



DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
 DIVISION OF WATER RESOURCES  
 William R. Snodgrass - Tennessee Tower  
 312 Rosa L. Parks Avenue, 11th Floor  
 Nashville, Tennessee 37243-1102  
 (615) 532-0625

NOTICE OF INTENT (NOI) for Land Application of Non-Exceptional Quality Biosolids

Generator Name: <b>Town of Centerville</b>	Current NPDES No: <b>TN0024937</b>	Existing Tracking No:
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Owner or Operator: (the person or legal entity which controls the site's operation)

<b>1</b>	Name of Official Contact Person: (individual responsible for a site) <b>GARY JACOBS</b>	Title or Position: <b>MAYOR</b>		
	Mailing Address: <b>102 EAST SWAN</b>	City: <b>CENTERVILLE</b>	State: <b>TN</b>	Zip: <b>37033</b>
	Phone: <b>(931) 729-4246</b>	E-mail: <b>mayor@centervilletn.org</b>		
<b>2</b>	Name of Local Contact Person: (if appropriate, write "same as #1") <b>Jarrett Chad Dotson</b>	Title or Position: <b>Operator</b>		
	Site Address: (this may or may not be the same as street address) <b>110 Lawson St.</b>	Site City: <b>Centerville</b>	State: <b>TN</b>	Zip: <b>37033</b>
	Phone: <b>(931) 729-4265</b>	E-mail: <b>WWTP@Centervilletn.org</b>		

Write in the box (to the right) or circle the number (above) to indicate where to send correspondence: **2**

All non-EQ biosolids land application sites that have been approved by the division prior to the effective date of this permit will be covered under this permit upon receipt of the signed certification statement, completed NOI and a copy of site approval letter(s).

<b>A. OPERATIONAL INFORMATION:</b>	
Estimated annual amount of biosolids generated (dry weight basis)	<u>19mt</u> (tons)
Estimated annual amount of biosolids to be land applied (dry weight basis)	<u>19mt</u> (tons)
<b>B. BIOSOLIDS TREATMENT PROCESS:</b> Please provide a description of the biosolids treatment process used prior to biosolids being land applied (use a separate sheet if necessary):	
<u>Aerobic Digester / Beltpress dewater</u>	
<b>C. CHEMICAL ANALYSIS:</b> Indicate which contaminant standard(s) the biosolids meet:	
Table 1 Ceiling Contaminant Concentrations: <input checked="" type="checkbox"/>	Table 3 Contaminant Concentrations: <input checked="" type="checkbox"/>
<ul style="list-style-type: none"> <li>Submit analytical results to demonstrate eligibility for and compliance with the quality criteria specified in the General Permit.</li> <li>Submit PCB and TCLP analytical results that are less five years old.</li> </ul>	
<b>D. PATHOGEN REDUCTION LEVEL ACHIEVED:</b> Indicate alternative used to achieve the pathogen reduction. For Class A, Alternatives 5 and 6; for Class B, Alternatives 2 and 3, list the specific Process to Further Reduce Pathogens (PFRP) or Process to Significantly Reduce Pathogens (PSRP).	
Class A:	<input type="checkbox"/> Alternative 1 <input type="checkbox"/> Alternative 4 <input type="checkbox"/> Alternative 2 <input type="checkbox"/> Alternative 5 <input type="checkbox"/> Alternative 3 <input type="checkbox"/> Alternative 6
Class B:	<input checked="" type="checkbox"/> Alternative 1 <input type="checkbox"/> Alternative 2 <input type="checkbox"/> Alternative 3
Provide a detailed description of the pathogen treatment process. Attach laboratory analytical and/or process monitoring results, as appropriate, that demonstrate pathogen reduction is being achieved:	
<u>Aerobic Digestion</u>	

**NOTICE OF INTENT (NOI) for Land Application of Non-Exceptional Quality Biosolids**

**E. VECTOR ATTRACTION REDUCTION LEVEL ACHIEVED:** Indicate the option used to achieve the vector attraction reduction.

- Option 1       Option 2       Option 3       Option 4  
 Option 5       Option 6       Option 7       Option 8

If one of the vector attraction reduction Options 1 - 5 is selected, do the biosolids meet Class A pathogen reduction requirements prior to or at the same time as meeting the vector attraction reduction requirements?

- Yes       No

Provide a detailed description of the vector attraction reduction treatment process. Attach laboratory analytical and/or process monitoring results, as appropriate, that demonstrate vector attraction reduction is being achieved:

*Aerobic Digestion*

**F.** If one of the vector attraction reduction Options 1 - 8 above was not performed, indicate how the vector attraction reduction will be performed on the field as part of the land application process:

- Option 9 (Subsurface Injection)       Option 10 (Incorporation)

*N/A*

**G. SAMPLING PLAN:** Include a detailed copy of the biosolids sampling plan as specified in the instructions. The sampling plan must address sampling protocols for contaminants, pathogen reduction, and vector attraction reduction quality criteria.

**H. LAND APPLICATION AREA(S):** Include a list of land application area(s) that will be used for disposal of biosolids. Attach a detailed map showing appropriate buffers in accordance with section 3.2.1 (add additional pages if necessary)

Area Number	Area (acres)	Application Rate (tons/acre) per section 3.2.2	Latitude (decimal)	Longitude (decimal)
1	9	2.7 per acre / 24	N 35.821118°	W 087.279233°
2	9	2.7 Per acre / 24	N 35.781705°	W 087.466596°
3	8.6	2.7 Per acre / 23	N 35.781705°	W 087.466596°
4	5.4	2.7 Per acre / 14.5	N 35.822799°	W 087.279290°
5	8.6	2.7 per / 23	N 35.823078°	W 087.279699°
6	10.4	2.7 per / 28	N 35.781276°	W 087.466278°
7	3.8	2.7 per / 10	N 35.781276°	W 087.466278°

**I. CERTIFICATION:** I certify, under penalty of law, that contaminant concentrations in the biosolids, pathogen reduction, vector attraction reduction, and other quality criteria of the biosolids stated in the regulations have been met or, if appropriate, will be met prior to land application of biosolids. I further certify that other information in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my own knowledge as well as the inquiry of the person(s) who manage the system, or those directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief, is true, accurate and complete. I further acknowledge that the facility or generator of biosolids described above is eligible for coverage under TDEC's General Permit for the Land Application of Biosolids. I am aware that there are significant penalties for submitting false information, including possibility of fines and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Name: GARY JACOBS Title: MAYOR

Signature: 

Telephone: (615) 729-4246 Date Signed: 11, 19, 2015

**NOTE:** In evaluating NOI forms, TDEC may request additional information to complete its review to determine the eligibility for coverage under TDEC's General Permit.

Submit the original completed and signed form to [Water.Permits@tn.gov](mailto:Water.Permits@tn.gov) or:  
 Biosolids NOI Processing - Division of Water Resources  
 William R. Snodgrass - Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor  
 Nashville, TN 37243-1102

**NOTICE OF INTENT (NOI) for Land Application of Non-Exceptional Quality Biosolids**

**E. VECTOR ATTRACTION REDUCTION LEVEL ACHIEVED:** Indicate the option used to achieve the vector attraction reduction.

- Option 1       Option 2       Option 3       Option 4  
 Option 5       Option 6       Option 7       Option 8

If one of the vector attraction reduction Options 1 - 5 is selected, do the biosolids meet Class A pathogen reduction requirements prior to or at the same time as meeting the vector attraction reduction requirements?

