INACTIVE SITES RANKING SYSTEM
SUMMARY SHEET

STATE FILE

Site Name:	Clayton Farms		
Location:	1833 Loop Road, Clayton, Johnston County, NC		
ID Number:	NONCD0002852		
Ranked By:	Sue Robbins	Date:	1/22/09
Reviewed By:	Ginny Henderson	Date:	1/22/09

Site Description/Comments:

Site is a former crop protection, chemical testing, research farm. Pesticides, including dieldrin, were detected in the soils and groundwater.

Keith Data Entry Sheet

Route Scores: GW = 51.22 SW = 74.49 A = 0 P = ~~40.5~~ 41

$$\frac{((51.22)^2 + (74.49)^2 + (0)^2 + (41\ \cancel{40.5})^2)^{1/2}}{2} = \cancel{49.53}\ 49.63$$

Total Score:

I. GROUND WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Score
A. Route Characteristics		
1. Depth to Water Table	0 2 4 6 8 10	
2. Net Precipitation	0 1 2 3	
3. Hydraulic Conductivity	0 1 2 3	
4. Physical State	0 1 2 3	
	Total Route Characteristics Score	11
B. Containment	0 1 2	3
C. Waste Characteristics		
1. Toxicity/Persistence	0 3 6 9 12 15 18	
2. Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	
	Total Waste Characteristics Score	23

Ground Water Route of Migration Score

The Ground Water Route of Migration Score is obtained by multiplying lines A, B, and C and dividing this by 14.82 to give a score between 0 and 100.

Total Ground Water Route of Migration Score: 51.22

II. SURFACE WATER ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Score
A. Route Characteristics		
1. Facility Slope and Intervening Terrain	0 1 2 3	
2. 1-yr., 24-hour Rainfall	0 1 2 3	
3. Distance to Nearest Surface Water	0 2 4 6 8 10	
4. Physical State	0 1 2 3	
	Total Route Characteristics Score	16
B. Containment	0 1 2 3	3
C. Waste Characteristics		
1. Toxicity/Persistence	0 3 6 9 12 15 18	
2. Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	
	Total Waste Characteristics Score	23

Surface Water Route of Migration Score

The Surface Water Route of Migration Score is obtained by multiplying lines A, B, and C and dividing this by 14.82 to give a score between 0 and 100.

Total Surface Water Route of Migration Score: 74.49

III. AIR ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Score
A. Waste Characteristics		
1. Reactivity and Incompatibility	0 1 2 3	
2. Toxicity	0 3 6 9	
3. Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	
	Total Waste Characteristics Score	0
B. Targets		
1. Population Within a 4-Mile Radius	0 9 12 15 18 21 24 27 30	
2. Distance to Sensitive Environment	0 2 4 6	
3. Land Use	0 1 2 3	
	Total Targets Score	0

Air Route of Migration Score

The Air Route of Migration Score is obtained by multiplying lines A and B and dividing this by 7.80 to give a score between 0 and 100.

Total Air Route of Migration Score: 0

IV. DIRECT CONTACT ROUTE SCORE SHEET

Rating Factor	Assigned Value (Circle One)	Score
A. Residential Population		
1. Toxicity	0 3 6 9	0
2. Targets		
a) High Risk Population (count x 8, max. 100)	_____	
b) Total Resident Population (count x 2, max. 100)	_____	
c) Sensitive Environment	0 10 15 20 25	0
Resident Target Score (lines 2a + 2b + 2c, max. 100)	_____	
	Total Residential Population Score	0
B. Nearby Population		
1. Likelihood of Exposure (matrix score)	1	
a) Area of Contamination	0 25 50 75 100	100
b) Accessibility/ Frequency of Use	5 25 50 75 100	75
2. Toxicity Environment	0 3 6 9	0
3. Targets (max. 100)	~~81~~ 82	
	Total Nearby Population Score	~~729~~ 738
Overall Population Exposure Score		

The Overall Population Exposure Score is determined by adding lines A and B and dividing this by 18 to give a score between 0 and 100.

Total Population Exposure Route of Migration Score: ~~40.5~~ 41

DOCUMENTATION RECORDS
FOR
STATE HAZARD RANKING SYSTEM

INSTRUCTIONS: Briefly summarize the information you used to assign a score to each factor and document the source of the information and/or the rationale for each score.

Facility Name:	Clayton Farms
ID Number:	NONCD0002852
Location:	1833 Loop Road, Clayton, Johnston County, NC
Date Scored:	1/21/09
Person Scoring:	Sue Robbins
Factors Not Scored:	Air Route and Residential Population

Comments:

References:

1. State file.
2. North Carolina Atlas, University of NC Press, Chapel Hill, NC 1975.
3. Rainfall Frequency Atlas of the US, Technical Paper 40, US Department of Commerce, Washington, DC, 1963.
4. 2000 Census of Population and Housing: Summary Population and Housing Characteristics: North Carolina, US Department of Comerce. http://quickfacts.census.gov/qfd/.
5. Dangerous Properties of Industrial Materials, N. Irving Sax, Van Reinhold Company, Inc., 1984.
6. 40 CFR 300, Appendix A, July 1, 1988.
7. Johnston County GIS, www.johnstonnc.com

GROUND WATER ROUTE

A. Route Characteristics:

1. Depth to Water Table: (1)

   4: Piedmont

2. Net Precipitation: (2)

   2: 48 – 41 = 7 inches

3. Hydraulic Conductivity of Unsaturated Zone: (2)

   2: Piedmont

4. Physical State: (1)

   3: liquid

B. Containment: (1)

3: none

C. Waste Characteristics:

1. Toxicity/Persistence: (1,5)

   18: dieldrin

2. Hazardous Waste Quantity: (1)

   5: unknown

SURFACE WATER ROUTE

A. Route Characteristics:

1. Facility Slope and Intervening Terrain: (7)

   3: site in surface water

2. One-Year 24-hour Rainfall: (3)

   2: 3 to 3.5 inches

3. Distance to Nearest Surface Water/Name: (7)

   8: pond on site

4. Physical State: (1)

   3: liquid

B. Containment: (1)

   3: none

C. Waste Characteristics:

1. Toxicity/Persistence: (1,5)

   18: dieldrin

2. Hazardous Waste Quantity: (1)

   5: unknown

AIR ROUTE

A. Waste Characteristics: **NOT SCORED**

1. Reactivity and Incompatibility:

2. Toxicity:

3. Hazardous Waste Quantity:

B. Targets: **NOT SCORED**

1. Population within 4-mile Radius/Distance from Hazardous Substance:

2. Distance to Sensitive Environment:

3. Land Use:

POPULATION EXPOSURE ROUTE

A. Residential Population: **Not Scored**

1. Toxicity: ()

2. Targets:

a. High Risk Population: ()

b. Total Resident Population: ()

c. Sensitive Environment

B. Nearby Population:

1. Likelihood of Exposure Score: 1

a. Area of Contamination: (1)

100: 39.27 acres

b. Accessibility/Frequency of Use: (1)

75: no continuous barrier

2. Toxicity: (1,5)

9: dieldrin

3. Targets: 0.1 (326) + 0.05 (977) = ≈ 81

a. 0- ½ mile: 3.14 (0.5^2) x 415 people/sq.mi = 326 (4)

b. ½ - 1 mile: 3.14 $(1^2 - 0.5^2)$ x 415 people/sq.mi = 977 (4)