



# **Arkansas Water Resources Center**

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## **PESTICIDE GROUND WATER MONITORING PROJECT PHASE VII**

**Prepared for:  
ARKANSAS STATE PLANT BOARD**

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COMPLETION REPORT  
ARKANSAS STATE PLANT BOARD  
PESTICIDE GROUND WATER MONITORING PROJECT  
FOR MOST VULNERABLE AREAS OF ARKANSAS  
PHASE VII

COMPLETION REPORT:  
ARKANSAS STATE PLANT BOARD  
PESTICIDE GROUND WATER MONITORING PROJECT  
PHASE VII

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### Summary

During Phase VII 45 samples were drawn from 44 wells in eleven counties. These samples were all from new wells including two each in Ashley, Chicot and Lincoln Counties; seven in Prairie and Crittenden Counties; six in Jefferson County; three in Lonoke county; 13 in Desha County; and one each in Arkansas White and St. Francis Counties. The well at Jefferson #2 was sampled twice. This gives a total, to date, of 348 samples collected from 306 wells for this program. Table 1 shows a listing of all counties where monitoring has been done and the number of wells sampled in each county.

All samples collected were analyzed for 61 pesticides and nitrate-nitrogen. A listing of all the analytes can be found in the Quality Assurance Report (QAR) which is attached as an appendix. The QAR also includes detection limits for all analytes as well as quality control (QC) data for all the samples analyzed.

There were pesticide detections in samples from four wells during Phase VII. Table 2 lists all the pesticide detections for all phases of monitoring. All detections from Phase VII appear in bold type in Table 2. Bentazon, at less than 1 µg/L was found in both samples from Jefferson #2. In both cases no confirmation was possible, as the detection limit for bentazon at the Arkansas State Plant Board (ASPB) laboratory is not low enough. Bentazon was also found in the sample from St. Francis #1, at 7.97 µg/L. No confirmation was possible due to lack of sample. This well will be sampled again in Phase VIII.

Molinate was found in Desha #12 (1.42 µg/L) and Jefferson #5 (0.29 µg/L). These detections were both too small to be confirmed at the ASPB laboratory. Verification of these detections is planned for Phase VIII. These results are particularly interesting. This is the first time molinate has been detected in the ASPB monitoring series. Both wells are in the area monitored several years ago by the Arkansas Department of Environmental Quality (ADEQ) when seven of 77 wells monitored were found to have trace levels of molinate.

Nitrate-nitrogen was analyzed in all 45 samples collected. All but 14 of the analyses showed detectable levels of nitrate greater than 0.002 mg/L. Only four wells had nitrate levels above 1 mg/L. None were above the Maximum Contaminant Level, 10 mg/L.

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Table 1. Areas Monitored During Phases I-VI

<u>County</u>	<u>Number of Wells</u>	<u>Number of Samples</u>
Ashley	18 (2)	23 (2)
Chicot	8 (2)	8 (2)
Drew	1	2
Mississippi	18	19
Craighead	12	13
Poinsett	13	14
Woodruff	60	81
Pulaski	19	22
Lonoke	15 (3)	15 (3)
Lee	11	11
Crittenden	7 (6)	7 (6)
Jackson	26	26
Lawrence	12	12
Monroe	30	34
Clay	15	18
Greene	6	6
Randolph	5	5
Prairie	7 (7)	7 (7)
Lincoln	2 (2)	2 (2)
Jefferson	6 (6)	7 (7)
White	1 (1)	1 (1)
St. Francis	1 (1)	1 (1)
Desha	13 (13)	13 (13)
Arkansas	1 (1)	1 (1)
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	Total 306 (44)	348 (45)

Note: ( ) indicates numbers for Phase VII.

## II. Background

In 1990 the U. S. Environmental Protection Agency (EPA) released its first report on its National Pesticide Survey. The report made it clear that ground water contamination by pesticides is a widespread problem in the U. S. In response the EPA initiated its "Pesticides in Ground-Water Strategy" which included the State Management Plan (SMP) concept (EPA, 1991). Arkansas completed its generic SMP--The Arkansas Agricultural Chemical Ground-Water Management Plan--in 1992. The SMP called for monitoring of ground water for pesticides in those areas of the state found to be most vulnerable.

Table 2. Pesticide Detections during Phases I-VII. \*

Well ID#	Date(s) Sampled	Chemical	Conc. (µg/L)
Drew #1	Apr. 22, 1993	Metolachlor	0.7
	May 20, 1993	no detection	
Miss #4	Nov. 2, 1993 closed	Bentazon	2.5
Miss #5	Nov. 2, 1993	Bentazon	0.3
	Mar. 29, 1994	no detection	
CH #4	Nov. 22, 1993	Fluometuron	0.5
	Mar. 29, 1994	no detection	
Poin #1	Dec. 6, 1993	Bentazon	0.2
	Mar. 29, 1994	no detection	
Wood #7	May 23, 1994	Bentazon	55
	June 29, 1994	Bentazon	66
		Fluometuron	0.4
	July 27, 1994 inside	Bentazon	78
	outside	Bentazon	69
	May 15, 1995	Bentazon	21
	Oct. 12, 1995	Bentazon	38
	Jan. 12, 1998	Bentazon	11.35
	Apr. 23, 1998	Bentazon	16.50
	Wood #9	May 24, 1994	Bentazon
		Acifluorfen	1.7
		Fluometuron	0.9
June 29, 1994		Bentazon	88
		Acifluorfen	8.6
		Fluometuron	0.8
May 15, 1995		Bentazon	37
		Acifluorfen	6.8
		Fluometuron	0.4
Oct. 12, 1995		Bentazon	26
		Acifluorfen	4
Sep. 27, 1997		Bentazon	2.73
		Acifluorfen	1.58
Wood #11	Jul. 26, 1994	Metolachlor	13
	Feb. 20, 1995	Metolachlor	11.5
	July 10, 1996	Metolachlor	7.1
	Sep. 25, 1998	Metolachlor	4.42
Wood #25	Sep. 15, 1994	Bentazon	4.4
	Feb. 20, 1995	Bentazon	1.9
	June 18, 1997	Bentazon	0.34

Table 2. Pesticide Detections during Phases I-VII (continued). \*

Wood #26	Sep. 15, 1994	Bentazon	1.5
	Feb. 20, 1995	Bentazon	0.9
	June 18, 1997	Bentazon	0.55
Wood #29	Sep. 29, 1994	Metribuzin	0.4
	Feb. 20, 1995 closed	Metribuzin	0.4
Wood #34(PB)	Feb. 20, 1995	Alachlor	1.5
	May 15, 1995	Bentazon	1.5
		Acifluorfen	0.5
Pulaski #14	Jun. 19, 1995	Acifluorfen	27
		Bentazon	135
		Fluometuron	24
		Metribuzin	4
	Sep. 28, 1995	Acifluorfen	11
		Bentazon	57
		Fluometuron	19
		Metribuzin	2
	Feb. 18, 1996	Acifluorfen	9.3
		Bentazon	58
		Metribuzin	1.3
	June 18, 1997	Acifluorfen	30.0
Monroe #1	Mar. 28, 1996	Bentazon	92.3
		Acifluorfen	148
	Apr. 17, 1996	Bentazon	97
		Acifluorfen	180
	June 17, 1996	Bentazon	103
		Acifluorfen	374
	Jan 12, 1998	Bentazon	145
		Acifluorfen	58.8
	May 8, 1998	Bentazon	152
		Acifluorfen	14.3
Clay #2	July 29, 1997	Bentazon	137
		Bromacil	1.66
	Sep. 23, 1997	Bromacil	1.85
Clay #7	Aug. 13, 1997	Acifluorfen	1.70
	Sep. 24, 1997	Acifluorfen	0.95
Jefferson #2	<b>Feb. 26, 1999</b>	<b>Bentazon</b>	<b>0.92</b>
	<b>June 11, 1999</b>	<b>Bentazon</b>	<b>0.72</b>
Jefferson #5	<b>June 11, 1999</b>	<b>Molinate</b>	<b>0.29</b>
St. Francis #1	<b>May 12, 1999</b>	<b>Bentazon</b>	<b>7.97</b>
Desha #12	<b>June 10, 1999</b>	<b>Molinate</b>	<b>1.42</b>

\*Phase VII detections shown in bold face type.

To identify the areas where the ground water is vulnerable, a vulnerability map for the Arkansas Delta was developed using a combination of pesticide DRASTIC and pesticide use information. DRASTIC (Aller et al., 1987) is a method for determining areas sensitive to ground-water contamination developed for EPA.

DRASTIC determines ground-water sensitivity to contamination based on seven factors:

**D**epth to Ground Water  
net **R**echarge  
**A**quifer media  
**S**oil media  
**T**opography  
**I**mpact of the vadose zone, and  
hydraulic **C**onductivity

The Arkansas Soil and Water Conservation Commission (ASWCC) coordinated development of the vulnerability map for Arkansas (Fugitt, 1992). For this purpose estimates of pesticide use in the various counties was provided by the Arkansas Cooperative Extension Service (CES).

With the Arkansas State Plant Board (ASPB) as lead agency, monitoring under the SMP began in September 1992. Six phases of monitoring have been carried out, prior to this phase. As Table 2 shows, 16 of the 262 wells tested prior to Phase VII were found to be contaminated. With completion of Phase VI the number has risen to 20 contaminated wells, i.e., 6.5% of the wells monitored have had pesticides detected

### III. The Study Area.

At least one sample was taken from each of eleven different counties during Phase VII. Two samples were collected in Ashley County. Detailed vulnerability maps were unavailable when Ashley County was monitored during Phase I. As a result a 'high vulnerability' area in the county was missed at that time. The Phase VII samples were collected in and near that area. During the same trip two samples were also collected near Lake Chicot in Chicot County. This is another area of higher vulnerability that had not been monitored previously. The major crops in these two counties are cotton (50,000 acres in 1990), soybeans (41,000) and rice (20,400) (Arkansas Agricultural Statistics, 1990).

Other samples were collected in Prairie, Jefferson, Crittenden and Desha counties during Phase VII. Seven samples were taken from wells in a vulnerable area that roughly parallels the White River in eastern Prairie County. Soybeans is the most widely grown crop in Prairie County (146,000 acres in 1996). Rice is second (67,000

acres) and wheat, often grown in conjunction with soybeans, is third (55,000 acres). (Arkansas Agricultural Statistics, 1996).

Six samples were drawn from wells in Crittenden County, located just west of Memphis. The area of highest vulnerability in Crittenden follows the west side of the Mississippi River. All six samples came from this area. Soybeans and wheat are the predominant crops with 189,00 and 71,000 acres respectively grown in 1996. Cotton is also a major crop with 57,000 acres grown in 1996 (Arkansas Agricultural Statistics, 1996). On the same sampling trip, one well from a vulnerable area in southeastern St. Francis County was also sampled.

While a number of wells were sampled in Lonoke County in 1995, a small area with high vulnerability near the White County line was not sampled at that time. Three samples were collected from this area during Phase VII along with one sample from just over the line in White County in the same area of vulnerability.

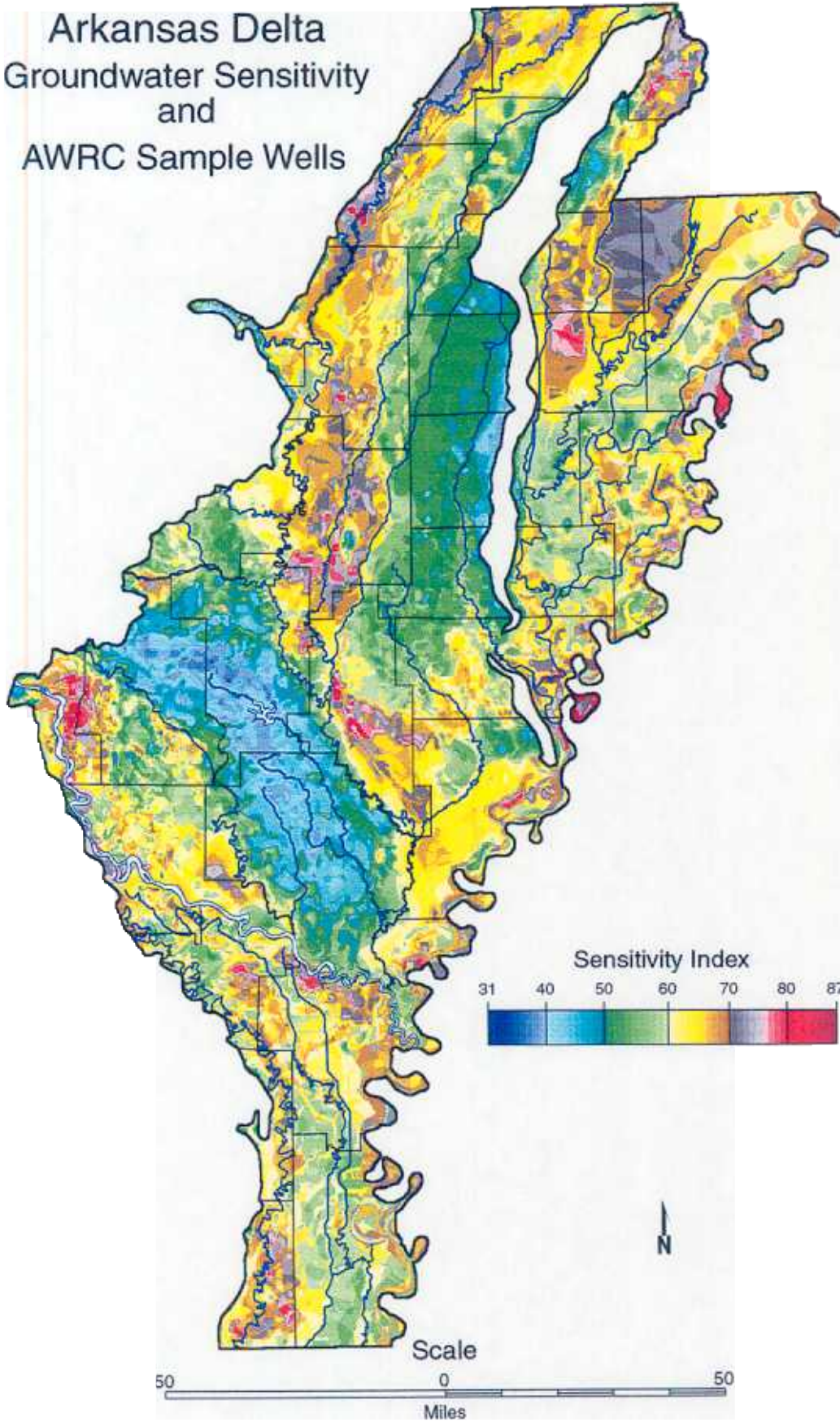
Twenty of the samples taken came from Jefferson and Desha counties, where Soybeans is the major crop, both counties producing 109,000 acres in 1996 (Arkansas Agricultural Statistics, 1996). Cotton is the second largest crop. These two counties were included in the area sampled by the Arkansas Department of Environmental Quality (ADEQ-formerly the Department of Pollution Control and Ecology) in 1996. At that time seven wells in these counties were found to have trace levels of bentazon (all less than or equal to 0.11 µg/L). At the same time there were six detections of molinate in these two counties with concentrations between 0.016 and 0.246 µg/L. All the wells sampled by ADEQ were irrigation wells

Twelve maps are included on the following pages. The first of these is the sensitivity map for the entire Arkansas Delta. Reds and yellows show the areas of highest sensitivity. The blue and green areas have lower sensitivity. This map shows sensitive areas not vulnerable areas. Only the factors from pesticide DRASTIC are included. Actual pesticide use was not included. However, as pesticide use in the delta is so ubiquitous, the sensitive areas are highly correlated with vulnerability.