- Yes       No

Provide a detailed description of the vector attraction reduction treatment process. Attach laboratory analytical and/or process monitoring results, as appropriate, that demonstrate vector attraction reduction is being achieved:

*Aerobic Digestion*

**F.** If one of the vector attraction reduction Options 1 - 8 above was not performed, indicate how the vector attraction reduction will be performed on the field as part of the land application process:

- Option 9 (Subsurface Injection)       Option 10 (Incorporation)

*N/A*

**G. SAMPLING PLAN:** Include a detailed copy of the biosolids sampling plan as specified in the instructions. The sampling plan must address sampling protocols for contaminants, pathogen reduction, and vector attraction reduction quality criteria.

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Area Number	Area (acres)	Application Rate (tons/acre) per section 3.2.2	Latitude (decimal)	Longitude (decimal)
8	10.7	2.7 per / 28	N 35.781276°	W 87.466278°
9	6.3	2.7 per / 17	N 35.78126°	W 87.466278°
10	5.8	2.7 per / 15.5	N 35.827706°	W 87.283717°
11	1.4	2.7 per / 3.5	N 35.821271°	W 87.287030°

**I. CERTIFICATION:** I certify, under penalty of law, that contaminant concentrations in the biosolids, pathogen reduction, vector attraction reduction, and other quality criteria of the biosolids stated in the regulations have been met or, if appropriate, will be met prior to land application of biosolids. I further certify that other information in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my own knowledge as well as the inquiry of the person(s) who manage the system, or those directly responsible for gathering the information, the information submitted, to the best of my knowledge and belief, is true, accurate and complete. I further acknowledge that the facility or generator of biosolids described above is eligible for coverage under TDEC's General Permit for the Land Application of Biosolids. I am aware that there are significant penalties for submitting false information, including possibility of fines and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Name: GARY JACOBS Title: MAYOR

Signature: 

Telephone: (615) 729-4246 Date Signed: 11/19/2015

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 Nashville, TN 37243-1102

## Biosolids Sampling Plan

Tennessee Rules and Regulations, 0400-40-15-.02 Table 1

Table 1  
Frequency of Monitoring-Land Application

Amount of Biosolids <sup>1</sup> (metric tons per calendar year)	Frequency
Greater than 0 but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter ( 4 times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (6 times per year)
Equal to or greater than 15,000	Once per month ( 12 times per year)

<sup>1</sup> Either the amount of bulk biosolids applied to the land or the amount of biosolids prepared for sale or give-away in a bag or other container for application to the land (dry weight basis).

Note: 290 dry metric tons would be 7.67 MG of sludge at 1% total solids.

Containers: Preferred containers are Teflon, glass or stainless steel, plastic, steel or aluminum may be used, but galvanized coatings are to be avoided because they can release zinc into the sample. Containers are thoroughly cleaned using standard lab glassware cleaning processes.

### Nine Metals and Four Nitrogens

Early in the Monitoring Period or prior to a hauling event, a sample will be collected from the digester with aeration operating fully in order to have a well-mixed digester. A clean dipper is used to collect multiple aliquots that are composited in the laboratory provided container. Aliquots are collected over at least 15 minutes while the digester is mixing.

### Fecal Coliform Testing

Early in the Monitoring Period or prior to a hauling event, seven samples are collected over a two week period of time. Each sample is collected in the laboratory provided container using sterile technique.

### Fecal Coliform Testing, Follow-up

Subsequent hauling events will include a single Fecal Coliform sample prior to hauling.

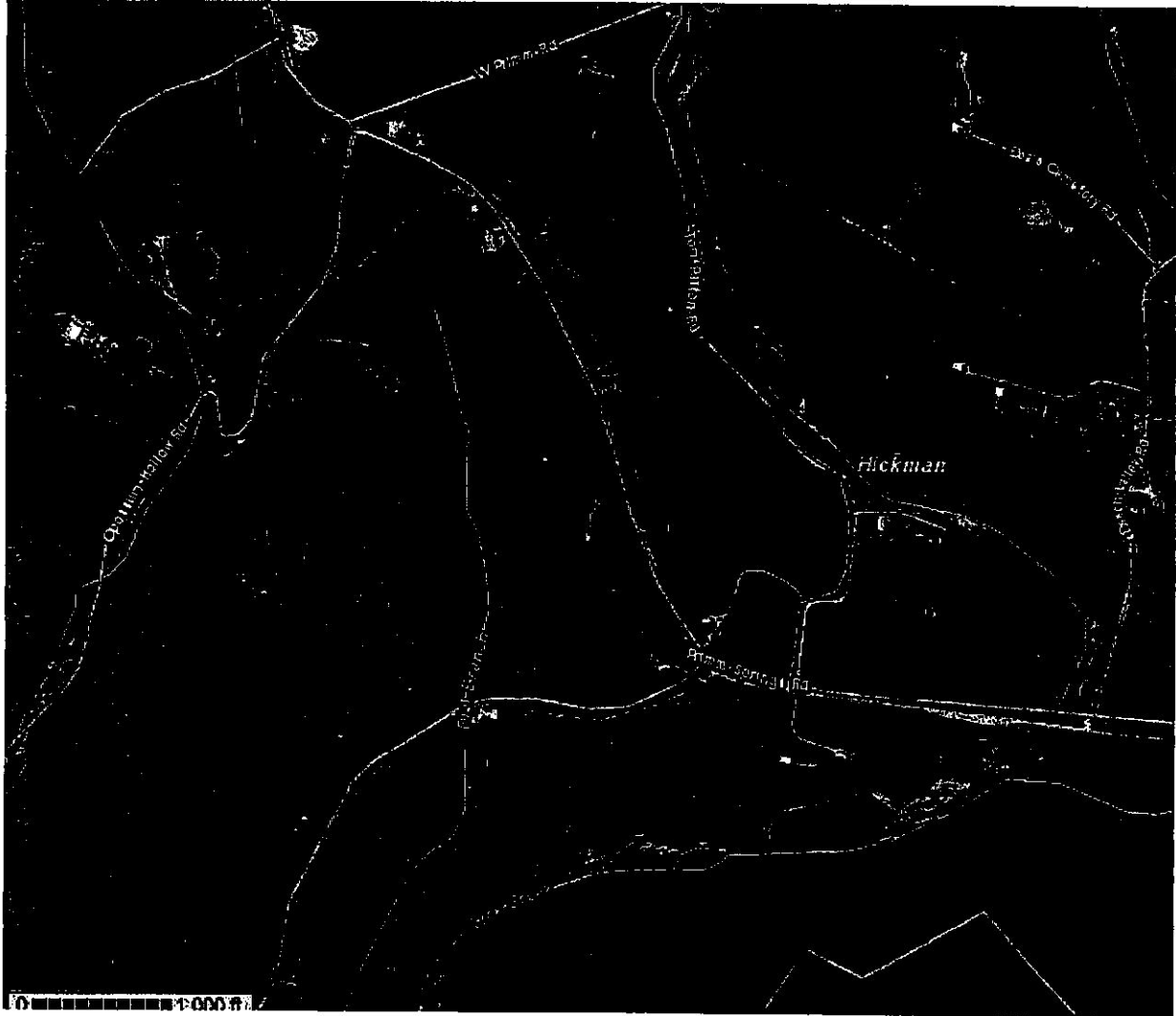
### Specific Oxygen Uptake Rate (SOUR) Testing

Prior to a hauling event duplicate SOUR tests will be conducted on the fully stabilized sludge. From a thoroughly mixing digester a sample of about 1 L is collected in a clean container and analyzed immediately. The duplicate test will be analyzed using a fresh sample.

