

Date: 01/26/2005



2000

0

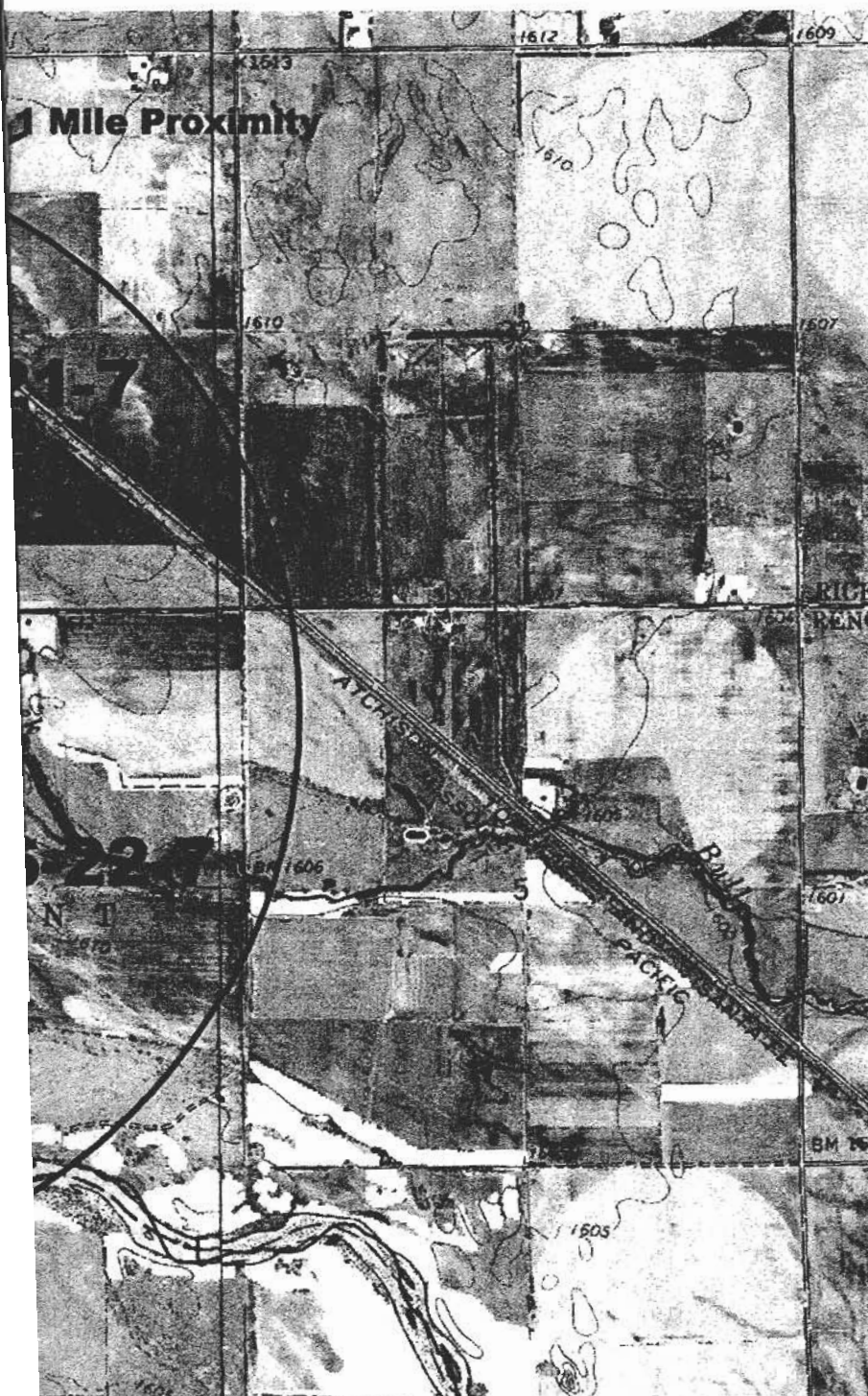
2000

40

USDA

Proximity

South Hutchinson Service Center
Natural Resources Conservation Service
Lance Ohnmacht