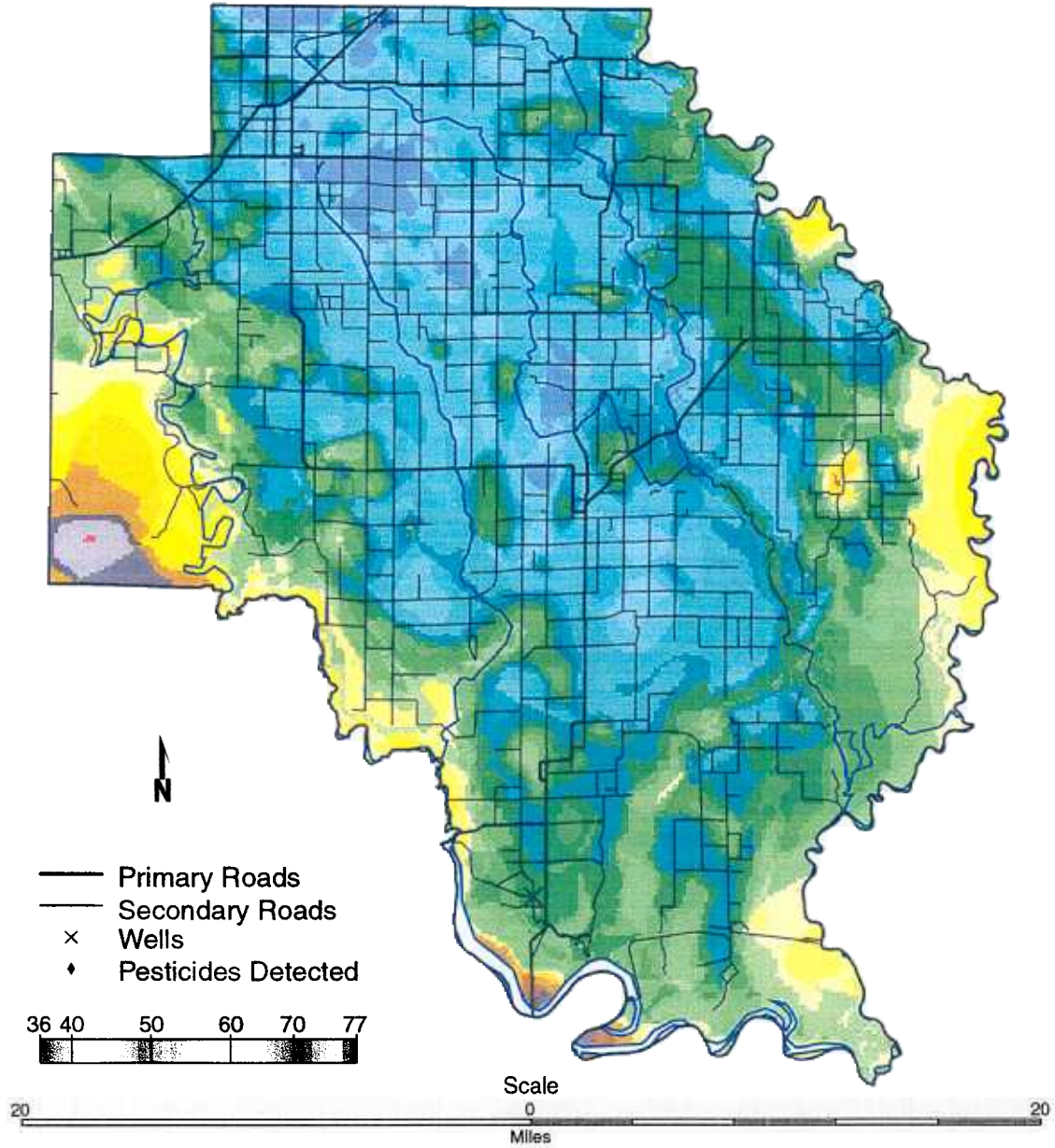
Following the Delta sensitivity map are maps of all the counties investigated during Phase VII. On these maps, "X" indicates where wells were sampled and if the "X" is partially covered with a red diamond a detection is indicated. These maps show how the locations of the samples collected, including detections, match up with the sensitive areas in the various counties.



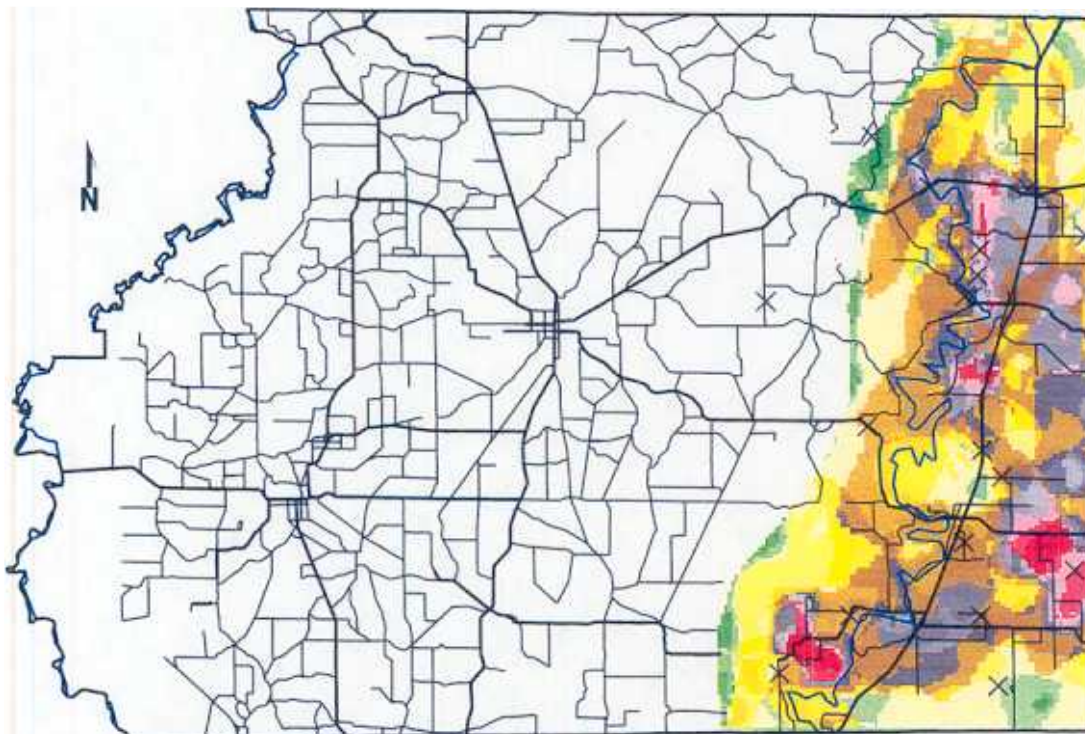
# Arkansas Delta Groundwater Sensitivity and AWRC Sample Wells



# Arkansas County



# Ashley County

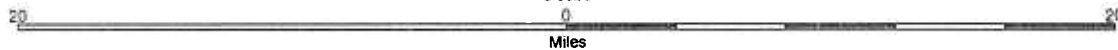


Primary Roads  
Secondary Roads

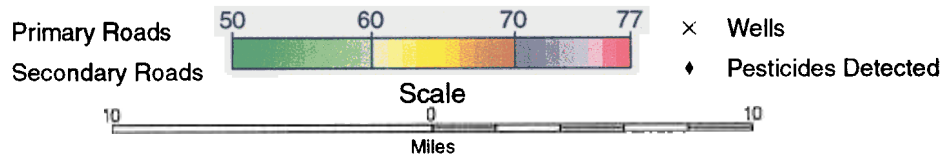
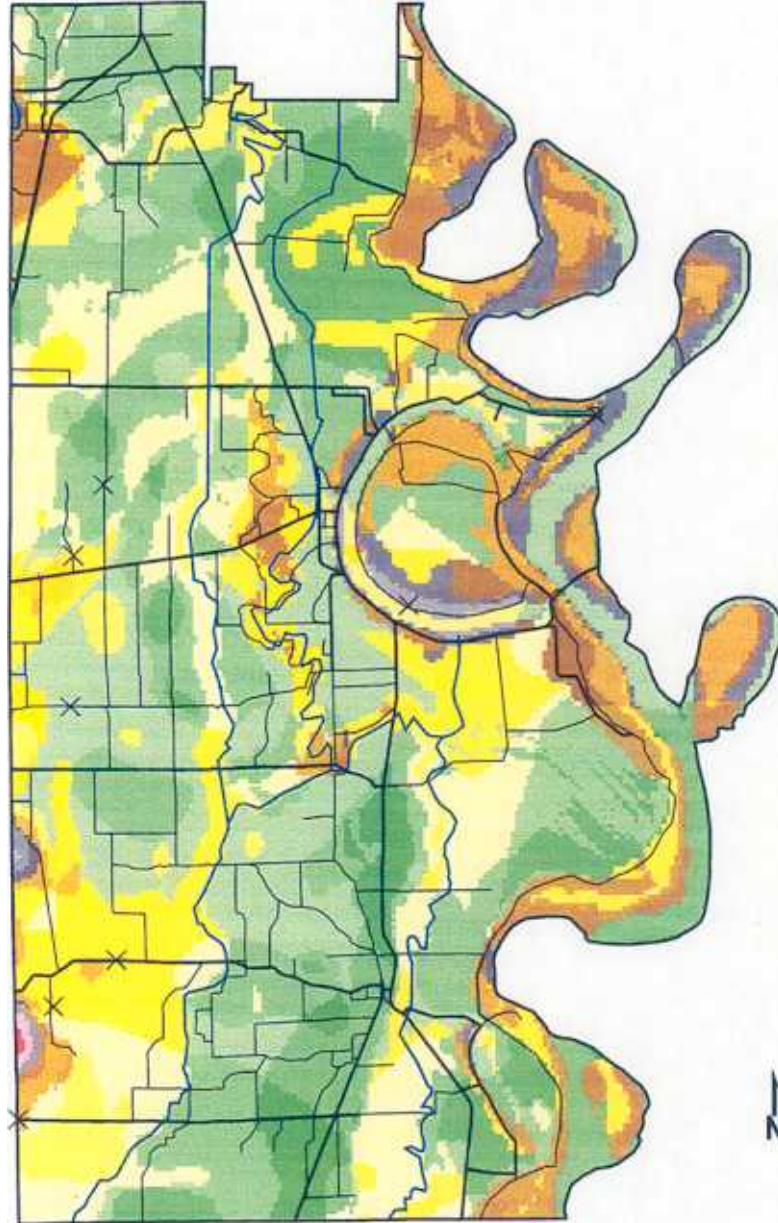


X Wells  
◆ Pesticides Detected

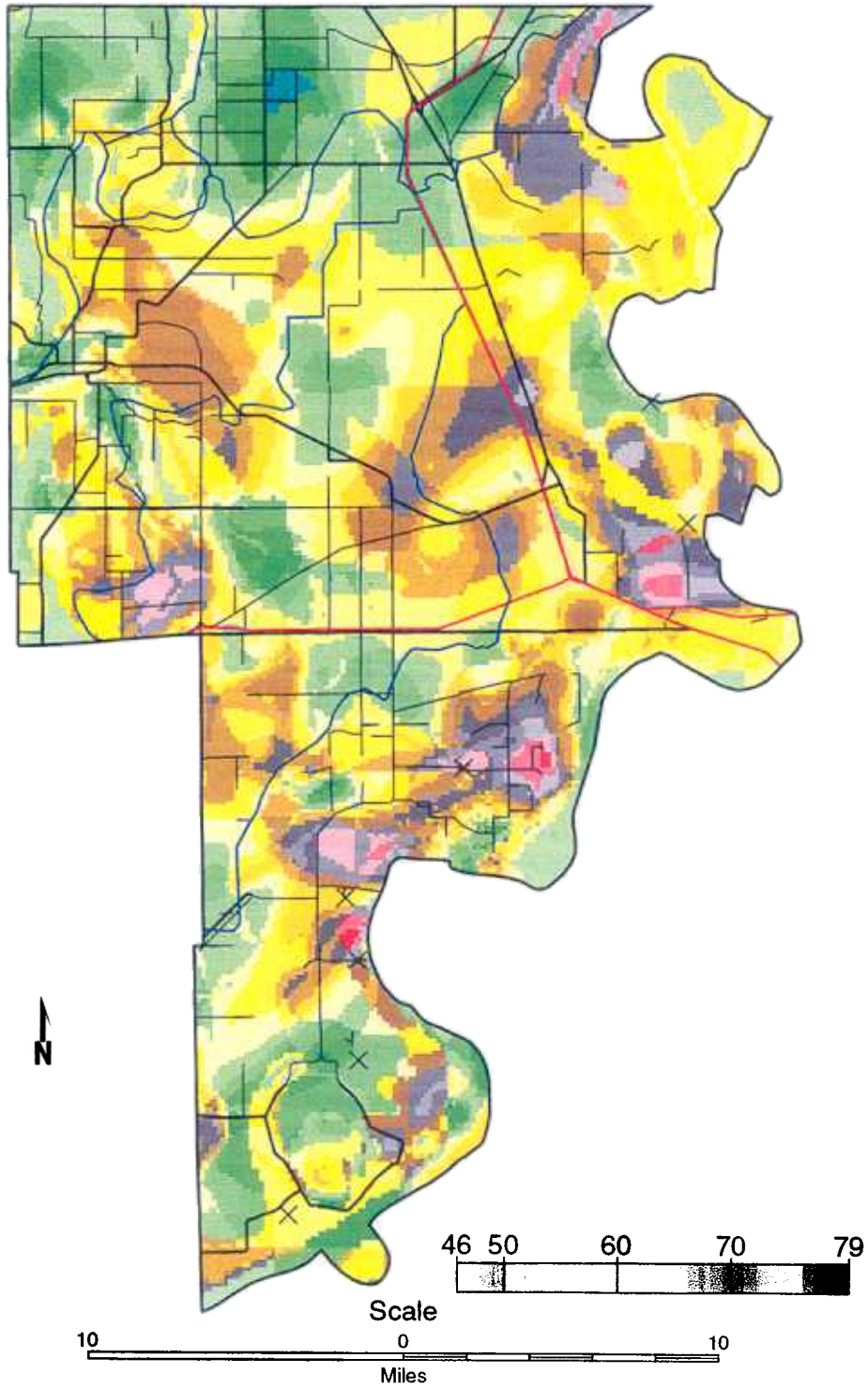
Scale



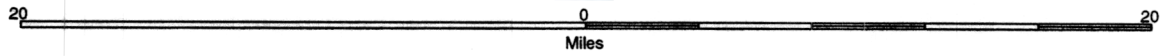
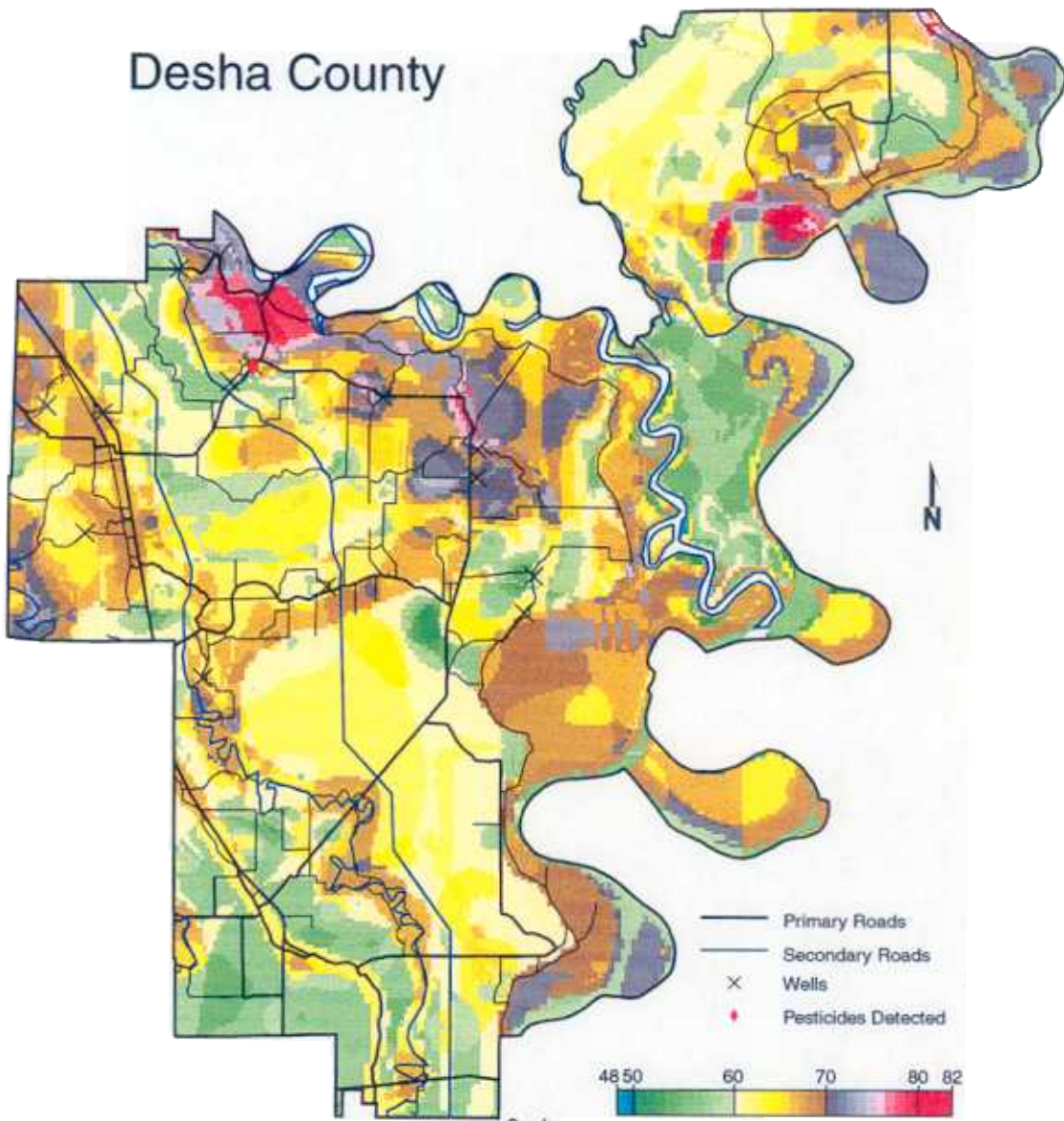
# Chicot County