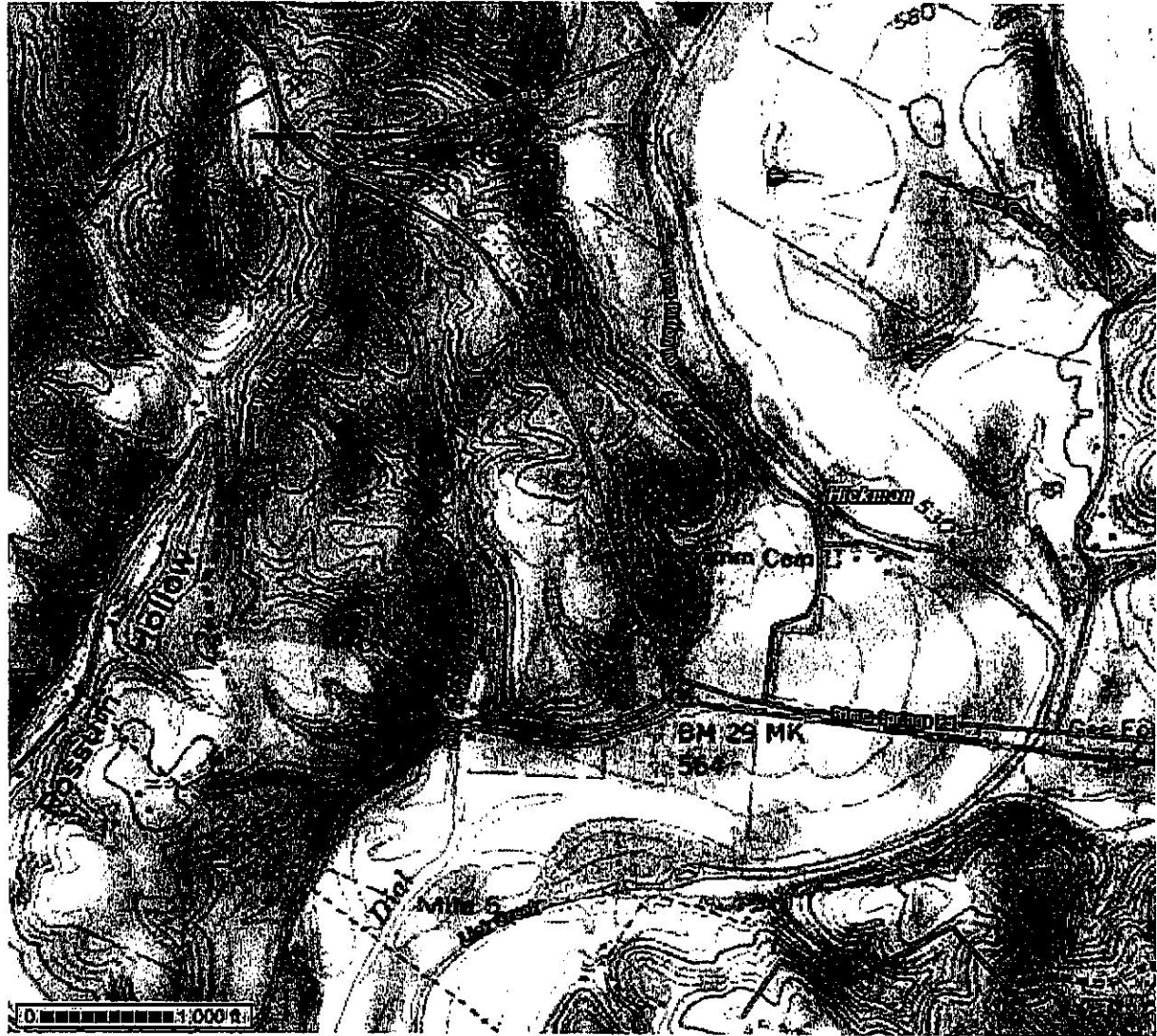
## Land Application Plan

1. Previous biosolids applications where metals exceeded Table 3.
  - a. No previous applications of biosolids have been made.
2. Type of Crops.
  - a. Perennial grass for hay and pasture- Typically hay is harvested in May-June and possibly later in the summer, with grazing of livestock during the remainder of the year depending upon need and rainfall
  - b. Shale Pit- reclamation site where perineal grass will be established.
3. Agronomic loading rate. Agronomic loading rate is calculated from nitrogen testing and expected crop nitrogen usage. TDEC standard form is used. Rate calculations are for the upcoming growing season.
4. Method of application- Biosolids are applied using a tractor towed dry manure spreading equipment.
5. Seasonal biosolids applications- Biosolids may be applied in all season of the year, depending upon weather and soil condition.
6. Biosolids are applied in Hickman County.
7. On site storage- Biosolids may be stored at individual fields for short periods of time or a specified storage site.
8. See attached maps.