Legend

Mizell2000.dxf

- 1
- 3
- 4
- 6
- 7
- 110
- 141
- 255

Proximity

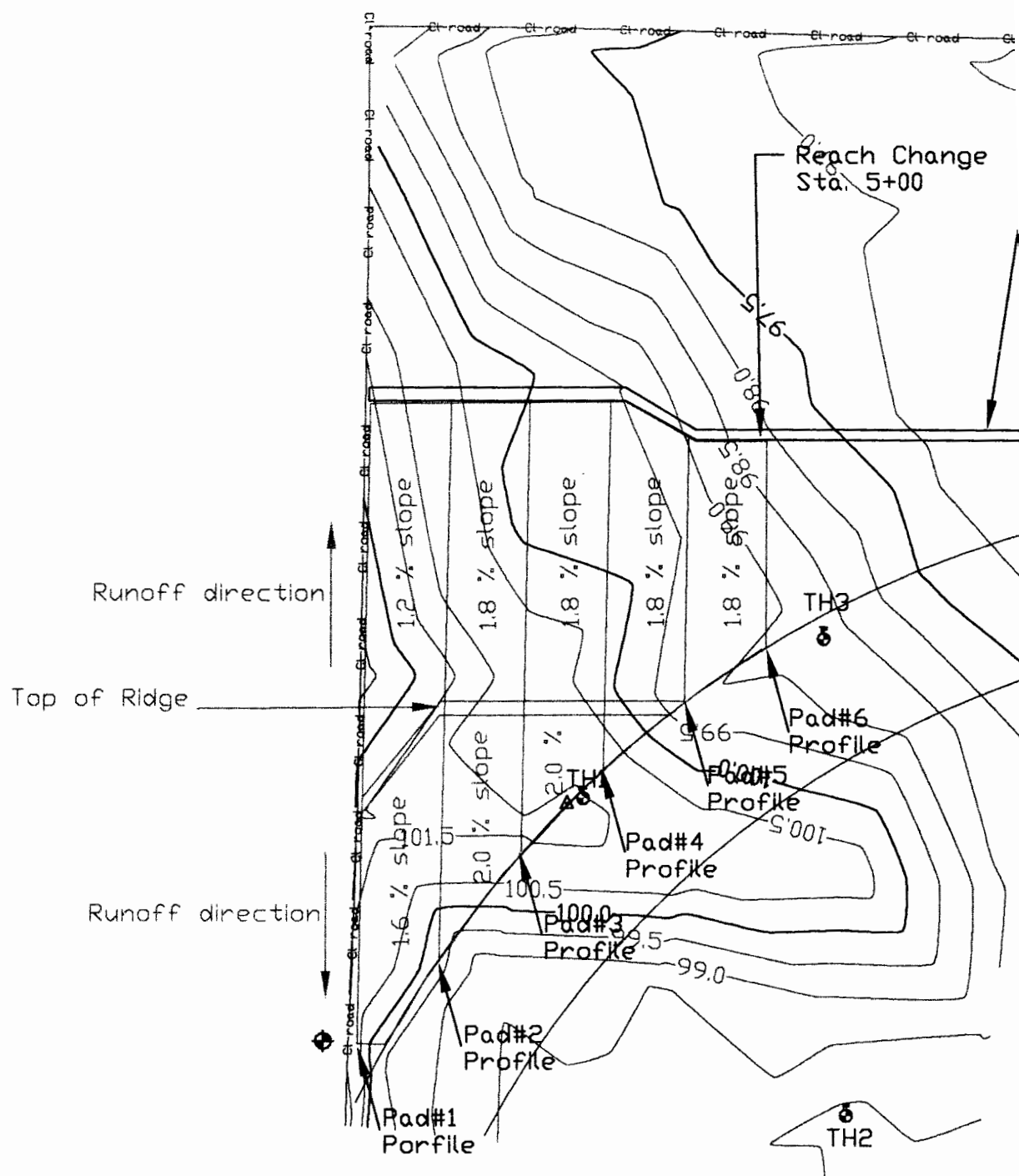
Hydro_1_ks159.shp

- Perennial
- Right Bank Perennial
- Left Bank Perennial
- Intermittent
- Shoreline Natural
- Shoreline Manmade
- Canal

Hydro_1_ks155.shp

- Perennial
- Right Bank Perennial
- Left Bank Perennial
- Intermittent
- Shoreline Natural
- Shoreline Manmade
- Canal





road
0.96
5.96

Runoff Water Channel

Outside Edge of Center Pivot

Outer Wheel Track



GRAPHIC SCALE



(IN FEET)

1 inch = 200 ft.

Designed	<u>Lance C. Chmachi</u>	Date	<u>10-04</u>
Drawn	<u>LCD</u>		<u>10-04</u>
Checked			
Approved			

Robert Mizell
Composting Facility
NW 1/4 6-22-7
Reno County, Kansas



File Name

Drawing Name

Sheet of