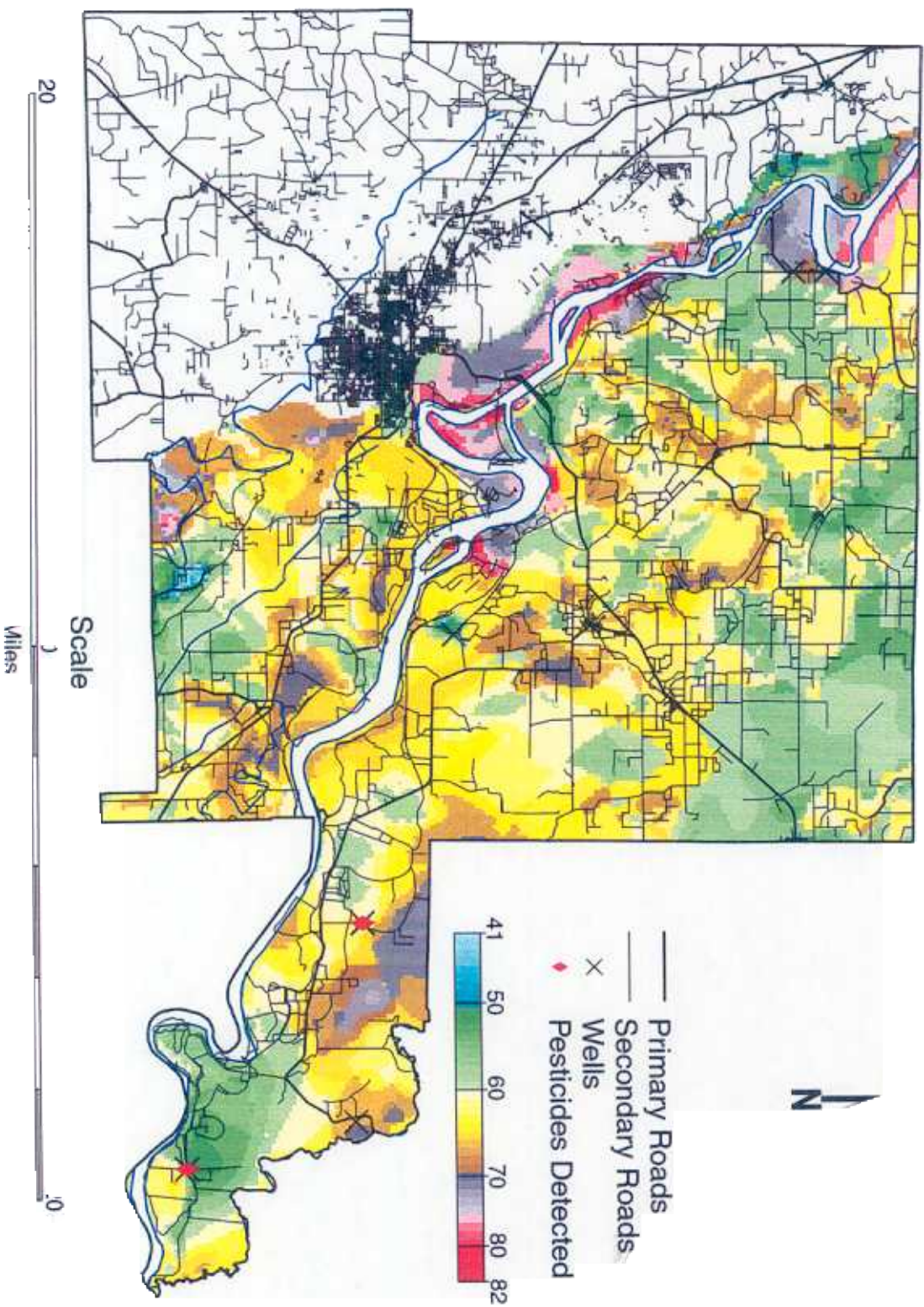
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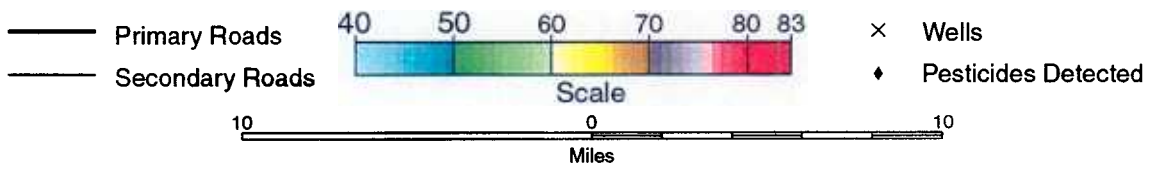
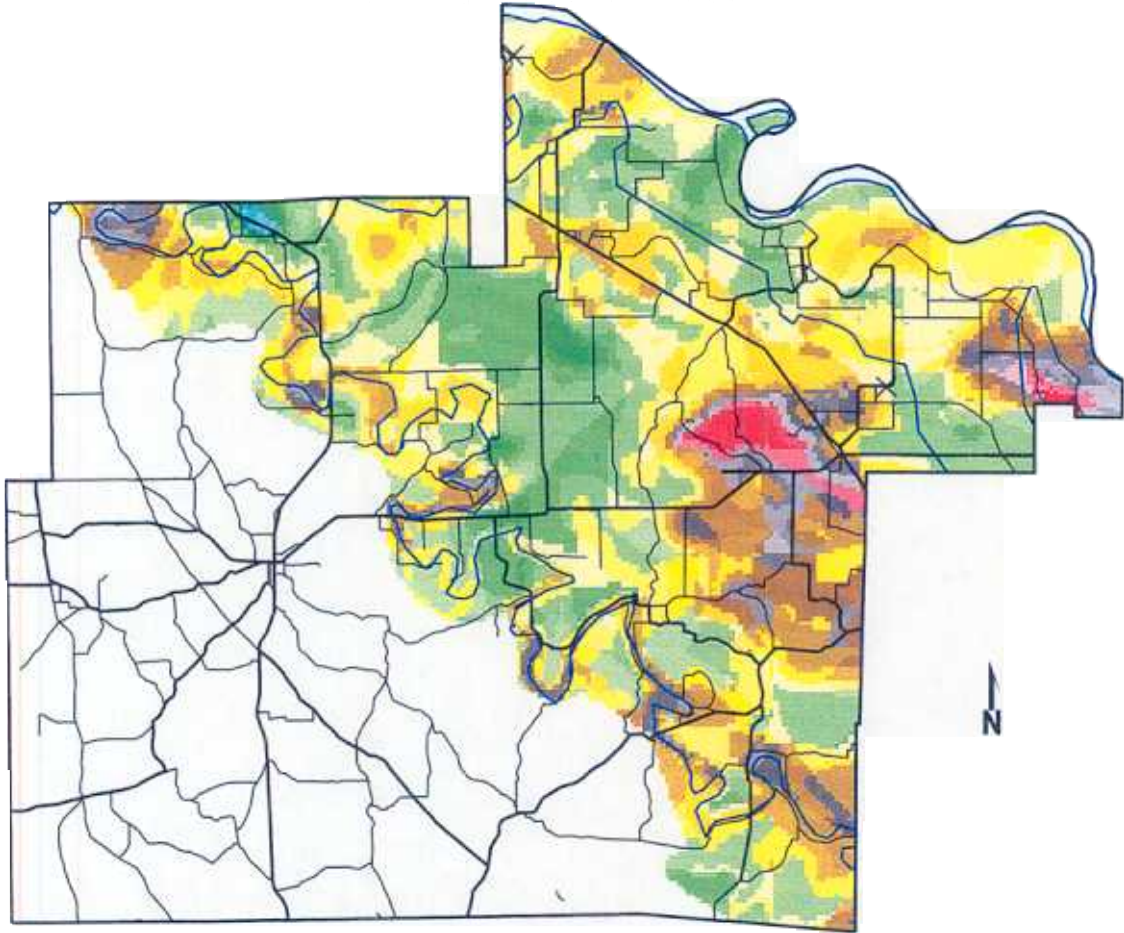
# Desha County



# Jefferson County

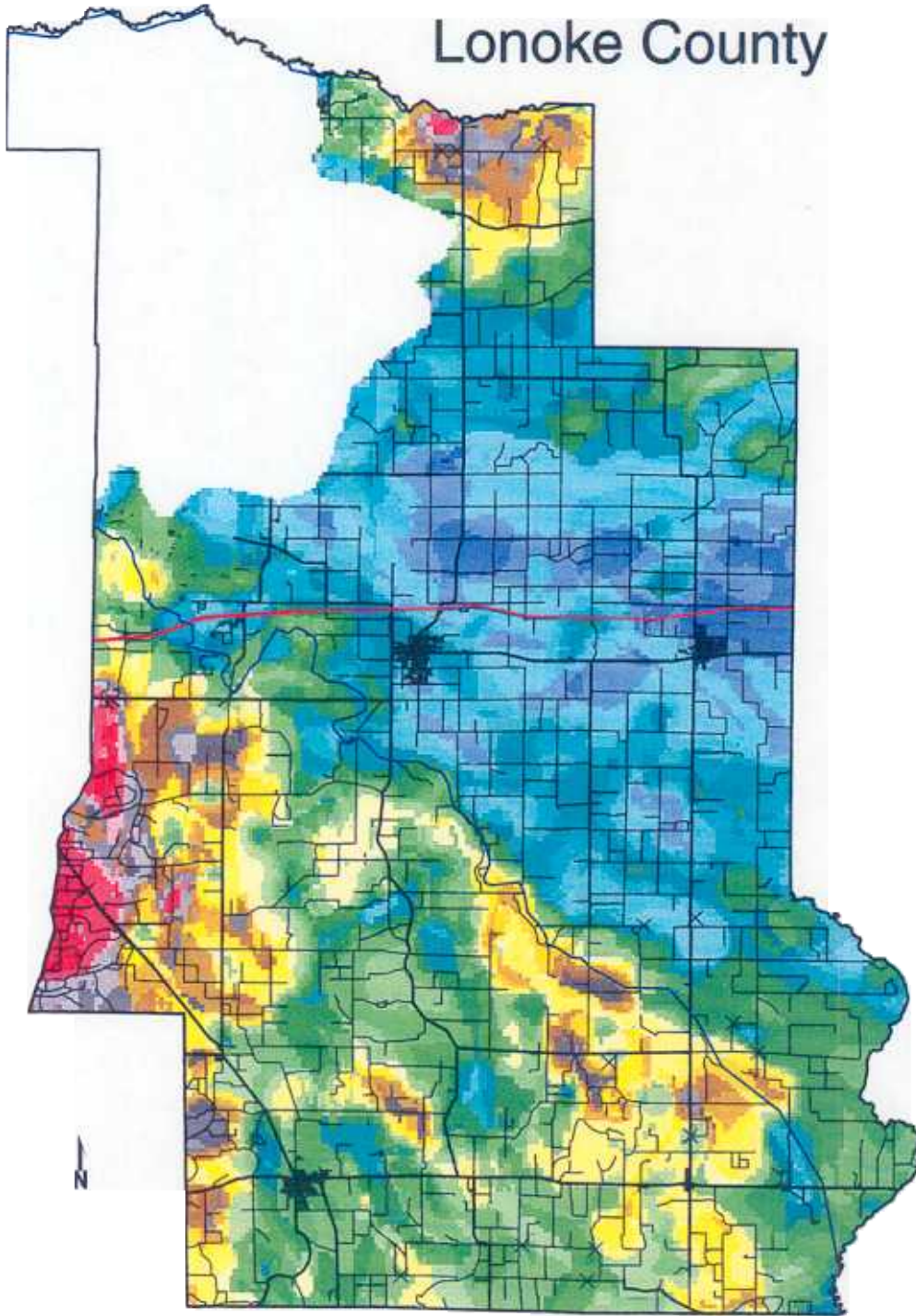


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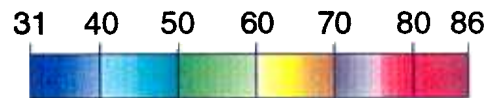




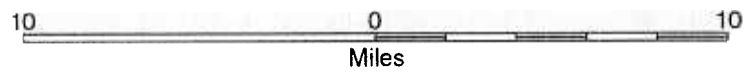
# Lonoke County



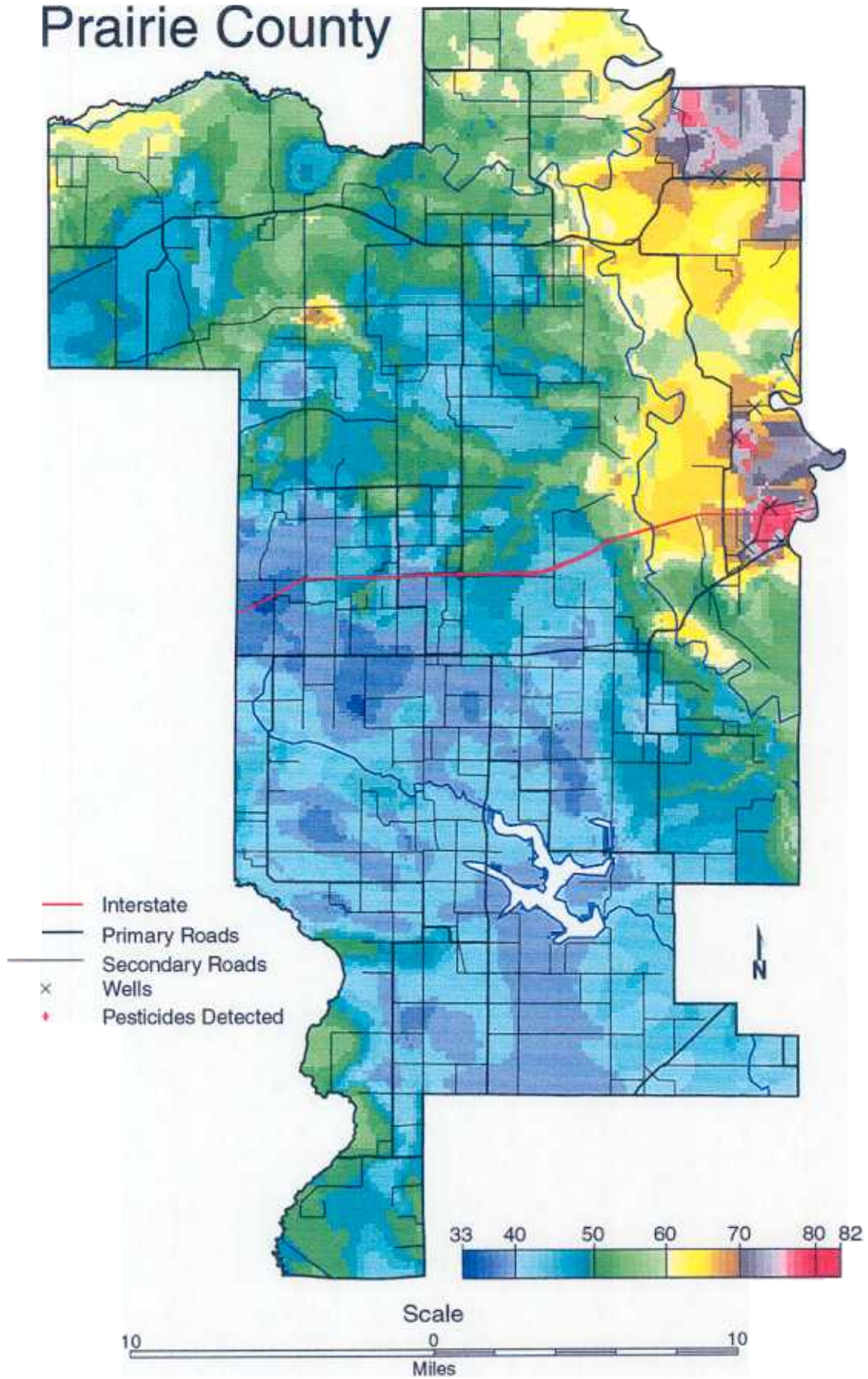
- × Wells
  - ◆ Pesticides Detected
- Interstate  
Primary Roads  
Secondary Roads