Cochran Farm  
Full View Aerial Photo

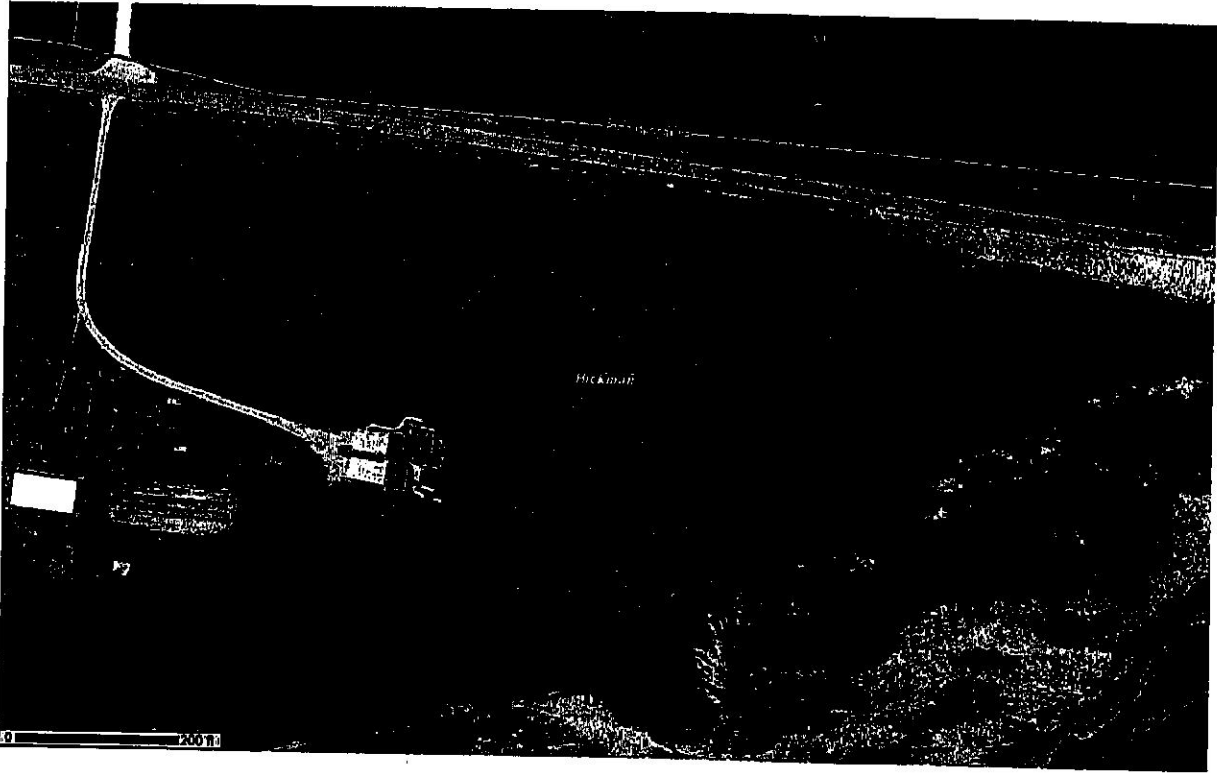


Full View Topographical Map



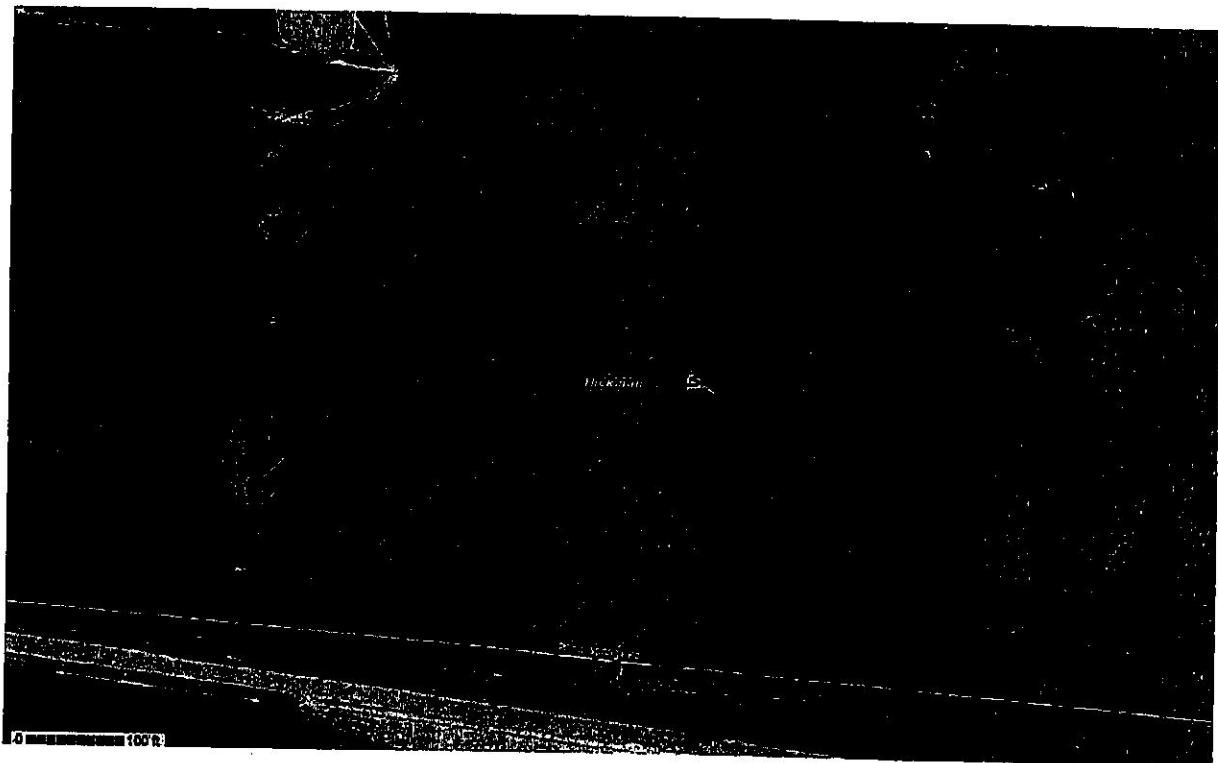
#1 Hunters  
Field

Name \_\_\_\_\_ 9 Acres

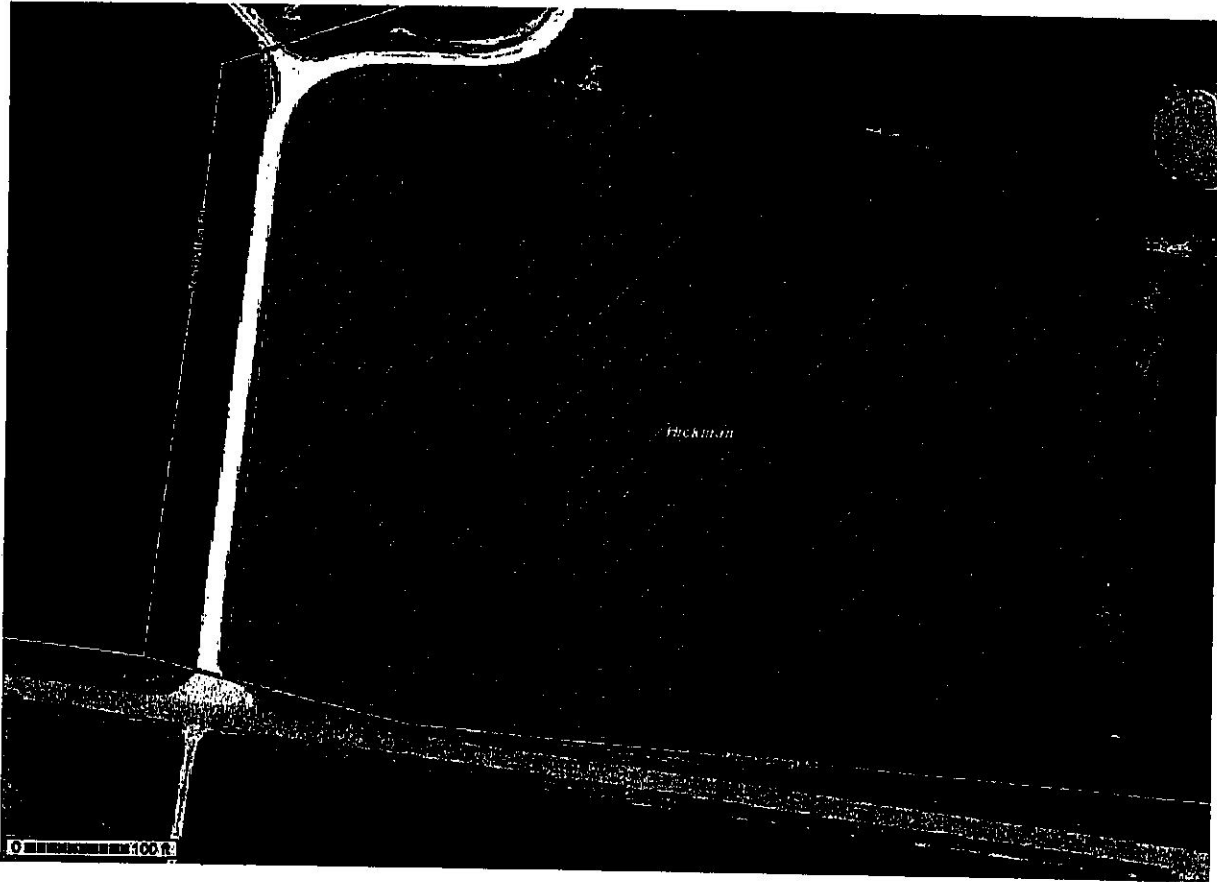




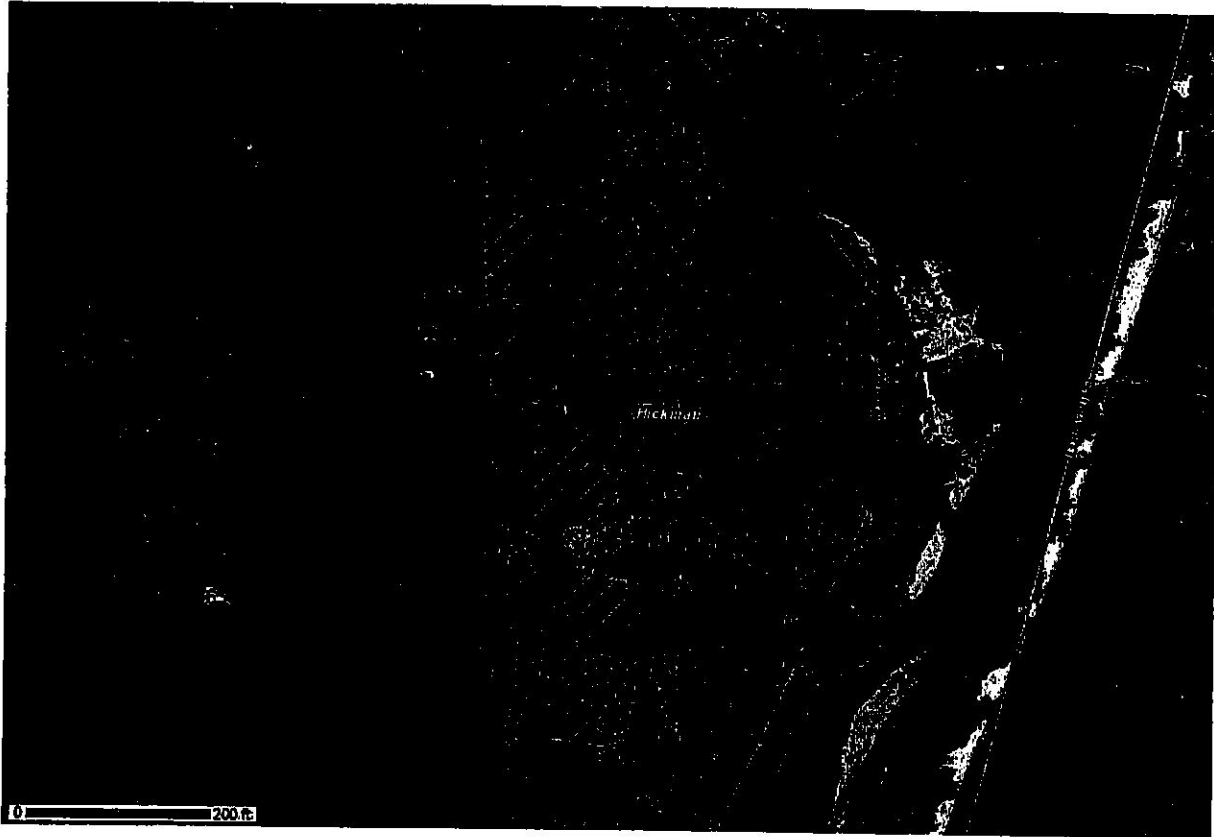
Name #2 Cooper 9 Acres



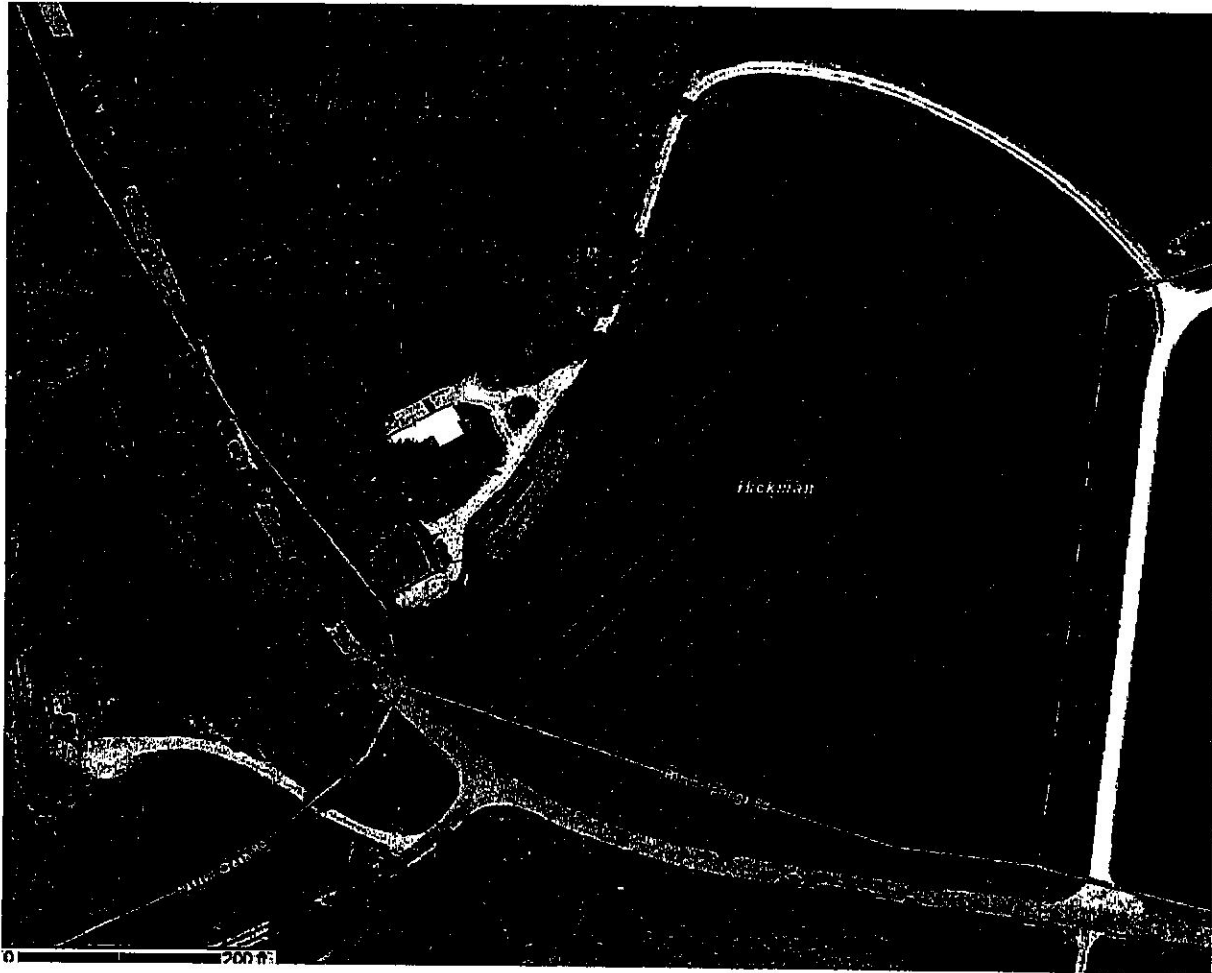
Name #3 Nichols 8.6 Acres



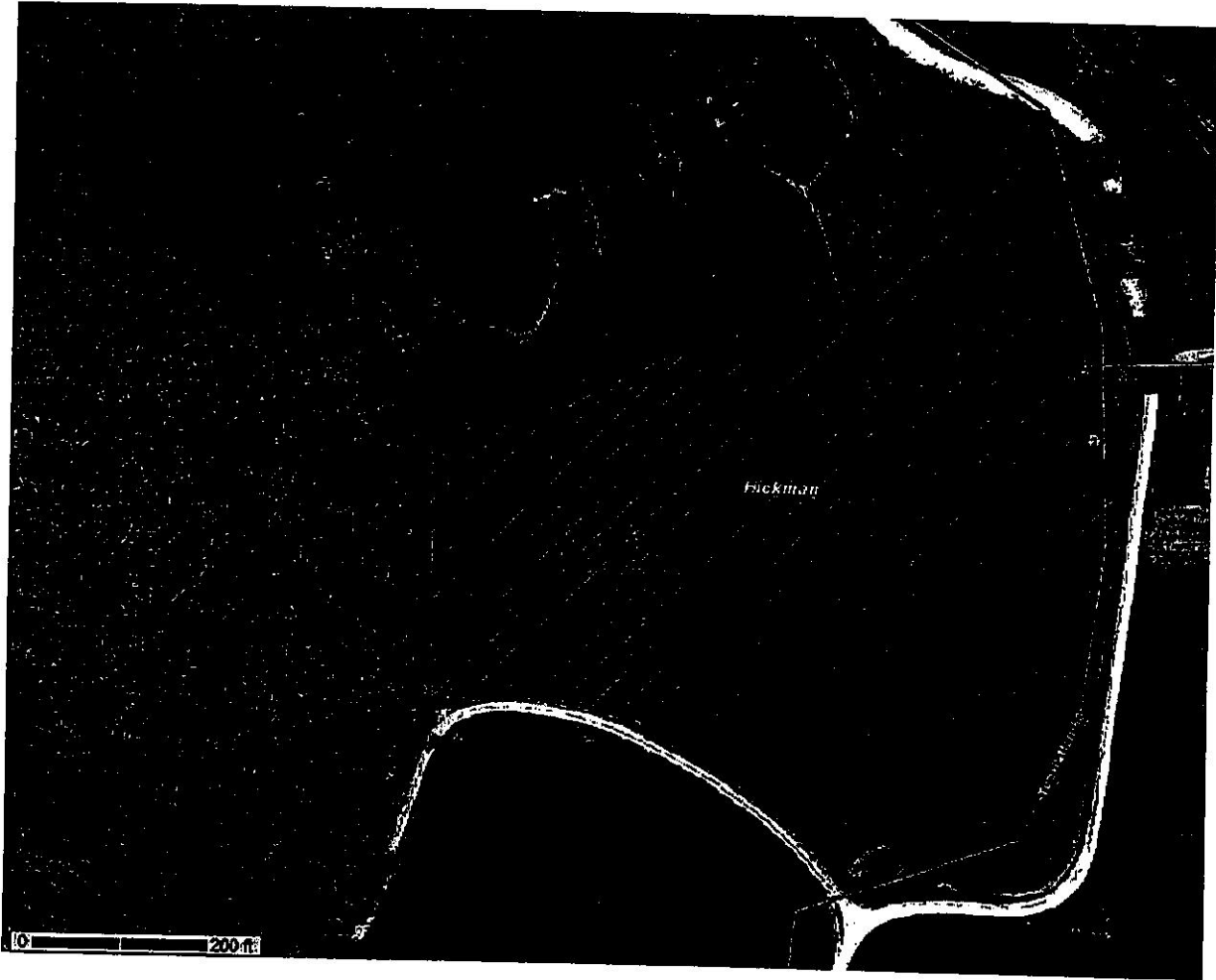
Name #4 Sand Bar 5.4 Acres



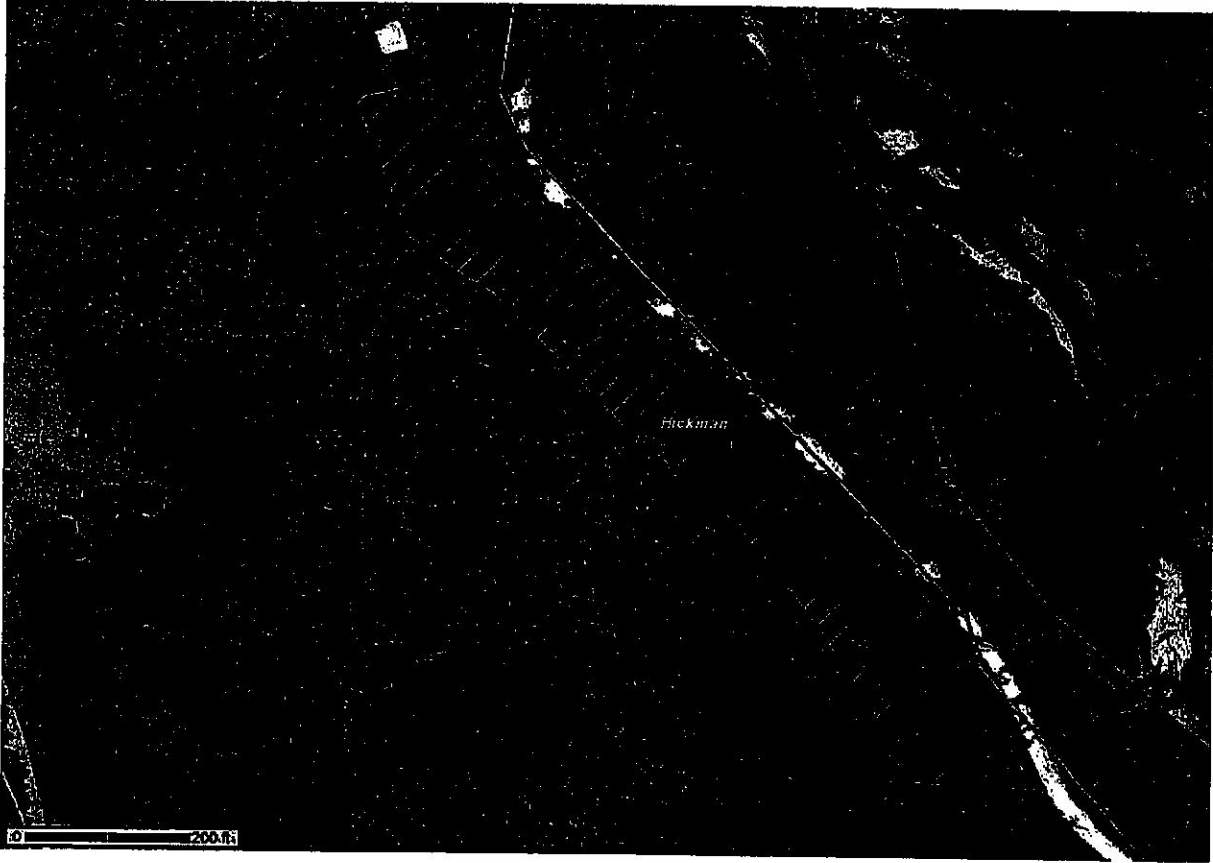
Name #5 Dear Field 8.6 Acres



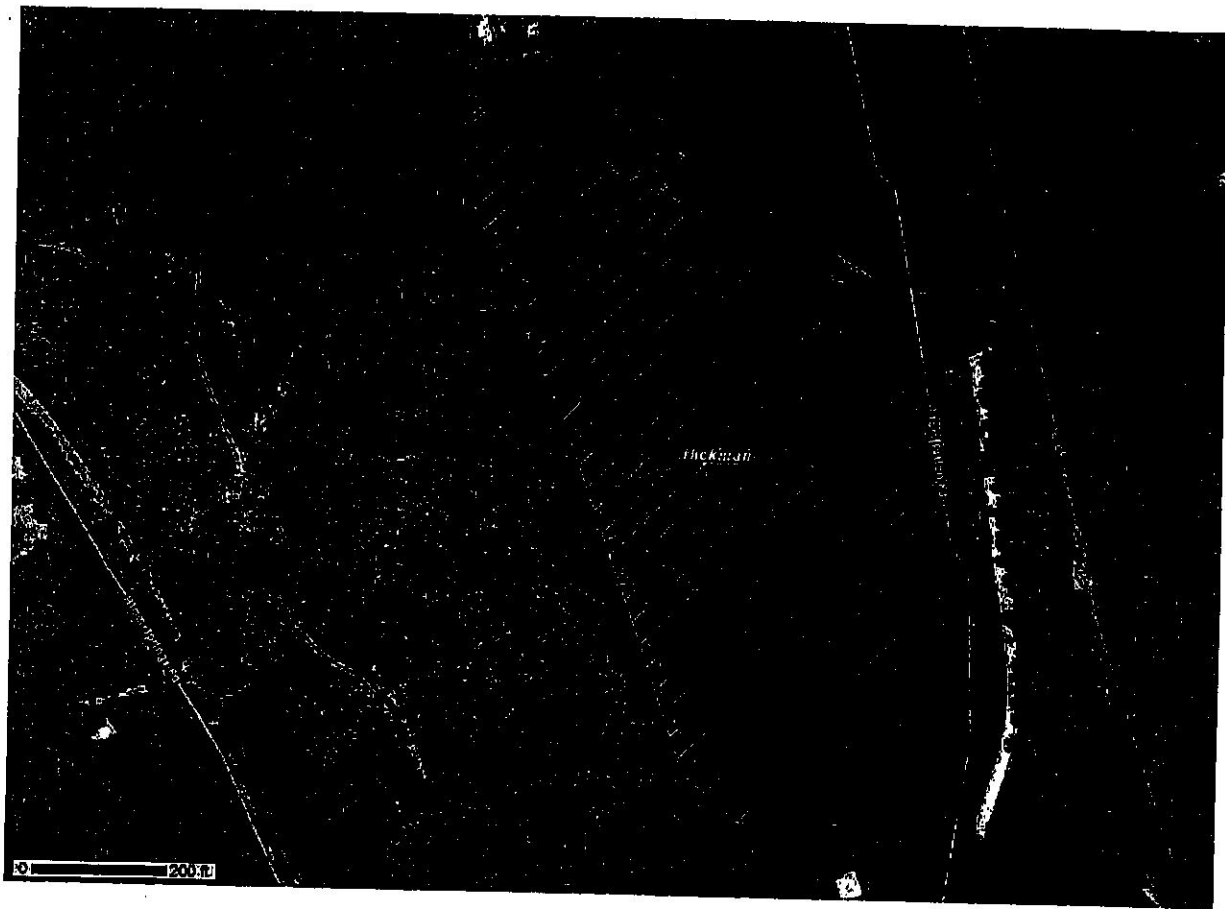
Name #6 Pond Field 10.4 Acres



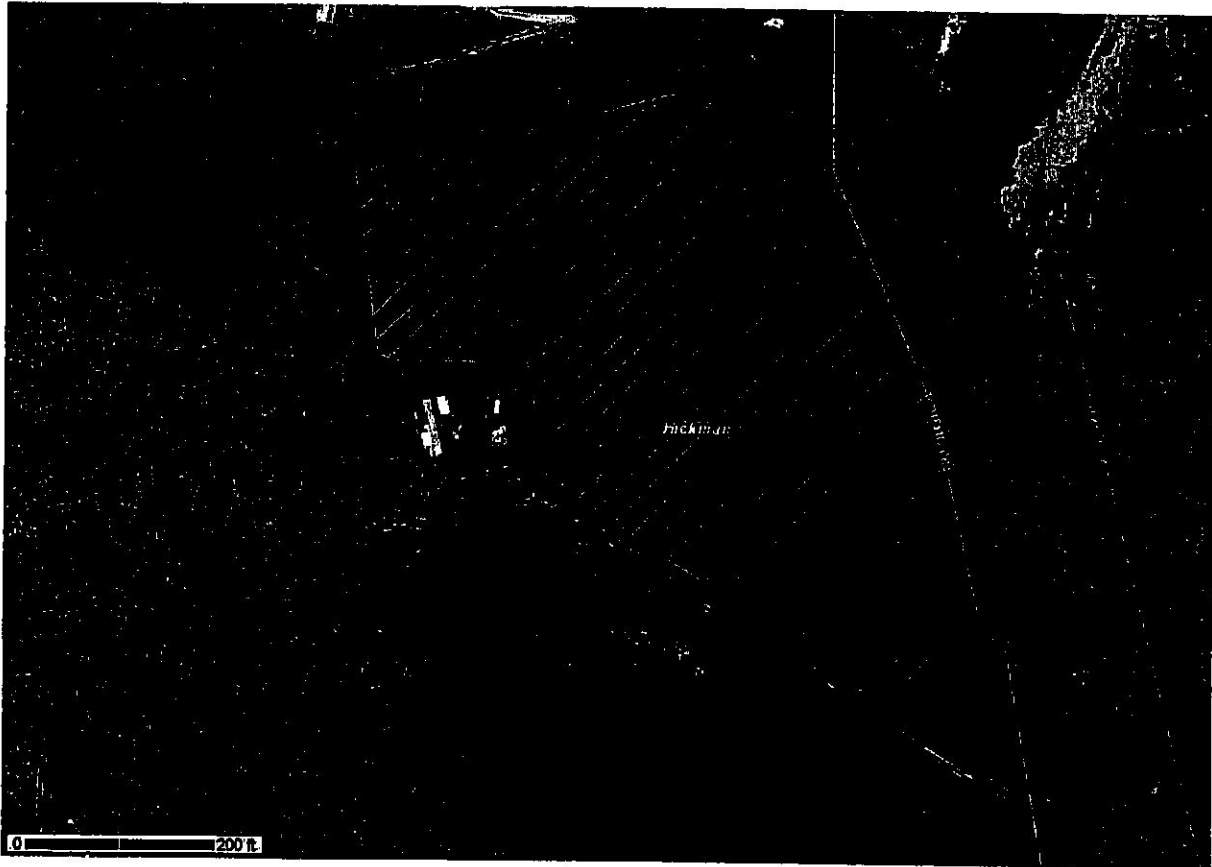
Name #7 Eagle Field 3.8 Acres



Name #8 Valley Field 10.7 Acres

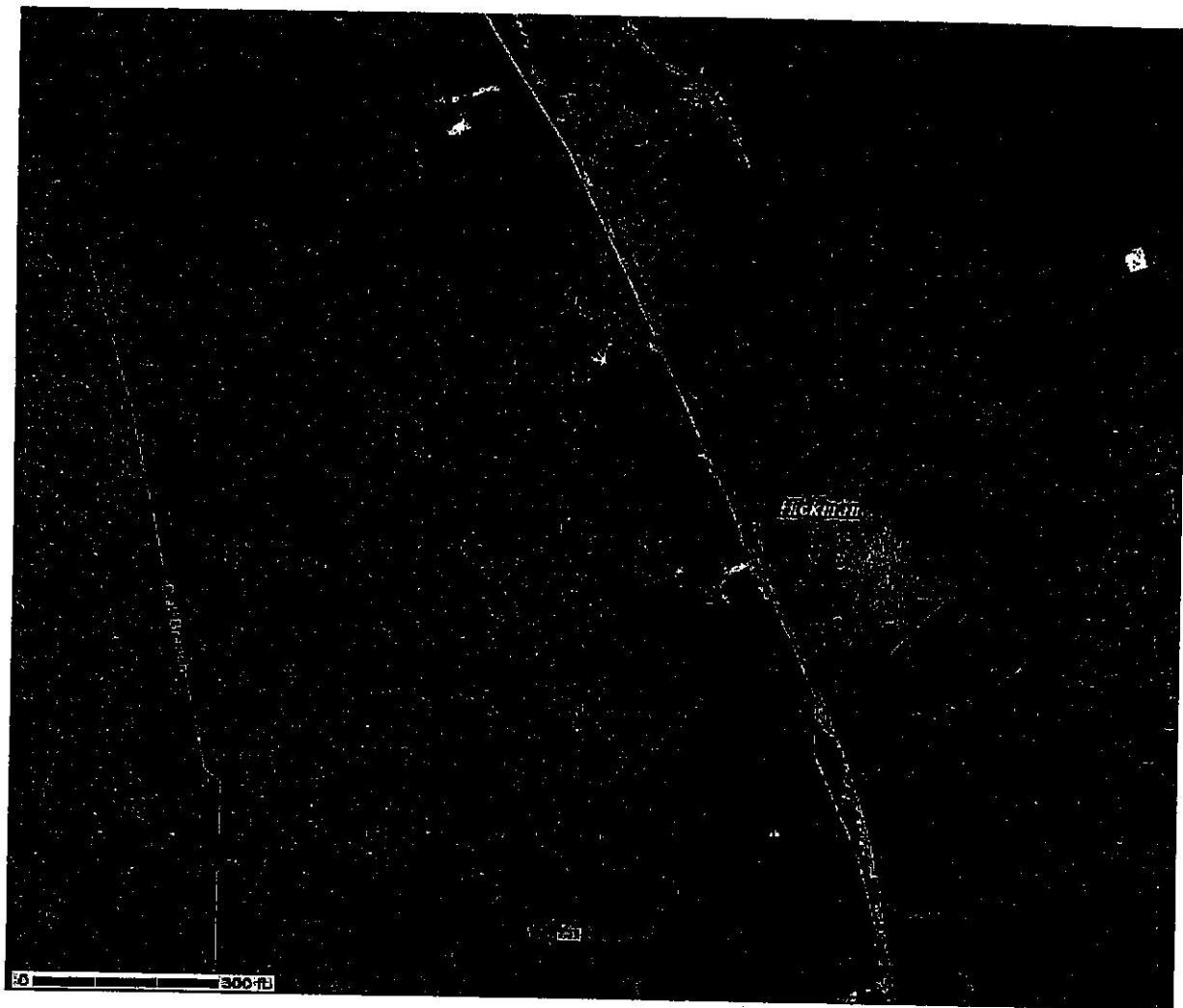


Name #9 Fuzzy Field 6.3 Acres





Name #10 Hilltop 5.8 Acres



#11

Shale Pit, 1.4 Acres



### Exhibit C Volatilization Factors $K_v$

Biosolids and	
Liquid and surface applied	0.50
Liquid and injected into the soil	1.0