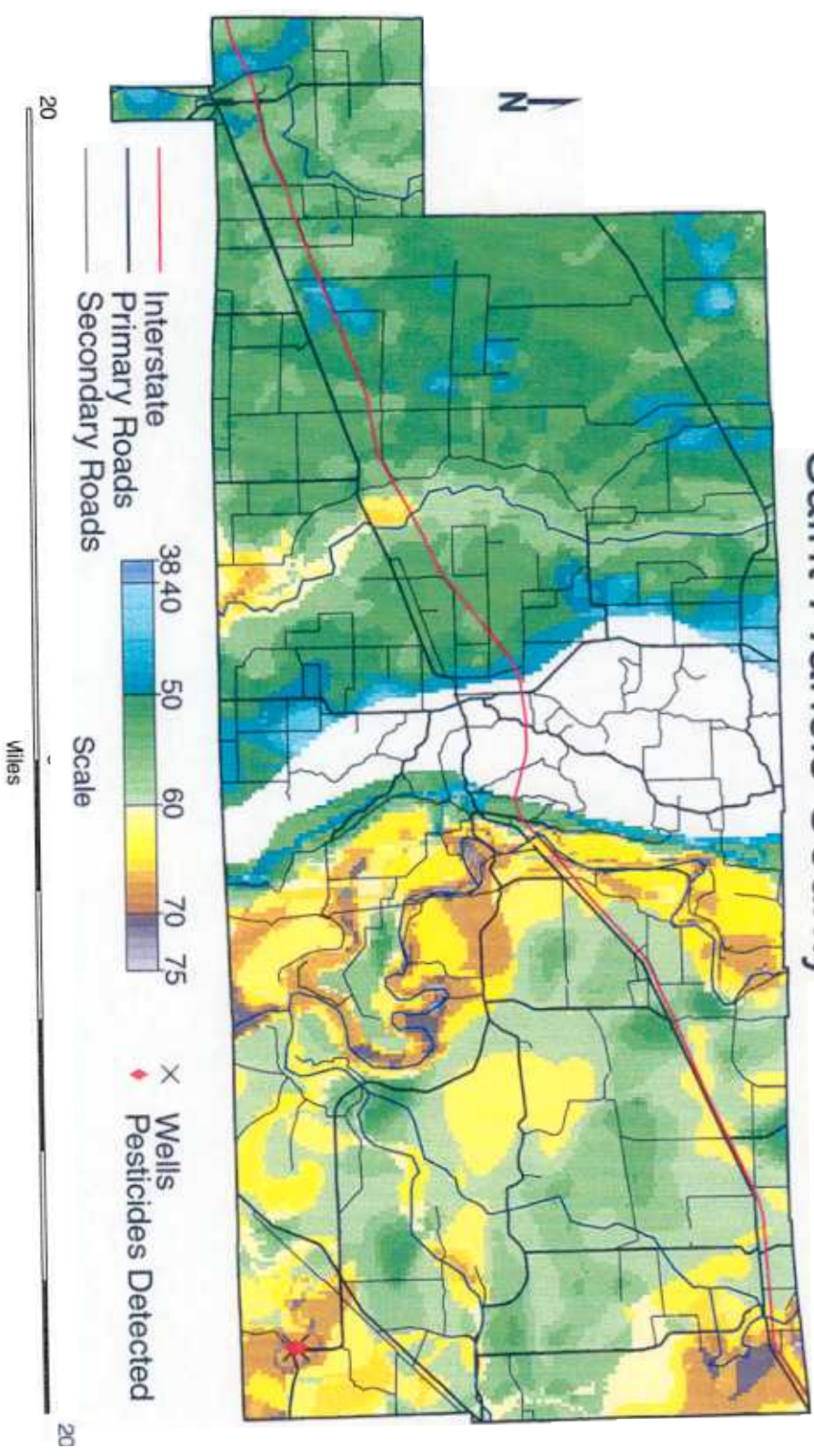
Scale



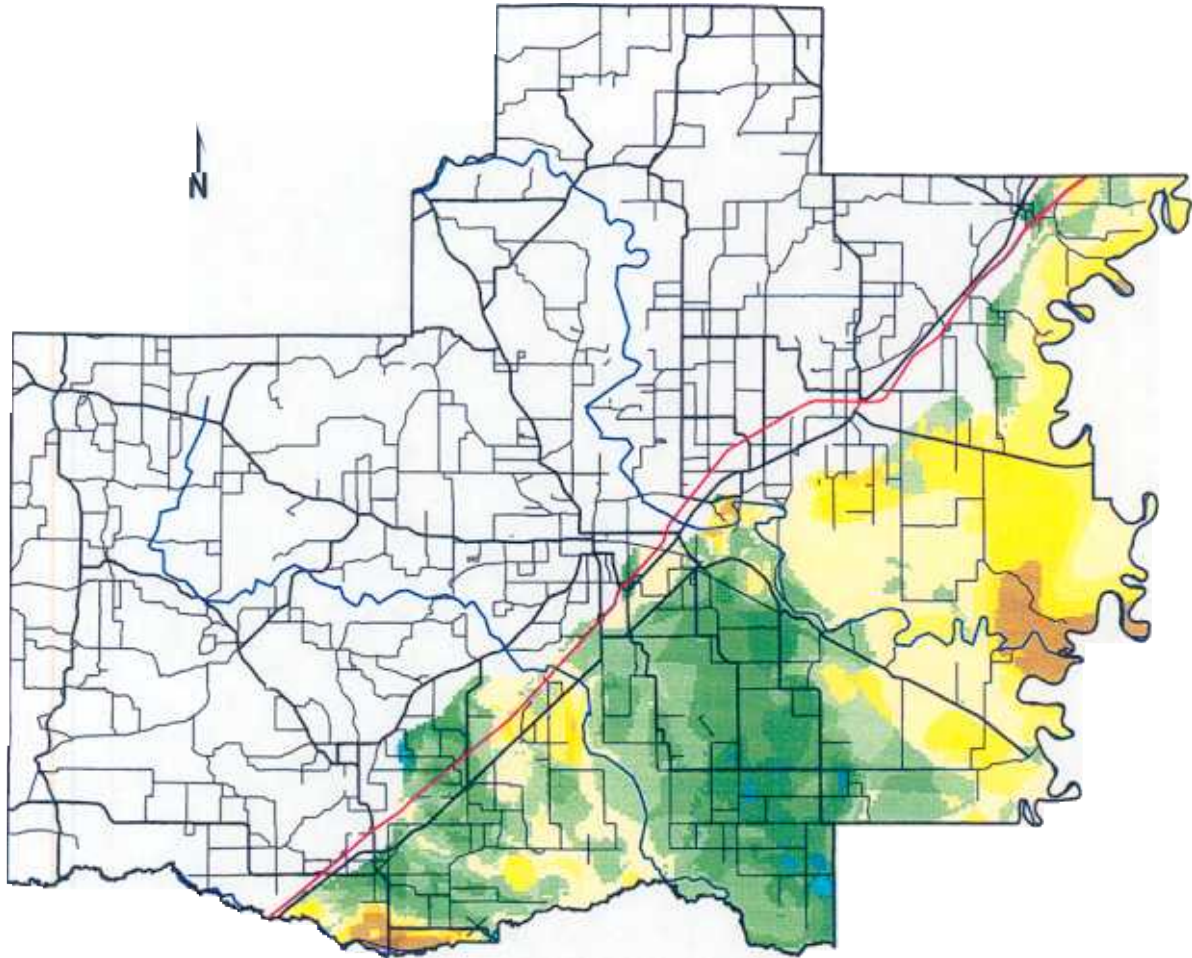
# Prairie County



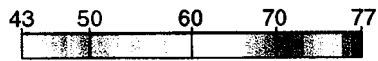
# Saint Francis County



# White County

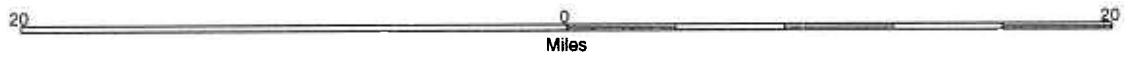


- Interstate
- Primary Roads
- Secondary Roads



- × Wells
- ◆ Pesticides Detected

Scale



#### IV. Monitoring Results

Table 3 gives general information about all the wells sampled in Phase VII and results for pH, conductivity, temperature and nitrate-nitrogen. It also indicates whether or not pesticides were detected. Table 4 is a listing of all the wells in which pesticides were detected at the WQL. This table shows the concentrations of the pesticides detected. It also indicates whether or not the results were confirmed at the ASPB laboratory. For new pesticide detections, the table also indicates if the detection has been verified by the analysis of a second sample from the same well and what the official reporting status is for the detection. Full analysis results, along with all quality assurance data are contained in Appendix A.

Only four of the wells tested had detectable levels of pesticides. Bentazon, at 7.97 µg/L, was detected in a well in southeastern St. Francis County. Due to some sample being lost, this detection has not been confirmed. No sample has yet been collected for verification; this will be done in Phase VIII. While this detection is substantial, there have been detections of bentazon in Woodruff, Pulaski and Monroe Counties (see Table 1) at levels more than 10 times this high. EPA's long-term Health Advisory for adults is 200 µg/L. Nonetheless, if bentazon is again detected at this well during Phase VIII, it will be listed for continued monitoring in the future as called for by the Arkansas SMP for pesticides.

Bentazon was also detected at the Jefferson #2 site. At less than 1 µg/L, it was impossible to get confirmation from the ASPB laboratory. The well was sampled twice, however, with detections both times supporting the conclusion that the well really is contaminated at a low level. This well used to be used for drinking water, but several years ago a rural water system was installed and the well is now used only for watering in the garden and around the house.

Trace levels of molinate were found in two wells. These are the first molinate detections to show up in this monitoring program. The well at the Jefferson #5 site, a rice irrigation well, contained 0.29 µg/L molinate. Also a rice irrigation well, Desha #12 was found to contain 1.42 µg/L molinate. Due to the low concentrations the ASPB laboratory was unable to confirm either of these detections. During Phase VIII, both these wells will be sampled again.

Given the characteristics of molinate which indicate that it might be persistent, the amount of rice grown in Arkansas, and the rice farmers' heavy dependence on molinate it was expected early on that molinate would show up in many of the wells we tested. For unknown reasons this has not been the case. In 1996, however, when ADEQ monitored 77 irrigation wells in east-central Arkansas, including 19 in Jefferson County and 21 in Desha County, seven wells were found to be contaminated with trace levels (0.02-0.25 µg/L) of molinate (Kresse et.al. 1997). Combined with the data from ADEQ, our results may indicate a low-level molinate contamination problem in these counties.

TABLE 3 - SAMPLES ANALYZED AT WQL  
- PHASE VII

SITE	DATE COLLECTED	LAB #	WELL TYPE	TARGET CROP	PEST. DETECT ?	LAT.	LONG.	pH	Cond. uS/cm	temp. °C	Nitrate -N mg/L	Depth ft.
ASH #18	1/7/1999	991426	domestic	cotton	NO	32° 30' 11"	91° 38' 46"	6.58	210	15	0.011	85
ASH #19	1/7/1999	991427	garden	cotton	NO	33° 05' 33"	91° 28' 22"	7.28	720	16	0.005	90
CHIC #7	1/7/1999	991428	domestic	cotton	NO	33° 17' 10"	91° 14' 40"	7.76	1000	15.5	0.014	190
CHIC #8	1/7/1999	991429	domestic	cotton	NO	33° 22' 20"	91° 08' 29"	8.65	680	15	0.003	200+
LINC #1	1/6/1999	991430	domestic	cotton	NO	34° 00' 45"	91° 32' 17"	8.36	230	16	0.007	shallow
PRAIR #1	1/27/1999	991515	domestic	cotton	NO	34° 50' 58"	91° 23' 15"	7.25	291	16	4.137	46
PRAIR #2	1/27/1999	991516	domestic	cotton	NO	34° 49' 57"	91° 22' 52"	7.58	167	19	9.062	44
PRAIR #3	1/27/1999	991517	domestic	wheat	NO	34° 49' 48"	91° 24' 04"	7.48	226	17	5.353	34
PRAIR #4	1/27/1999	991518	garden	rice	NO	35° 00' 31"	91° 24' 50"	6.94	400	17.5	0.598	28
PRAIR #5	1/27/1999	991519	garden	soybeans	NO	35° 00' 27"	91° 23' 40"	7.27	360	17	0.003	29
PRAIR #6	1/27/1999	991520	shop	soybeans	NO	34° 53' 03"	91° 24' 25"	6.88	185	15.5	0.007	150+
PRAIR #7	1/28/1999	991521	garden	soybeans	NO	34° 53' 52"	91° 23' 43"	7.23	130	16	1.335	60
LINC#2	2/25/1999	991988	domestic	soybeans	NO	34° 09' 11"	91° 43' 18"	7.18	511	14	0.033	700?
JEFF#1	2/26/1999	991989	irrigation	rice	NO	34° 14' 54"	91° 50' 28"	6.69	888	16.5	0.030	120
JEFF#2	2/26/1999	991990	garden	soybeans	YES	34° 11' 54"	91° 39' 39"	7.21	1000	15	0.079	22
JEFF#3	2/26/1999	991991	garden	cotton	NO	34° 25' 33"	92° 04' 00"	7.5	786	16.5	0.009	60
JEFF#4	2/26/1999	991992	garden	cotton	NO	34° 26' 33"	92° 04' 00"	7.88	609	18	<0.002	<50
LON#13	3/9/1999	992053	domestic	wheat	NO	35° 00' 36"	91° 53' 07"	6.59	391	16	0.153	shallow
LON#14	3/9/1999	992054	domestic	wheat	NO	35° 00' 36"	91° 52' 37"	6.81	202	16.5	0.251	90
LON#15	3/9/1999	992055	domestic	soybeans	NO	35° 00' 47"	91° 49' 46"	6.54	583	15.5	0.014	<30
WHIT#1	3/9/1999	992052	domestic	rice	NO	35° 02' 21"	91° 48' 57"	6.75	557	15	0.017	shallow
STF #1	5/12/1999	992822	shop	cotton	YES	34° 55' 40"	90° 26' 44"	8.04	525		0.005	shallow

TABLE 3 - SAMPLES ANALYZED AT  
WQL - PHASE VII (CONTINUED)

SITE	DATE COLLECTED	LAB #	WELL TYPE	TARGET CROP	PEST. DETECT ?	LAT.	LONG.	pH	Cond. uS/cm	Temp. °C	Nitrate	Depth ft.
											-N mg/L	
CRIT #2	5/12/1999	992823	garden	wheat	NO	34° 56' 53"	90° 19' 02"	7.57	1025	25	0.010	shallow
CRIT #3	5/12/1999	992824	animal	soybeans	NO	34° 59' 40"	90° 18' 59"	7.75	658	19	0.006	45
CRIT #4	5/12/1999	992825	domestic	soybeans	NO	35° 01' 25"	90° 19' 20"	7.69	575	18	0.034	shallow
CRIT #5	5/13/1999	992826	irrigation	rice	NO	35° 04' 58"	90° 15' 17"	7.85	481	16	0.001	100
CRIT #6	5/13/1999	992827	garden	soybeans	NO	35° 11' 43"	90° 07' 36"	7.63	515	17	0.005	100
CRIT #7	5/13/1999	992828	domestic	soybeans	NO	35° 15' 09"	90° 08' 45"	7.66	895	16.5	0.000	100
DESHA 1	5/27/1999	993064	irrigation	rice	NO	33° 50' 22"	91°30'25"	7.25	833	17	0.001	110
DESHA 2	5/27/1999	993065	domestic	cotton	NO	33° 48' 31"	91°21'06"	8.96	493	23	0.001	deep
DESHA 3	5/27/1999	993066	domestic	cotton	NO	33° 47' 34"	91°13'28"	9.26	268	20	0.006	deep
DESHA 4	5/27/1999	993067	domestic	cotton	NO	33° 48' 46"	91°13'04"	9.35	240	21	0.006	shallow
DESHA 5	5/28/1999	993068	irrigation	rice	NO	33° 52' 04"	91°15'13"	7.22	1159	18	0.002	110
DESHA 6	5/28/1999	993069	domestic	soybeans	NO	33° 52' 59"	91°15'11"	8.98	278	18	0.010	540
DESHA 7	5/28/1999	993070	shop	cotton	NO	33°54'44"	91°18'50"	9.11	294	18	0.008	120
DESHA 8	5/28/1999	993071	irrigation	rice	NO	33°58'58"	91°26'41"	6.97	814	18	0.023	110
DESHA 9	6/10/1999	993175	irrigation	corn	NO	33°45'35"	91°25'57"	7.35	538	18	0.000	100
DESHA 10	6/10/1999	993176	irrigation	corn	NO	33°54'33"	91°31'51"	7.14	604	16.5	0.000	110
DESHA 11	6/11/1999	993177	irrigation	rice	NO	33°54'19"	91°29'41"	7.3	986	18	0.000	110
DESHA 12	6/11/1999	993178	irrigation	rice	YES	33° 55' 46"	91° 23' 51"	7.37	892	18	0.081	110
DESHA 13	6/11/1999	993179	irrigation	rice	NO	33°55'15"	91°24'44"	7.75	1260	18	0.000	120
ARK #1	6/11/1999	993180	irrigation	rice	NO	34°02'57"	91°22'55"	7.47	1124	19	0.014	110
JEF #5	6/11/1999	993181	irrigation	rice	YES	34°06'18"	91°30'35"	7.4	1361	18	0.000	100
JEF #6	6/11/1999	993182	irrigation	rice	NO	34°11'33"	91°32'13"	7.52	1493	18	0.000	100
JEF #2(R1)	6/11/1999	993183	garden	soybeans	YES	34°11'53"	91°39'39"	7.42	905	21	0.733	22