Dewatered and applied in any manner	0.50

### Exhibit D Mineralization Rates $F_M$

Time After Biosolids Application (Year)	Fraction ( $F_M$ ) of Organic Nitrogen Mineralized from Biosolids from an Anaerobic process	Fraction ( $F_M$ ) of Organic Nitrogen Mineralized from Biosolids from an Aerobic process
0-1	.20	.30
1-2	.10	.15
2-3	.05	.08

### Exhibit E Crop Nitrogen Requirements<sup>1</sup>

(From University of Tennessee Agricultural Extension Service and EPA Guidance for Land Application of Biosolids)

Crop	Harvests/Year	Nitrogen Requirement
Corn (grain)	100-125 bu	120
	125-150 bu	150
Corn (silage)	20 tons	120 - 150
Soybeans	40 bu	0
Wheat	40 bu	60
Summer Annual Grass	6 tons (1 cutting)†	60 - 120
Hybrid hay	8 tons (4 cuttings)†	400 <sup>2</sup>
Tall Fescue hay	3 tons (2 cuttings)†	120
Orchard Grass hay	4 tons (2 cuttings)†	60 - 120
Sorghum (grain)	60 bu	60
Cotton	1 bale/acre	50
	1.5 bale/acre	90

†When less than the indicated number of harvests is expected, the total nitrogen rate should be reduced proportionally.