TABLE 4 - DETECTIONS PHASE VII

SITE	DATE COLLECTED	ANALYTE FOUND	CONC. (ug/L)	CONFIRMED	NEW	DETECTIONS
					VERIFI-CATION	ACTION STATUS
JEFFERSON #2	26-Feb-99		0.92*	No, Below ASPB DL.		report as qualitative detection
JEFFERSON #2(r1)	6/11/1999	bentazon	0.72*	No, Below ASPB DL.		report as qualitative detection
ST. FRANCIS #1	5/12/1999	bentazon	7.97	No, No sample	not yet	no action until verified
DESHA #12	6/11/1999	molinate	1.42	No, Below ASPB DL.	not yet	no action until verified
JEFFERSON #5	6/11/1999	molinate	0.29*	No, Below ASPB DL.	not yet	no action until verified

\*qualitative only, below d.l



Table 5. Nitrate Distribution

Concentration (mg/L, NO <sub>3</sub> -N)	Number of Wells
less than 0.002 (below detection limit)	10
0.004 to 0.99	30
1.0 to 4.99	2
5.0 to 9.99	2
10.0 or more	0
Total	44

Table 5 shows the distribution of nitrate in the 44 wells tested during Phase VII. The MCL for nitrate, as nitrogen, in drinking water is 10 mg/L. None of the wells was above the MCL. The well at Prairie #2 had the highest level (9.06 mg/L NO<sub>3</sub>-N). Nine percent of the nitrate results were at or above 1 mg/L. These numbers are quite low compared to 47.5% at or above 1 mg/L in Phase VII, the highest number ever for one phase of monitoring. Compared to the results of all previous phases, 30% at or above 1 mg/L, it is still a low number

## V. Conclusions

Although none of the detections during this phase were large compared to other monitoring phases, the percentage of hits was slightly higher than the average for the last seven years. The four contaminated wells constitute 9.1% of all the wells tested this time. Prior to this phase, 6.1% of wells tested were contaminated. With the addition of the data from this phase, we have now tested 306 wells, of which 20 have detectable levels of pesticides. Currently the overall rate for detections is 6.54%.

In Phase VII, once again, no evidence was found to indicate widespread aquifer contamination by pesticides. The contaminated wells are spreadout, rather than clumped together and the concentrations are very low, except for St. Francis #1. In the past, several of the wells tested have shown extremely high pesticide levels, 50 to 400 µg/L, but no such wells were found during this phase.

The most notable aspect of the new data was the detection of molinate, an herbicide frequently used on rice crops. Despite the large amount of rice grown in Arkansas, no molinate had been found in any of the 262 wells tested during earlier phases of

monitoring. However, as noted previously, ADEQ did find very low levels of molinate in 7 of the 77 wells it tested in 1996. Six of those seven wells were located in Desha and Jefferson counties, the two counties where molinate was detected during Phase VII. It should be noted that all the detections of molinate have been in rice irrigation wells, including the wells sampled by ADEQ.

Do these results mean we are looking at slowly increasing levels of molinate in the areas where rice is grown? This is the kind of problem which motivated EPA to mandate pesticides in ground water monitoring. As long as large amounts of pesticides continue to be used, there will be occasional accidents that result in pesticides reaching ground water. Continuing education and supervision of applicators and farmers will hopefully reduce the overall number of such accidents. However, the main concern is with non-point sources of pesticide contamination. Does the continuing, normal use of pesticides by our farmers constitute a threat to the state's groundwater? It will take many years to answer this question definitely, but the most likely scenario for such a threat shows slowly increasing pesticide levels across large areas. Thus the low-level pesticide detections we see now could indicate that this process is going on and we are just now beginning to observe it. Alternatively, it is possible that the concentrations are constant or going down, i.e., contamination occurred in the past and, with better management practices now in place, contaminant concentrations may be going down.

To answer the question posed above, it will be necessary to continue to monitor wells, which have low-level molinate (or other pesticide) contamination to determine if concentrations are increasing. The amount of time it will take to answer the question is exacerbated by the amount of error considered acceptable in the methods used for pesticide determination. Thus it could be several years before an increasing, or decreasing, trend, if any, is documented. And, even longer before rates of change could be determined.

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**APPENDIX A**

DATA QUALITY ASSURANCE REPORT

ARKANSAS STATE PLANT BOARD

PESTICIDE GROUND WATER MONITORING PROJECT

FOR MOST VULNERABLE AREAS OF ARKANSAS

PHASE VII

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DATA QUALITY ASSURANCE REPORT  
ARKANSAS STATE PLANT BOARD  
PESTICIDE GROUND WATER MONITORING PROJECT  
FOR VULNERABLE AREAS OF ARKANSAS  
PHASE VII

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## **Introduction**

This appendix presents a summary of the pesticide and nitrate data collected during Phase VII monitoring and the associated quality assurance data including all quality control checks. Figure 1 is a listing of all the pesticides (and nitrate-nitrogen) analyzed in this project. Each analyte is listed with the method of analysis and the Water Quality laboratory's detection limit for the pesticide. Data to support the detection limits were presented in the Phase VI report.

Phase VII monitoring for pesticides was conducted as a series of seven distinct batches or trips ("trip" refers to a sample collection trip). Samples for each trip were collected over a period of one or two days. Separate aliquots of sample water were collected for each of three methods of pesticide analysis and for one nitrate-nitrogen method. Sample aliquots for each method were extracted and analyzed as a group. Quality control checks were done separately for each method for each trip. Thus the data and quality assurance information in this report are presented one trip at a time, with each trip subdivided by method. Data and quality control information are listed by trip and by method beginning on page A11. A brief summary of the monitoring data is given in the following section.

## **Data Summary**

Table 1 is a listing of all the sites sampled during this phase. For each site, along with identifying information, results are given for pH, specific conductance, temperature, nitrate and all pesticides. Table 2 is a listing of all the wells in which pesticides were detected at the WQL. One column shows the concentration of the pesticide. The next column indicates if the results were confirmed at the ASPB laboratory. For new pesticide detections a further column indicates if the detection has been verified by the analysis of another sample from the same well. These data are also in the main body of the Completion Report. They are included here for those who might only read this appendix.

Figure 1. Methods, analytes and detection limits.

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Method	Analyte	WQL_DL ( $\mu\text{g/L}$ )
EPA507	Alachlor	0.452
	Ametryn	0.208
	Atraton	0.381
	Atrazine	0.199
	Bromacil	0.543
	Butachlor	0.655
	Butylate	0.257
	Carboxin	0.491
	Chlorpropham	0.332
	Cycloate	3.016
	Diazinon	0.093
	Dichlorvos	0.560
	Diphenamid	0.201
	Disulfoton	1.160
	EPTC	0.348
	Ethoprop (Prophos)	0.255
	Fenarimol	4.301
	Hexazinone (Velpar)	0.482
	Merphos	0.359
	Metolachlor	1.025
	Metribuzin	0.594
	Mevinphos (Phosdrin)	0.190
	MGK 264	0.844
	Molinate	0.401
	Napropamide (Devrinol)	1.359
	Norflurazon	0.523
	Pebulate	0.466
	Phenamiphos	0.445
	Prometon	0.261
	Prometryn	0.211
	Propazine	0.200
	Simazine	0.122
	Simetryn	0.861
	Tetrachlorvinphos (Stirofos)	0.736
	Tebuthiuron	0.916
	Terbacil	3.874
	Terbufos	0.012
	Terbutryn	0.168
	Triademefon	0.201
	Vernolate	0.888

Figure 1. Methods, analytes and detection limits (continued).

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Method	Analyte	WQL_DL ( $\mu\text{g/L}$ )
EPA515	Acifluorfen	0.228
	Bentazon	1.048
	2,4-D	0.145
	2,4-DB	0.814
	DCPA(Dacthal)	0.104
	Dicamba	0.376
	3,5-Dichlorobenzoic acid	0.494
	Dichlorprop	5.302
	Dinoseb	0.184
	Pentachlorophenol (PCP)	0.085
	Picloram	0.284
	2,4,5-T	0.116
	2,4,5-TP (Silvex)	0.059
	NPS4	Barban
Cyanazine		0.329
Diuron		0.089
Fluometuron		0.104
Linuron		0.141
Propanil		0.090
Propham		0.712
Swep		0.436
EPA300	nitrate-nitrogen	0.002 (mg/L)



Table 1. PHASE VII Data Report

Site	Date	Lab #	Well Type	Crop	Detection ?	Latitude	Longitude	pH pH units	Conductivity uS/cm	Temperature deg. C	Nitrate mg/L	Depth ft.
ASH #18	1/7/1999	991426	domestic	cotton	NO	32° 30' 11"	91° 38' 46"	6.58	210	15	0.011	85
ASH #19	1/7/1999	991427	garden	cotton	NO	33° 05' 33"	91° 28' 22"	7.28	720	16	0.005	90
CHIC #7	1/7/1999	991428	domestic	cotton	NO	33° 17' 10"	91° 14' 40"	7.76	1000	15.5	0.014	190
CHIC #8	1/7/1999	991429	domestic	cotton	NO	33° 22' 20"	91° 08' 29"	8.65	680	15	0.003	200+
LINC #1	1/6/1999	991430	domestic	cotton	NO	34° 00' 45"	91° 32' 17"	8.36	230	16	0.007	shallow
PRAIR #1	1/27/1999	991515	domestic	cotton	NO	34° 50' 58"	91° 23' 15"	7.25	291	16	4.137	46
PRAIR #2	1/27/1999	991516	domestic	cotton	NO	34° 49' 57"	91° 22' 52"	7.58	167	19	9.062	44
PRAIR #3	1/27/1999	991517	domestic	wheat	NO	34° 49' 48"	91° 24' 04"	7.48	226	17	5.353	34
PRAIR #4	1/27/1999	991518	garden	rice	NO	35° 00' 31"	91° 24' 50"	6.94	400	17.5	0.598	28
PRAIR #5	1/27/1999	991519	garden	soybeans	NO	35° 00' 27"	91° 23' 40"	7.27	360	17	0.003	29
PRAIR #6	1/27/1999	991520	shop	soybeans	NO	34° 53' 03"	91° 24' 25"	6.88	185	15.5	0.007	150+
PRAIR #7	1/28/1999	991521	garden	soybeans	NO	34° 53' 52"	91° 23' 43"	7.23	130	16	1.335	60
LINC#2	2/25/1999	991988	domestic	soybeans	NO	34° 09' 11"	91° 43' 18"	7.18	511	14	0.033	700?
JEFF#1	2/26/1999	991989	irrigation	rice	NO	34° 14' 54"	91° 50' 28"	6.69	888	16.5	0.030	120
JEFF#2	2/26/1999	991990	garden	soybeans	YES	34° 11' 54"	91° 39' 39"	7.21	1000	15	0.079	22
JEFF#3	2/26/1999	991991	garden	cotton	NO	34° 25' 33"	92° 04' 00"	7.5	786	16.5	0.009	60
JEFF#4	2/26/1999	991992	garden	cotton	NO	34° 26' 33"	92° 04' 00"	7.88	609	18	<0.002	<50
LON#13	3/9/1999	992053	domestic	wheat	NO	35° 00' 36"	91° 53' 07"	6.59	391	16	0.153	shallow
LON#14	3/9/1999	992054	domestic	wheat	NO	35° 00' 36"	91° 52' 37"	6.81	202	16.5	0.251	90
LON#15	3/9/1999	992055	domestic	soybeans	NO	35° 00' 47"	91° 49' 46"	6.54	583	15.5	0.014	<30
WHIT#1	3/9/1999	992052	domestic	rice	NO	35° 02' 21"	91° 48' 57"	6.75	557	15	0.017	shallow
STF #1	5/12/1999	992822	shop	cotton	YES	34° 55' 40"	90° 26' 44"	8.04	525		0.005	shallow
CRIT #2	5/12/1999	992823	garden	wheat	NO	34° 56' 53"	90° 19' 02"	7.57	1025	25	0.010	shallow
CRIT #3	5/12/1999	992824	animal	soybeans	NO	34° 59' 40"	90° 18' 59"	7.75	658	19	0.006	45
CRIT #4	5/12/1999	992825	domestic	soybeans	NO	35° 01' 25"	90° 19' 20"	7.69	575	18	0.034	shallow
CRIT #5	5/13/1999	992826	irrigation	rice	NO	35° 04' 58"	90° 15' 17"	7.85	481	16	<0.002	100
CRIT #6	5/13/1999	992827	garden	soybeans	NO	35° 11' 43"	90° 07' 36"	7.63	515	17	0.005	100
CRIT #7	5/13/1999	992828	domestic	soybeans	NO	35° 15' 09"	90° 08' 45"	7.66	895	16.5	<0.002	100
DESHA 1	5/27/1999	993064	irrigation	rice	NO	33° 50' 22"	91°30'25"	7.25	833	17	<0.002	110
DESHA 2	5/27/1999	993065	domestic	cotton	NO	33° 48' 31"	91°21'06"	8.96	493	23	<0.002	deep
DESHA 3	5/27/1999	993066	domestic	cotton	NO	33° 47' 34"	91°13'28"	9.26	268	20	0.006	deep
DESHA 4	5/27/1999	993067	domestic	cotton	NO	33° 48' 46"	91° 13' 04"	9.35	240	21	0.006	shallow
DESHA 5	5/28/1999	993068	irrigation	rice	NO	33° 52' 04"	91°15'13"	7.22	1159	18	0.002	110
DESHA 6	5/28/1999	993069	domestic	soybeans	NO	33° 52' 59"	91°15'11"	8.98	278	18	0.010	540
DESHA 7	5/28/1999	993070	shop	cotton	NO	33°54'44"	91°18'50"	9.11	294	18	0.008	120
DESHA 8	5/28/1999	993071	irrigation	rice	NO	33°58'58"	91°26'41"	6.97	814	18	0.023	110
DESHA 9	6/10/1999	993175	irrigation	corn	NO	33°45'35"	91°25'57"	7.35	538	18	<0.002	100
DESHA 10	6/10/1999	993176	irrigation	corn	NO	33°54'33"	91°31'51"	7.14	604	16.5	<0.002	110
DESHA 11	6/11/1999	993177	irrigation	rice	NO	33°54'19"	91°29'41"	7.3	986	18	<0.002	110
DESHA 12	6/11/1999	993178	irrigation	rice	YES	33° 55' 46"	91° 23' 51"	7.37	892	18	0.081	110
DESHA 13	6/11/1999	993179	irrigation	rice	NO	33°55'15"	91°24'44"	7.75	1260	18	<0.002	120
ARK #1	6/11/1999	993180	irrigation	rice	NO	34°02'57"	91°22'55"	7.47	1124	19	0.014	110
JEF #5	6/11/1999	993181	irrigation	rice	YES	34°06'18"	91°30'35"	7.4	1361	18	<0.002	100
JEF #6	6/11/1999	993182	irrigation	rice	NO	34°11'33"	91°32'13"	7.52	1493	18	<0.002	100
JEF #2(R1)	6/11/1999	993183	garden	soybeans	YES	34°11'53"	91°39'39"	7.42	905	21	0.733	22









TABLE 2 - DETECTIONS, PHASE VII

SITE	DATE COLLECTED	ANALYTE FOUND	CONC. (µg/l)	CONFIRMED	DETECTIONS	
					VERIFI-CATION	ACTION STATUS
JEFFERSON #2	2/26/99	bentazon	0.92*	No, Below ASPB DL.		report as qualitative detection
JEFFERSON #2R1	6/11/99	bentazon	0.72*	No, Below ASPB DL.		
ST. FRANCIS #1	5/12/99	bentazon	7.97	No, No sample	not yet	no action until verified
DESHA #1	6/11/99	molinate	1.42	No, Below ASPB DL.	not yet	no action until verified
JEFFERSON #5	6/11/99	molinate	0.29*	No, Below ASPB DL.	not yet	no action until verified

\*qualitative only, below d.l.