<sup>1</sup> For crops not listed, consult with the University of Tennessee Agricultural Extension Service and the Lime and Fertilizer Recommendations for the Various Crops of Tennessee. Compiled by: Hubert J. Savoy, Jr. and Debbie Jones; Revised: March, 1998; P&SS info #185.

<sup>2</sup> Highly dependent on field conditions and harvesting schedule.



12065 Lebanon Rd.  
 Mt. Juliet, TN 37122  
 (615) 758-5858  
 1-800-767-5859  
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Tax I.D. 62-0814289  
 Est. 1970

REPORT OF ANALYSIS

September 17, 2015

Jarrett (Chad) Dotson  
 Centerville Sewage Treatment Plant  
 110 Lawson St  
 Centerville, TN 37033

ESC Sample # : L787525-01

Date Received : September 09, 2015  
 Description : sludge

Site ID :

Sample ID : SS

Project : TCLP/PCB SLUDGE

Collected By : Jarrett Chad Dotson  
 Collection Date : 09/08/15 00:00

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	09/10/15 1800	LJN	1
Mercury	BDL	0.0100	mg/l	0.200	7470A	09/14/15 1210	CHM	1
Arsenic	BDL	0.450	mg/l	5.00	6010B	09/11/15 1821	ST	1
Barium	BDL	1.35	mg/l	100.	6010B	09/11/15 1821	ST	1
Cadmium	BDL	0.450	mg/l	1.00	6010B	09/11/15 1821	ST	1
Chromium	BDL	0.450	mg/l	5.00	6010B	09/11/15 1821	ST	1
Lead	BDL	0.450	mg/l	5.00	6010B	09/11/15 1821	ST	1
Selenium	BDL	0.450	mg/l	1.00	6010B	09/11/15 1821	ST	1
Silver	BDL	0.450	mg/l	5.00	6010B	09/11/15 1821	ST	1
TCLP ZHE Extraction	-				1311	09/10/15 1400	BG	1
TCLP Volatiles								
Benzene	BDL	0.0500	mg/l	0.500	8260B	09/12/15 1724	KLO	1
Carbon tetrachloride	BDL	0.0500	mg/l	0.500	8260B	09/12/15 1724	KLO	1
Chlorobenzene	BDL	0.0500	mg/l	100.	8260B	09/12/15 1724	KLO	1
Chloroform	BDL	0.250	mg/l	6.00	8260B	09/12/15 1724	KLO	1
1,2-Dichloroethane	BDL	0.0500	mg/l	0.500	8260B	09/12/15 1724	KLO	1
1,1-Dichloroethene	BDL	0.0500	mg/l	0.700	8260B	09/12/15 1724	KLO	1
2-Butanone (MEK)	BDL	0.500	mg/l	200.	8260B	09/12/15 1724	KLO	1
Tetrachloroethene	BDL	0.0500	mg/l	0.700	8260B	09/12/15 1724	KLO	1