## Explanation of Quality Control Data

The major QA/QC concern of this study is to demonstrate an ongoing ability to detect small amounts of pesticides in various ground waters. For this it is necessary to demonstrate that the methods are "in control." For each of the three major methods, EPA507, EPA515 and NPS4, one or more lab fortified blanks (LFB) for each batch was run along with the samples. For each LFB, a known amount of a surrogate compound was added before extraction and a known amount of an internal standard was added after extraction was complete. For an LFB to pass QC it had to show acceptable recoveries for the surrogate and internal standard as well as for the analytes with which it was fortified. If acceptable recoveries are not obtained for any of the analytes in a LFB, everything must stop and the problems must be corrected. An acceptable lab fortified blank must be obtained before analyzing the samples of a current batch. Figure 2 shows acceptable recoveries for surrogates, internal standards and analytes as specified in the methods.

For each trip, at least one Lab Fortified Sample Matrix (LFM) was analyzed for each method. This is a check for matrix interference. Assuming the process is in control as indicated by good recoveries on an LFB and if the recovery for one or more analytes in an LFM is outside the acceptable range, then the results for those analytes in unfortified samples from the same matrix are labeled suspect/matrix, indicating the result is suspect due to matrix interference.

The non-fortified samples for pesticide analysis are also required to pass QC checks for surrogate and internal standard recovery. All results reported are reported with percent recoveries for both the surrogate and internal standard. Any results associated with low recoveries on either the surrogate or the internal standard are reported as suspect due to matrix interference.

In addition, at least one Lab Blank (LB) was analyzed for each method for each trip. All results on the LBs are reported as part of the "trip" QC. To be acceptable LBs must have good surrogate and internal standard recoveries with no analytes detected. Results for field and machine duplicates are also reported

Figure 2. Required recoveries for methods to be in control.

Method	Surrogate Recov. %	Int. Std. Recov. %	Analyte Recovs. %
EPA507	70-130	70-130	70-130
EPA515	60-140	70-130	60-140
NPS4	70-130	70-130	70-130

QC for nitrate-nitrogen results for each trip are reported with estimates of accuracy and precision in the form of percent recovery for a lab spike (90 to 110%)

required) and percent relative standard deviation (%RSD<10% required) for two duplicates analyzed with the batch.

#### Summary of QA/QC

Sampling procedures set out in the QAPP for this project were followed on all sample collection trips. Sample bottles were thoroughly cleaned before use and appropriate preservatives were pipeted into the bottles in the lab prior to each sampling trip. Samples were iced immediately and kept iced until delivered to the lab. Sample custody forms were maintained through sample delivery and are on file with the records of this project. EPA holding times for samples and extracts were met and samples and extracts were held in the lab at 4°C, or below, at all times. No detectable levels of pesticide were found in any of the laboratory "blanks."

The following paragraphs summarize the QA data on a trip by trip basis. Data points that are reported as suspect for any reason, are itemized and discussed in these trip summaries.

Trip 1. All the data for Trip 1 have acceptable QA data. One analyte, EPTC, in the matrix spike duplicates for EPA 507 had a high relative standard deviation, 11.14%. As this is supplementary QC none of the results are invalidated. The high number reflects the amount of variation inherent in the method.

Trip 2. All the data for Trip 2 have acceptable QA data except that some matrix interference was observed for the NPS4 method in the water from the Prairie #4 well. The water was extracted and analyzed twice, once in its non-fortified, original state and once after being fortified with NPS4 mix 2. Both analyses had a slightly low surrogate recovery and the fortified sample also had low recoveries for prophan and barban. The fortified lab blanks were all right, however, so only the NPS4 data points for Prairie #4 are reported as suspect.

Trip 3. QA data for both NPS4 and EPA507 methods is complete and acceptable. For EPA515, the surrogate recovery for one sample was extremely high, 225%. Most likely, the wrong amount of surrogate was added to this sample. All other QC checks are good. However, all 515 data points for this well, Jefferson #2, are being reported as suspect due to matrix interference.

Trip 4..All the QC data for NPS4 and EPA515 are acceptable. One of the Lab fortified blanks for EPA507 had a slightly low, 68%, internal standard recovery. As recoveries on all the compounds were good these data points are being reported as acceptable.

Trip 5." All QC data points are acceptable.



Trip 6. The QC data for NPS4 and EPA515 are acceptable. One of the matrix spikes for EPA507 had a slightly low, 66%, recovery. The compound recoveries came out excellent, however. The EPA507 data are all reported as acceptable.

Trip 7. For NPS4 the protham recovery on the matrix spike was slightly low, 64%. The spike was done on Desha #12 so the protham data point for Desha #12 is being reported as suspect. The machine duplicate for EPA507 was inadvertently omitted. However, a matrix spike duplicate was analyzed with good results. Data for EPA507 are acceptable. Due to a low surrogate recovery, 58%, the EPA515 data for Jefferson 2R1 are being reported as suspect, possible matrix interference.

Overview. A total of 33 data points are being reported as suspect due to matrix interference. This is less than 1.5% of the 2475 data points reported. The only serious QC problem relates to the bentazon detection at Jefferson #2. This well was sampled twice with low levels of bentazon detected both times (0.979  $\mu\text{g/L}$  and 0.721  $\mu\text{g/L}$ ). However, both times the surrogate recovery for EPA515 was unacceptable—once so high as to indicate a spiking problem and once too low. The ASPB lab did not run confirmations on these detections as they were below detection limit. Thus the call on the bentazon concentration should not be considered precise. As the chemical was found twice at approximately the same concentration, identification of the chemical is adequate, only the concentration is in question. Since the WQL detection limit for bentazon is 1.048  $\mu\text{g/L}$ , the detection is being reported as qualitative only.

PHASE VII QC DATA TABLES  
(TRIP BY TRIP)

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 1 - JANUARY 1999

PERCENT RECOVERIES

EPA METHOD 507

LAB FORTIFIED SAMPLES

		*										
	Spike	Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
ASHLEY #19	mix 2	100	101	102	95	96	98	98	115	117	99	97
	Spike	Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	
CHICOT #7	mix 4	96	87	103	111	68	104	107	105	96	107	

LAB FORTIFIED BLANKS

		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
p5655	mix 2	89	108	99	96	102	97	97	109	111	95	91
		Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	
p5656	mix 4	89	90	115	116	70	107	114	110	110	106	

NON-FORTIFIED SAMPLES

		nt. Std.	Surrogate
ASHLEY #18	p5602	94	85
ASHLEY #19	p5613	93	81
CHICOT #7	p5623	91	94
CHICOT #8	p5633	87	88
LINCOLN #1	p5643	86	75

**METHOD 507**

**LAB BLANKS**

Mix	Sample	Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos						
mix 1	p5654	87	100	0	0	0	0						
	p5657	93	99	0	0	0	0						
mix 2	p5654	87	100	0	0	0	0	0	0	0	0	0	0
	p5657	93	99	0	0	0	0	0	0	0	0	0	0
mix 3	p5654	87	100	0	0	0	0	0	0	0	0		
	p5657	93	99	0	0	0	0	0	0	0	0		
mix 4	p5654	87	100	0	0	0	0	0	0	0	0	0	0
	p5657	93	99	0	0	0	0	0	0	0	0	0	0
mix 5	p5654	87	100	0	0	0	0	0	0	0	0		
	p5657	93	99	0	0	0	0	0	0	0	0		

METHOD 507

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5611	Duplicate p5612	%RSD
EPTC	20.36	14.24	11.14
Phosdrin	19.09	16.32	5.08
Prophos	19.29	18.25	1.83
Atrazine	19.59	17.57	3.56
Propazine	19.56	17.53	3.58
Prometryne	23.06	20.7	3.53
Terbutryne	23.47	21.22	3.30
Triadimefon	19.85	17.52	4.07
Diphenamid	19.47	16.67	5.04

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5655	2ND RUN p5655	%RSD
272181	274787	0.32

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507 - PHASE VII TRIP 1 JANUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
26-Jan-99	5602	P7T1507.010	0.85	0	0	0	0	1
26-Jan-99	5613	P7T1507.011	0.808	0	0	0	0	1
26-Jan-99	5623	P7T1507.012	0.938	0	0	0	0	1
26-Jan-99	5654 blk	P7T1507.113	1	0	0	0	0	1
26-Jan-99	5633	P7T1507.015	0.875	0	0	0	0	1
26-Jan-99	5643	P7T1507.016	0.745	0	0	0	0	1
26-Jan-99	5657 blk	P7T1507.019	0.99	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamid	TTP
26-Jan-99	5611 fs2	P7T1507.008	1.014	20.359	19.09	19.292	19.589	19.555	23.062	23.466	19.851	19.47	1
26-Jan-99	5612 fs2 dup	P7T1507.014	0.66	14.244	16.323	18.247	17.57	17.526	20.7	21.222	17.524	16.673	1
26-Jan-99	5655 ls2	P7T1507.017	1.081	19.724	19.267	20.34	19.404	19.32	21.798	22.208	18.983	18.182	1
26-Jan-99	5655 ls2mdup	P7T1507.117	1.045	20.005	19.051	19.919	19.1	19.044	21.541	21.844	18.446	17.439	1
26-Jan-99	5602	P7T1507.010	0.85	0	0	0	0	0	0	0	0	0	1
26-Jan-99	5613	P7T1507.011	0.808	0	0	0	0	0	0	0	0	0	1
26-Jan-99	5623	P7T1507.012	0.938	0	0	0	0	0	0	0	0	0	1
26-Jan-99	5654 blk	P7T1507.113	1	0	0	0	0	0	0	0	0	0	1
26-Jan-99	5633	P7T1507.015	0.875	0	0	0	0	0	0	0	0	0	1
26-Jan-99	5643	P7T1507.016	0.745	0	0	0	0	0	0	0	0	0	1
26-Jan-99	5657 blk	P7T1507.019	0.99	0	0	0	0	0	0	0	0	0	1

METHOD 507 - PHASE VII TRIP 1 - JANUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxylen	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
26-Jan-99	5602	P7T1507.010	0.85	0	0	0	0	0	0	0	1
26-Jan-99	5613	P7T1507.011	0.808	0	0	0	0	0	0	0	1
26-Jan-99	5623	P7T1507.012	0.938	0	0	0	0	0	0	0	1
26-Jan-99	5654 blk	P7T1507.113	1	0	0	0	0	0	0	0	1
26-Jan-99	5633	P7T1507.015	0.875	0	0	0	0	0	0	0	1
26-Jan-99	5643	P7T1507.016	0.745	0	0	0	0	0	0	0	1
26-Jan-99	5657 blk	P7T1507.019	0.99	0	0	0	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample Id	File Name	Nitroxylen	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
26-Jan-99	5621 fs4	P7T1507.009	0.87	20.516	22.158	13.666	20.851	21.363	20.925	19.272	21.462	
26-Jan-99	5656 ls4	P7T1507.018	0.902	22.932	23.293	13.985	21.338	22.756	22.035	22.066	21.209	
26-Jan-99	5602	P7T1507.010	0.85	0	0	0	0	0	0	0	0	
26-Jan-99	5613	P7T1507.011	0.808	0	0	0	0	0	0	0	0	
26-Jan-99	5623	P7T1507.012	0.938	0	0	0	0	0	0	0	0	
26-Jan-99	5654 blk	P7T1507.113	1	0	0	0	0	0	0	0	0	
26-Jan-99	5633	P7T1507.015	0.875	0	0	0	0	0	0	0	0	
26-Jan-99	5643	P7T1507.016	0.745	0	0	0	0	0	0	0	0	
26-Jan-99	5657 blk	P7T1507.019	0.99	0	0	0	0	0	0	0	0	

METHOD 507 - PHASE VII TRIP 1 - JANUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxylene	Dichlorvos	Perbutate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
26-Jan-99	5602	P7T1507.010	0.85	0	0	0	0	0	0	1	0
26-Jan-99	5613	P7T1507.011	0.808	0	0	0	0	0	0	1	0
26-Jan-99	5623	P7T1507.012	0.938	0	0	0	0	0	0		0
26-Jan-99	5654 blk	P7T1507.113	1	0	0	0	0	0	0		0
26-Jan-99	5633	P7T1507.015	0.875	0	0	0	0	0	0		0
26-Jan-99	5643	P7T1507.016	0.745	0	0	0	0	0	0		0
26-Jan-99	5657 blk	P7T1507.019	0.99	0	0	0	0	0	0		0



METHOD 507 - PHASE VII TRIP 1 - JANUARY 1999

PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
P7T1507.010	5602	85	0	0	0	0	94
P7T1507.011	5613	81	0	0	0	0	93
P7T1507.012	5623	94	0	0	0	0	91
P7T1507.113	5654 blk	100	0	0	0	0	87
P7T1507.015	5633	88	0	0	0	0	87
P7T1507.016	5643	75	0	0	0	0	86
P7T1507.019	5657 blk	99	0	0	0	0	93

PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TTP
P7T1507.008	5611 fs2	101	102	95	96	98	98	115	117	99	97	100
P7T1507.014	5612 fs2 dup	66	71	82	91	88	88	104	106	88	83	87
P7T1507.017	5655 ls2	108	99	96	102	97	97	109	111	95	91	89
P7T1507.117	5655 ls2mdup	105	100	95	100	96	95	108	109	92	87	93
P7T1507.010	5602	85	0	0	0	0	0	0	0	0	0	94
P7T1507.011	5613	81	0	0	0	0	0	0	0	0	0	93
P7T1507.012	5623	94	0	0	0	0	0	0	0	0	0	91
P7T1507.113	5654 blk	100	0	0	0	0	0	0	0	0	0	87
P7T1507.015	5633	88	0	0	0	0	0	0	0	0	0	87
P7T1507.016	5643	75	0	0	0	0	0	0	0	0	0	86
P7T1507.019	5657 blk	99	0	0	0	0	0	0	0	0	0	93

METHOD 507 - PHASE VII TRIP 1 - JANUARY 1999

PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylen	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
P7T1507.010	5602	85	0	0	0	0	0	0	0	94
P7T1507.011	5613	81	0	0	0	0	0	0	0	93
P7T1507.012	5623	94	0	0	0	0	0	0	0	91
P7T1507.113	5654 blk	100	0	0	0	0	0	0	0	87
P7T1507.015	5633	88	0	0	0	0	0	0	0	87
P7T1507.016	5643	75	0	0	0	0	0	0	0	86
P7T1507.019	5657 blk	99	0	0	0	0	0	0	0	93

PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylen	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
P7T1507.009	5621 fs4	87	103	111	68	104	107	105	96	107	96
P7T1507.018	5656 ls4	90	115	116	70	107	114	110	110	106	89
P7T1507.010	5602	85	0	0	0	0	0	0	0	0	94
P7T1507.011	5613	81	0	0	0	0	0	0	0	0	93
P7T1507.012	5623	94	0	0	0	0	0	0	0	0	91
P7T1507.113	5654 blk	100	0	0	0	0	0	0	0	0	87
P7T1507.015	5633	88	0	0	0	0	0	0	0	0	87
P7T1507.016	5643	75	0	0	0	0	0	0	0	0	86
P7T1507.019	5657 blk	99	0	0	0	0	0	0	0	0	93

METHOD 507 - PHASE VII TRIP 1 - JANUARY 1999

PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxylen	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
7T1507.010	5602	85	0	0	0	0	0	0	94	0
7T1507.011	5613	81	0	0	0	0	0	0	93	0
7T1507.012	5623	94	0	0	0	0	0	0	91	0
7T1507.113	5654 blk	100	0	0	0	0	0	0	87	0
7T1507.015	5633	88	0	0	0	0	0	0	87	0
7T1507.016	5643	75	0	0	0	0	0	0	86	0
7T1507.019	5657 blk	99	0	0	0	0	0	0	93	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 1 - JANUARY 1999

		PERCENT RECOVERIES											EPA METHOD 515			
		Internal.St	Surrogate	3,5-D	Dichlorprop	Pentachlorophenol	2,4,5-T	Dinoseb	Dacthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloram	Acifluorfen
		DBOB	DCAA													
LAB FORTIFIED SAMPLES																
Ashley #18	p5607	96	111	102	104	95	101	93	61							
Ashley #19	p5617	101	104							113	113	108	106	107	106	124
LAB FORTIFIED BLANKS																
	p5651	90	94	92	94	77	96	87	78							
	p5652	105	101							98	95	93	90	91	89	83
NON-FORTIFIED SAMPLES																
		Average	Average													
Ashley #18	p5608	103	107													
Ashley #19	p5618	102	101													
Chicot #7	p5627	113	105													
Chicot #8	p5638	96	99													
Lincoln #1	p5647	116	89													
LAB BLANKS																
		Average	Average													
	p5650	97	103	0	0	0	0	0	0	0	0	0	0	0	0	0
	p5662	111	100	0	0	0	0	0	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5607	Duplicate p5607	%RSD
3,5-D	9.535	10.213	2.32
Dichlorprop	1.879	2.074	3.34
Pentachlorophenol	1.791	1.897	1.93
2,4,5-T	1.872	2.023	2.62
Dinoseb	3.673	3.727	0.49
Dacthal	1.109	1.215	3.09

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

	1ST RUN	2ND RUN	%RSD
p5651	136120	138539	0.59

METHOD 515 - PHASE VII TRIP 1 -- JANURY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
14-Jan-99	5607 fs1	P7T1515.008	9.535	1.01	1.879	1	1.791	1.872	3.673	1.109
14-Jan-99	5607 fs1 dup	P7T1515.014	10.213	1.108	2.074	1	1.897	2.023	3.727	1.215
14-Jan-99	5608	P7T1515.010	0	1.086	0	1	0	0	0	0
14-Jan-99	5618	P7T1515.011	0	1.027	0	1	0	0	0	0
21-Jan-99	5627	P7T1515A.024	0	1.072	0	1	0	0	0	0
14-Jan-99	5650 blk	P7T1515.013	0	1.048	0	1	0	0	0	0
14-Jan-99	5638	P7T1515.015	0	1.007	0	1	0	0	0	0
21-Jan-99	5647	P7T1515A.025	0	0.903	0	1	0	0	0	0
14-Jan-99	5651 ls1	P7T1515.017	9.201	0.938	1.878	1	1.541	1.924	3.47	1.554
14-Jan-99	5651 ls1mdup	P7T1515.117	8.692	0.89	1.738	1	1.458	1.828	3.415	1.47
21-Jan-99	5662 blk	P7T1515A.026	0	1.022	0	1	0	0	0	0

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUORFEN
14-Jan-99	5617 fs2	P7T1515.009	1.042	6.777	2.261	1	2.151	21.122	21.35	6.336	4.948
14-Jan-99	5608	P7T1515.010	1.044	0	0	1	0	0	0	0	0
14-Jan-99	5618	P7T1515.011	0.987	0	0	1	0	0	0	0	0
21-Jan-99	5627	P7T1515A.024	1.031	0	0	1	0	0	0	0	0
14-Jan-99	5650 blk	P7T1515.013	1.007	0	0	1	0	0	0	0	0
14-Jan-99	5638	P7T1515.015	0.968	0	0	1	0	0	0	0	0
21-Jan-99	5647	P7T1515A.025	0.868	0	0	1	0	0	0	0	0
14-Jan-99	5652 ls2	P7T1515.018	1.009	5.897	1.898	1	1.86	18.019	18.296	5.331	3.331
21-Jan-99	5662 blk	P7T1515A.026	0.983	0	0	1	0	0	0	0	0

METHOD 515 - PHASE VII TRIP 1 -- JANURY 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
5607 fs1	95	101	94	103	90	94	92	55
5607 fs1 dup	102	111	104	96	95	101	93	61
5608	0	109	0	100	0	0	0	0
5618	0	103	0	99	0	0	0	0
5627	0	107	0	110	0	0	0	0
5650 blk	0	105	0	94	0	0	0	0
5638	0	101	0	92	0	0	0	0
5647	0	90	0	113	0	0	0	0
5651 ls1	92	94	94	90	77	96	87	78
5651 ls1mdup	87	89	87	97	73	91	85	74
5662 blk	0	102	0	108	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
5617 fs2	104	113	113	101	108	106	107	106	124
5608	104	0	0	106	0	0	0	0	0
5618	99	0	0	105	0	0	0	0	0
5627	103	0	0	116	0	0	0	0	0
5650 blk	101	0	0	100	0	0	0	0	0
5638	97	0	0	97	0	0	0	0	0
5647	87	0	0	119	0	0	0	0	0
5652 ls2	101	98	95	105	93	90	91	89	83
5662 blk	98	0	0	114	0	0	0	0	0

METHOD 515 - PHASE VII TRIP 1 -- JANURY 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
5607 fs1	95	101	94	103	90	94	92	55
5607 fs1 dup	102	111	104	96	95	101	93	61
5608	0	109	0	100	0	0	0	0
5618	0	103	0	99	0	0	0	0
5627	0	107	0	110	0	0	0	0
5650 blk	0	105	0	94	0	0	0	0
5638	0	101	0	92	0	0	0	0
5647	0	90	0	113	0	0	0	0
5651 ls1	92	94	94	90	77	96	87	78
5651 ls1mdup	87	89	87	97	73	91	85	74
5662 blk	0	102	0	108	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
5617 fs2	104	113	113	101	108	106	107	106	124
5608	104	0	0	106	0	0	0	0	0
5618	99	0	0	105	0	0	0	0	0
5627	103	0	0	116	0	0	0	0	0
5650 blk	101	0	0	100	0	0	0	0	0
5638	97	0	0	97	0	0	0	0	0
5647	87	0	0	119	0	0	0	0	0
5652 ls2	101	98	95	105	93	90	91	89	83
5662 blk	98	0	0	114	0	0	0	0	0



QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 1 - JANUARY 1999

PERCENT RECOVERIES      METHOD NPS4

Internal St.	Surrogate									
Ethylbenzene	Carbazole	Cyanazine	Fluometuron	Diuron	Linuron	Propham	Propanil	Swep	Barban	

LAB FORTIFIED SAMPLES

CHICOT #8	p5632	106	113	92	87	91	101			
LINCOLN #1	p5642	103	76					72	79	73
										82

LAB FORTIFIED BLANKS

	p5659	117	77	81	78	82	78			
	p5660	105	89					81	85	83
										81

NON-FORTIFIED SAMPLES

		[average]	[average]							
ASHLEY #18	p5604	101	93							
ASHLEY #19	p5614	105	81							
CHICOT #7	p5624	106	84							
CHICOT #8	p5634	108	87							
LINCOLN #1	p5644	103	82							

LAB BLANKS

		[average]	[average]							
	p5658	118	81	0	0	0	0	0	0	0
	p5661	112	82	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5642	Duplicate p5645	%RSD
Propham	5.582	6.58	5.75
Propanil	1.189	1.391	5.36
Swep	5.488	6.64	6.55
Barban	6.389	6.91	2.75

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5659	2ND RUN p5659	%RSD
64379	64420	0.02

METHOD NPS4 - PHASE VII TRIP 1

CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
20-Jan-99	5632 fs1	P7T1NPS4.008	5.97	1.802	0.913	3.147	1.131	-
21-Jan-99	5659 ls1	P7T1NPS4.017	5.237	1.558	0.821	2.439	0.765	-
21-Jan-99	5659 ls1mdup	P7T1NPS4.117	5.192	1.517	0.811	2.435	0.756	-
21-Jan-99	5604	P7T1NPS4.010	0	0	0	0	0.91	-
21-Jan-99	5614	P7T1NPS4.011	0	0	0	0	0.791	-
21-Jan-99	5624	P7T1NPS4.012	0	0	0	0	0.824	-
21-Jan-99	5658 blk	P7T1NPS4.013	0	0	0	0	0.79	-
21-Jan-99	5634	P7T1NPS4.015	0	0	0	0	0.852	-
21-Jan-99	5644	P7T1NPS4.016	0	0	0	0	0.786	-
21-Jan-99	5661 blk	P7T1NPS4.019	0	0	0	0	0.802	-
21-Jan-99	mix 1 5x	P7T1NPS4.020	2.791	0.89	0.463	1.477	0.956	-

CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Propham	Propanil	Swep	Carbazole	Barban	Ethylbenzene
20-Jan-99	5642 fs2	P7T1NPS4.009	5.562	1.189	5.486	0.755	6.369	-
21-Jan-99	5645 fs2 dup	P7T1NPS4.014	6.58	1.391	6.64	0.904	6.91	-
21-Jan-99	5660 ls2	P7T1NPS4.018	6.236	1.28	6.223	0.887	6.323	-
21-Jan-99	5604	P7T1NPS4.010	0	0	0	0.945	0	-
21-Jan-99	5614	P7T1NPS4.011	0	0	0	0.822	0	-
21-Jan-99	5624	P7T1NPS4.012	0	0	0	0.856	0	-
21-Jan-99	5658 blk	P7T1NPS4.013	0	0	0	0.82	0	-
21-Jan-99	5634	P7T1NPS4.015	0	0	0	0.884	0	-
21-Jan-99	5644	P7T1NPS4.016	0	0	0	0.839	0	-
21-Jan-99	5661 blk	P7T1NPS4.019	0	0	0	0.843	0	-
21-Jan-99	mix 2 5x	P7T1NPS4.021	3.409	0.703	3.388	0.981	3.417	-

METHOD NPS4 - PHASE VII TRIP 1

% RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIURON	LINURON	Surrogate	Internal Standard
					CARBAZOLE	ETHYLBENZENE
5632 fs1	92	87	91	101	113	106
5659 Is1	81	76	82	78	77	117
5659 Is1mdup	80	74	81	78	76	119
5604	0	0	0	0	91	105
5614	0	0	0	0	79	109
5624	0	0	0	0	82	111
5658 blk	0	0	0	0	79	123
5634	0	0	0	0	85	113
5644	0	0	0	0	79	108
5661 blk	0	0	0	0	80	117
mix 1 5x	86	86	93	94	96	110

% RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEP	Surrogate	Internal Standard	
				CARBAZOLE	BARBAN	ETHYLBENZENE
5642 fs2	72	79	73	76	82	103
5645 fs2 dup	86	92	88	90	89	108
5660 Is2	81	85	83	89	81	105
5604	0	0	0	95	0	96
5614	0	0	0	82	0	100
5624	0	0	0	86	0	101
5658 blk	0	0	0	82	0	112
5634	0	0	0	88	0	103
5644	0	0	0	84	0	98
5661 blk	0	0	0	84	0	107
mix 2 5x	89	93	90	98	88	106

ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 1

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
SPIKE RECOVERY	
991426	0.011
991426 spike (avg)	0.975
spike amount	0.98
%recovery	98%

RELATIVE STANDARD DEVIATION

991426S	0.95
991426SD	0.98
%rsd	0.8%

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

		PERCENT RECOVERIES					EPA METHOD 507					
LAB FORTIFIED SAMPLES		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
PRAIRIE #1	Spike mix 2	102	106	106	95	99	95	96	94	93	92	91
PRAIRIE #2	Spike mix 4	101	81	102	112	92	105	102	99	98	109	

LAB FORTIFIED BLANKS

		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
p5781	mix 2	83	79	87	90	97	92	92	88	85	84	80
p5782	mix 4	85	98	110	118	91	101	107	104	108	103	

NON-FORTIFIED SAMPLES

		Int. Std.	Surrogate
PRAIRIE #1	p5703	101	80
PRAIRIE #2	p5713	102	93
PRAIRIE #3	p5723	93	78
PRAIRIE #4	p5733	93	90
PRAIRIE #5	p5743	85	69
PRAIRIE #6	p5755	61	82
PRAIRIE #7	p5765	60	70

METHOD 507

LAB BLANKS

mix 1		Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos						
	p5770	90	84	0	0	0	0						
	p5780	78	90	0	0	0	0						
	p5783	86	105	0	0	0	0						
mix 2		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	
	p5770	90	84	0	0	0	0	0	0	0	0	0	
	p5780	78	90	0	0	0	0	0	0	0	0	0	
	p5783	86	105	0	0	0	0	0	0	0	0	0	
mix 3		Int. Std.	Surrogate	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon			
	p5770	90	84	0	0	0	0	0	0	0			
	p5780	78	90	0	0	0	0	0	0	0			
	p5783	86	105	0	0	0	0	0	0	0			
mix 4		Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar		
	p5770	90	84	0	0	0	0	0	0	0	0		
	p5780	78	90	0	0	0	0	0	0	0	0		
	p5783	86	105	0	0	0	0	0	0	0	0		
mix 5		Int. Std.	Surrogate	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	Fenarimol			
	p5770	90	84	0	0	0	0	0	0	0			
	p5780	78	90	0	0	0	0	0	0	0			
	p5783	86	105	0	0	0	0	0	0	0			

METHOD 507

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5701	Duplicate p5705	%RSD
EPTC	21.16	20.53	1.00
Phosdrin	18.95	19.55	1.04
Prophos	19.71	19.71	0.00
Atrazine	19.06	18.55	0.90
Propazine	19.2	18.67	0.93
Prometryne	18.84	17.47	2.48
Terbutyne	18.63	17.18	2.66
Triadimefon	18.49	16.78	3.18
Diphenamid	18.23	16.09	4.07

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5781	2ND RUN p5781	%RSD
145852	157914	2.68

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507 - PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylen	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
16-Feb-99	5703	P7T2507.010	0.799	0	0	0	0	1
16-Feb-99	5713	P7T2507.011	0.934	0	0	0	0	1
16-Feb-99	5723	P7T2507.012	0.775	0	0	0	0	1
16-Feb-99	5770 blk	P7T2507.013	0.835	0	0	0	0	1
16-Feb-99	5733	P7T2507.015	0.896	0	0	0	0	1
16-Feb-99	5743	P7T2507.016	0.691	0	0	0	0	1
17-Feb-99	5755	P7T2507.030	0.818	0	0	0	0	1
17-Feb-99	5765	P7T2507.031	0.697	0	0	0	0	1
16-Feb-99	5780 blk	P7T2507.019	0.904	0	0	0	0	1
16-Feb-99	5783 blk	P7T2507.022	1.046	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylen	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamid	TT
16-Feb-99	5701 fs2	P7T2507.008	1.06	21.159	18.954	19.714	19.06	19.195	18.844	18.629	18.491	18.23	1
16-Feb-99	5705 fs2 dup	P7T2507.014	0.903	20.53	19.548	19.71	18.552	18.666	17.468	17.182	16.778	16.092	1
16-Feb-99	5781 ls2	P7T2507.020	0.724	15.974	16.799	18.423	16.69	16.834	16.291	16.128	16.262	15.385	1
16-Feb-99	5781 ls2mdup	P7T2507.120	0.787	17.407	17.954	19.396	18.327	18.48	17.504	17.099	16.87	15.958	1
16-Feb-99	5703	P7T2507.010	0.799	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5713	P7T2507.011	0.934	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5723	P7T2507.012	0.775	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5770 blk	P7T2507.013	0.835	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5733	P7T2507.015	0.896	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5743	P7T2507.016	0.691	0	0	0	0	0	0	0	0	0	1
17-Feb-99	5755	P7T2507.030	0.818	0	0	0	0	0	0	0	0	0	1
17-Feb-99	5765	P7T2507.031	0.697	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5780 blk	P7T2507.019	0.904	0	0	0	0	0	0	0	0	0	1
16-Feb-99	5783 blk	P7T2507.022	1.046	0	0	0	0	0	0	0	0	0	1