Trichloroethene	BDL	0.0500	mg/l	0.500	8260B	09/12/15 1724	KLO	1
Vinyl chloride	BDL	0.0500	mg/l	0.200	8260B	09/12/15 1724	KLO	1
Surrogate Recovery								
Toluene-d8	102.		% Rec.	114.	8260B	09/12/15 1724	KLO	1
Dibromofluoromethane	96.5		% Rec.	125.	8260B	09/12/15 1724	KLO	1
a,a,a-Trifluorotoluene	101.		% Rec.	114.	8260B	09/12/15 1724	KLO	1
4-Bromofluorobenzene	105.		% Rec.	128.	8260B	09/12/15 1724	KLO	1
TCLP Pesticides								
Chlordane	BDL	0.00500	mg/l	0.0300	8081	09/15/15 1635	LKD	1
Endrin	BDL	0.00500	mg/l	0.0200	8081	09/15/15 1635	LKD	1
Heptachlor	BDL	0.00500	mg/l	0.0080	8081	09/15/15 1635	LKD	1
Lindane	BDL	0.00500	mg/l	0.400	8081	09/15/15 1635	LKD	1
Methoxychlor	BDL	0.00500	mg/l	10.0	8081	09/15/15 1635	LKD	1
Toxaphene	BDL	0.0100	mg/l	0.500	8081	09/15/15 1635	LKD	1
Surrogate Recovery								
Decachlorobiphenyl	75.9		% Rec.	123.	8081	09/15/15 1635	LKD	1
Tetrachloro-m-xylene	69.8		% Rec.	114.	8081	09/15/15 1635	LKD	1
TCLP Herbicides								