METHOD 507 - PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
16-Feb-99	5703	P7T2507.010	0.799	0	0	0	0	0	0	0	1
16-Feb-99	5713	P7T2507.011	0.934	0	0	0	0	0	0	0	1
16-Feb-99	5723	P7T2507.012	0.775	0	0	0	0	0	0	0	1
16-Feb-99	5770 blk	P7T2507.013	0.835	0	0	0	0	0	0	0	1
16-Feb-99	5733	P7T2507.015	0.896	0	0	0	0	0	0	0	1
16-Feb-99	5743	P7T2507.016	0.691	0	0	0	0	0	0	0	1
17-Feb-99	5755	P7T2507.030	0.818	0	0	0	0	0	0	0	1
17-Feb-99	5765	P7T2507.031	0.697	0	0	0	0	0	0	0	1
16-Feb-99	5780 blk	P7T2507.019	0.904	0	0	0	0	0	0	0	1
16-Feb-99	5783 blk	P7T2507.022	1.046	0	0	0	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample Id	File Name	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
16-Feb-99	5711 fs4	P7T2507.009	0.81	20.337	22.395	18.35	20.961	20.345	19.879	19.533	21.775	1
16-Feb-99	5782 ls4	P7T2507.021	0.982	22.024	23.668	18.226	20.121	21.361	20.709	21.614	20.592	1
16-Feb-99	5703	P7T2507.010	0.799	0	0	0	0	0	0	0	0	1
16-Feb-99	5713	P7T2507.011	0.934	0	0	0	0	0	0	0	0	1
16-Feb-99	5723	P7T2507.012	0.775	0	0	0	0	0	0	0	0	1
16-Feb-99	5770 blk	P7T2507.013	0.835	0	0	0	0	0	0	0	0	1
16-Feb-99	5733	P7T2507.015	0.896	0	0	0	0	0	0	0	0	1
16-Feb-99	5743	P7T2507.016	0.691	0	0	0	0	0	0	0	0	1
17-Feb-99	5755	P7T2507.030	0.818	0	0	0	0	0	0	0	0	1
17-Feb-99	5765	P7T2507.031	0.697	0	0	0	0	0	0	0	0	1
16-Feb-99	5780 blk	P7T2507.019	0.904	0	0	0	0	0	0	0	0	1
16-Feb-99	5783 blk	P7T2507.022	1.046	0	0	0	0	0	0	0	0	1

METHOD 507 - PHASE VII TRIP 2 - JANUARY/FEBRUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxylyene	Dichlorvos	Perbulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
16-Feb-99	5703	P7T2507.010	0.799	0	0	0	0	0	0	1	0
16-Feb-99	5713	P7T2507.011	0.934	0	0	0	0	0	0	1	0
16-Feb-99	5723	P7T2507.012	0.775	0	0	0	0	0	0	1	0
16-Feb-99	5770 blk	P7T2507.013	0.835	0	0	0	0	0	0	1	0
16-Feb-99	5733	P7T2507.015	0.896	0	0	0	0	0	0	1	0
16-Feb-99	5743	P7T2507.016	0.691	0	0	0	0	0	0	1	0
17-Feb-99	5755	P7T2507.030	0.818	0	0	0	0	0	0	1	0
17-Feb-99	5765	P7T2507.031	0.697	0	0	0	0	0	0	1	0
16-Feb-99	5780 blk	P7T2507.019	0.904	0	0	0	0	0	0	1	0
16-Feb-99	5783 blk	P7T2507.022	1.046	0	0	0	0	0	0		0

METHOD 507 - PHASE VII TRIP 2 - JANUARY/FEBRUARY 1999

PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
P7T2507.010	5703	80	0	0	0	0	101
P7T2507.011	5713	93	0	0	0	0	102
P7T2507.012	5723	78	0	0	0	0	93
P7T2507.013	5770 blk	84	0	0	0	0	90
P7T2507.015	5733	90	0	0	0	0	93
P7T2507.016	5743	69	0	0	0	0	85
P7T2507.030	5755	82	0	0	0	0	61
P7T2507.031	5765	70	0	0	0	0	60
P7T2507.019	5780 blk	90	0	0	0	0	78
P7T2507.022	5783 blk	105	0	0	0	0	86

PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TTI
P7T2507.008	5701 fs2	106	106	95	99	95	96	94	93	92	91	100
P7T2507.014	5705 fs2 dup	90	103	98	99	93	93	87	86	84	80	92
P7T2507.020	5781 ls2	72	80	84	92	83	84	81	81	81	77	84
P7T2507.120	5781 ls2mdup	79	87	90	97	92	92	88	85	84	80	83
P7T2507.010	5703	80	0	0	0	0	0	0	0	0	0	100
P7T2507.011	5713	93	0	0	0	0	0	0	0	0	0	100
P7T2507.012	5723	78	0	0	0	0	0	0	0	0	0	93
P7T2507.013	5770 blk	84	0	0	0	0	0	0	0	0	0	90
P7T2507.015	5733	90	0	0	0	0	0	0	0	0	0	93
P7T2507.016	5743	69	0	0	0	0	0	0	0	0	0	85
P7T2507.030	5755	82	0	0	0	0	0	0	0	0	0	61
P7T2507.031	5765	70	0	0	0	0	0	0	0	0	0	60
P7T2507.019	5780 blk	90	0	0	0	0	0	0	0	0	0	78
P7T2507.022	5783 blk	105	0	0	0	0	0	0	0	0	0	86

METHOD 507 - PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
P7T2507.010	5703	80	0	0	0	0	0	0	0	101
P7T2507.011	5713	93	0	0	0	0	0	0	0	102
P7T2507.012	5723	78	0	0	0	0	0	0	0	93
P7T2507.013	5770 blk	84	0	0	0	0	0	0	0	90
P7T2507.015	5733	90	0	0	0	0	0	0	0	93
P7T2507.016	5743	69	0	0	0	0	0	0	0	85
P7T2507.030	5755	82	0	0	0	0	0	0	0	61
P7T2507.031	5765	70	0	0	0	0	0	0	0	60
P7T2507.019	5780 blk	90	0	0	0	0	0	0	0	78
P7T2507.022	5783 blk	105	0	0	0	0	0	0	0	86

PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
P7T2507.009	5711 fs4	81	102	112	92	105	102	99	98	109	101
P7T2507.021	5782 ls4	98	110	118	91	101	107	104	108	103	85
P7T2507.010	5703	80	0	0	0	0	0	0	0	0	101
P7T2507.011	5713	93	0	0	0	0	0	0	0	0	102
P7T2507.012	5723	78	0	0	0	0	0	0	0	0	93
P7T2507.013	5770 blk	84	0	0	0	0	0	0	0	0	90
P7T2507.015	5733	90	0	0	0	0	0	0	0	0	93
P7T2507.016	5743	69	0	0	0	0	0	0	0	0	85
P7T2507.030	5755	82	0	0	0	0	0	0	0	0	61
P7T2507.031	5765	70	0	0	0	0	0	0	0	0	60
P7T2507.019	5780 blk	90	0	0	0	0	0	0	0	0	78
P7T2507.022	5783 blk	105	0	0	0	0	0	0	0	0	86

METHOD 507 - PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxylene	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetyne	Devrinol	TPP	Fenarimol
P7T2507.010	5703	80	0	0	0	0	0	0	101	0
P7T2507.011	5713	93	0	0	0	0	0	0	102	0
P7T2507.012	5723	78	0	0	0	0	0	0	93	0
P7T2507.013	5770 blk	84	0	0	0	0	0	0	90	0
P7T2507.015	5733	90	0	0	0	0	0	0	93	0
P7T2507.016	5743	69	0	0	0	0	0	0	85	0
P7T2507.030	5755	82	0	0	0	0	0	0	61	0
P7T2507.031	5765	70	0	0	0	0	0	0	60	0
P7T2507.019	5780 blk	90	0	0	0	0	0	0	78	0
P7T2507.022	5783 blk	105	0	0	0	0	0	0	86	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 2 - JANUARY/FEBRUARY 1999

		PERCENT RECOVERIES					EPA METHOD 515									
		Internal.St	Surrogate	3,5-D	Dichlorprop	Pentachlorophenol	2,4,5-T	Dinoseb	Dacthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloram	Acifluorfen
		DBOB	DCAA													
LAB FORTIFIED SAMPLES																
Prairie #5	p5747	104	104	96	88	99	99	87	73							
Prairie #6	p5757	112	82							91	86	90	89	88	80	90
LAB FORTIFIED BLANKS																
	p5777	112	91	88	86	89	92	69	73							
	p5778	112	86							91	88	89	87	88	76	69
NON-FORTIFIED SAMPLES																
		Average	Average													
Prairie #1	p5708	98	94													
Prairie #2	p5718	101	85													
Prairie #3	p5728	94	92													
Prairie #4	p5738	102	103													
Prairie #5	p5748	100	99													
Prairie #6	p5758	100	96													
Prairie #7	p5768	101	93													
LAB BLANKS																
		Average	Average													
	p5775	101	93	0	0	0	0	0	0	0	0	0	0	0	0	0
	p5776	99	94	0	0	0	0	0	0	0	0	0	0	0	0	0
	p5779	109	99	0	0	0	0	0	0	0	0	0	0	0	0	0

METHOD 515 - PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5747	Duplicate p5747	%RSD
3,5-D	10.667	9.569	3.55
Dichlorprop	1.914	1.756	2.83
Pentachlorophenol	2.321	1.971	5.29
2,4,5-T	2.179	1.975	3.22
Dinoseb	4.648	3.491	9.05
Dacthal	1.861	1.453	7.88

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

	1ST RUN	2ND RUN	%RSD
p5777	157668	144368	2.89

METHOD 515 - PHASE VII TRIP 2 - JANUARY\FEBRUARY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
19-Feb-99	5747 fs1	P7T2515.008	10.667	1.647	1.914	1	2.321	2.179	4.648	1.861
19-Feb-99	5747 fs1dup	P7T2515.014	9.569	1.04	1.756	1	1.971	1.975	3.491	1.453
19-Feb-99	5708	P7T2515.010	0	0.955	0	1	0	0	0	0
19-Feb-99	5718	P7T2515.011	0	0.868	0	1	0	0	0	0
19-Feb-99	5728	P7T2515.012	0	0.942	0	1	0	0	0	0
19-Feb-99	5775 blk	P7T2515.013	0	0.952	0	1	0	0	0	0
19-Feb-99	5738	P7T2515.015	0	1.058	0	1	0	0	0	0
19-Feb-99	5748	P7T2515.016	0	1.012	0	1	0	0	0	0
19-Feb-99	5758	P7T2515.017	0	0.98	0	1	0	0	0	0
19-Feb-99	5768	P7T2515.018	0	0.945	0	1	0	0	0	0
19-Feb-99	5776 blk	P7T2515.019	0	0.959	0	1	0	0	0	0
19-Feb-99	5777 ls1	P7T2515.020	8.798	0.909	1.725	1	1.786	1.833	2.753	1.45
19-Feb-99	5777 ls1mdup	P7T2515.120	9.291	0.989	1.949	1	1.893	1.948	2.862	1.523
19-Feb-99	5779 blk	P7T2515.022	0	1.015	0	1	0	0	0	0

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUORFEN
19-Feb-99	5757 fs2	P7T2515.026	0.815	5.449	1.722	1	1.792	17.715	17.608	4.822	3.618
19-Feb-99	5778 ls2	P7T2515.027	0.855	5.441	1.756	1	1.775	17.308	17.521	4.577	2.75
19-Feb-99	5708	P7T2515.010	0.905	0	0	1	0	0	0	0	0
19-Feb-99	5718	P7T2515.011	0.822	0	0	1	0	0	0	0	0
19-Feb-99	5728	P7T2515.012	0.893	0	0	1	0	0	0	0	0
19-Feb-99	5775 blk	P7T2515.013	0.902	0	0	1	0	0	0	0	0
19-Feb-99	5738	P7T2515.015	1.002	0	0	1	0	0	0	0	0
19-Feb-99	5748	P7T2515.016	0.959	0	0	1	0	0	0	0	0
19-Feb-99	5758	P7T2515.017	0.929	0	0	1	0	0	0	0	0
19-Feb-99	5768	P7T2515.018	0.896	0	0	1	0	0	0	0	0
19-Feb-99	5776 blk	P7T2515.019	0.909	0	0	1	0	0	0	0	0
19-Feb-99	5779 blk	P7T2515.022	0.961	0	0	1	0	0	0	0	0



METHOD 515 - PHASE VII TRIP 2 -- JANURY\FEBRUARY 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
5747 ls1	107	165	96	93	116	109	116	93
5747 ls1dup	96	104	88	104	99	99	87	73
5708	0	96	0	98	0	0	0	0
5718	0	87	0	101	0	0	0	0
5728	0	94	0	94	0	0	0	0
5775 blk	0	95	0	101	0	0	0	0
5738	0	106	0	101	0	0	0	0
5748	0	101	0	100	0	0	0	0
5758	0	98	0	100	0	0	0	0
5768	0	95	0	101	0	0	0	0
5776 blk	0	96	0	99	0	0	0	0
5777 ls1	88	91	86	112	89	92	69	73
5777 ls1mdup	93	99	97	106	95	97	72	76
5779 blk	0	102	0	109	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
5757 ls2	82	91	86	112	90	89	88	80	90
5778 ls2	86	91	88	112	89	87	88	76	69
5708	91	0	0	98	0	0	0	0	0
5718	82	0	0	101	0	0	0	0	0
5728	89	0	0	94	0	0	0	0	0
5775 blk	90	0	0	101	0	0	0	0	0
5738	100	0	0	102	0	0	0	0	0
5748	96	0	0	100	0	0	0	0	0
5758	93	0	0	100	0	0	0	0	0
5768	90	0	0	101	0	0	0	0	0
5776 blk	91	0	0	99	0	0	0	0	0
5779 blk	96	0	0	109	0	0	0	0	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 2 - JANUARY/FEBRUARY 1999

PERCENT RECOVERIES      METHOD NPS4

Internal St.	Surrogate									
Ethylbenzene	Carbazole	Cyanazine	Fluometuron	Diuron	Linuron	Propham	Propanil	Swep	Barban	

LAB FORTIFIED SAMPLES

PRAIRIE #3	p5722	121	72	80	78	79	76			
PRAIRIE #4	p5732	98	63					47	95	72 54

LAB FORTIFIED BLANKS

p5772	102	82	88	81	87	80				
p5773	97	99					93	97		

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NON-FORTIFIED SAMPLES

	(average)	(average)								
PRAIRIE #1	p5704	110	70							
PRAIRIE #2	p5714	109	74							
PRAIRIE #3	p5724	114	76							
PRAIRIE #4	p5734	105	66							
PRAIRIE #5	p5744	105	79							
PRAIRIE #6	p5754	100	81							
PRAIRIE #7	p5764	109	90							

LAB BLANKS

	(average)	(average)								
p5771	108	94	0	0	0	0	0	0	0	0
p5774	104	95	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5722	Duplicate p5728	%RSD
Propham	5.22	5.78	3.45
Propanil	1.61	1.75	2.82
Swep	0.79	0.89	4.05
Barban	2.38	2.62	3.25

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

2ND RUN p5722      %RSD

METHOD NPS4 - PHASE VII TRIP 2

CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
8-Feb-99	5722 fs1	P7T2NPS4.008	5.217	1.608	0.788	2.383	0.719	1
9-Feb-99	5726 fs1 dup	P7T2NPS4.014	5.78	1.75	0.885	2.621	0.878	1
9-Feb-99	5772 ls1	P7T2NPS4.019	5.719	1.671	0.865	2.501	0.815	1
9-Feb-99	5772 ls1mdup	P7T2NPS4.119	5.764	1.652	0.865	2.495	0.817	1
8-Feb-99	5704	P7T2NPS4.010	0	0	0	0	0.669	1
9-Feb-99	5714	P7T2NPS4.011	0	0	0	0	0.708	1
9-Feb-99	5724	P7T2NPS4.012	0	0	0	0	0.726	1
9-Feb-99	5771 blk	P7T2NPS4.013	0	0	0	0	0.906	1
9-Feb-99	5734	P7T2NPS4.015	0	0	0	0	0.634	1
9-Feb-99	5744	P7T2NPS4.016	0	0	0	0	0.757	1
9-Feb-99	5754	P7T2NPS4.017	0	0	0	0	0.781	1
9-Feb-99	5764	P7T2NPS4.018	0	0	0	0	0.866	1
9-Feb-99	5774 blk	P7T2NPS4.021	0	0	0	0	0.91	1

CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Propham	Propanil	Swep	Carbazole	Barban	Ethylbenzene
8-Feb-99	5732 fs2	P7T2NPS4.009	3.612	1.429	5.421	0.63	4.219	1
9-Feb-99	5773 ls2	P7T2NPS4.020	7.156	1.463	7.159	0.989	7.219	1
8-Feb-99	5704	P7T2NPS4.010	0	0	0	0.717	0	1
9-Feb-99	5714	P7T2NPS4.011	0	0	0	0.759	0	1
9-Feb-99	5724	P7T2NPS4.012	0	0	0	0.778	0	1
9-Feb-99	5771 blk	P7T2NPS4.013	0	0	0	0.971	0	1
9-Feb-99	5734	P7T2NPS4.015	0	0	0	0.679	0	1
9-Feb-99	5744	P7T2NPS4.016	0	0	0	0.811	0	1
9-Feb-99	5754	P7T2NPS4.017	0	0	0	0.837	0	1
9-Feb-99	5764	P7T2NPS4.018	0	0	0	0.928	0	1
9-Feb-99	5774 blk	P7T2NPS4.021	0	0	0	0.975	0	1

METHOD NPS4 - PHASE VII TRIP 2

% RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIURON	LINURON	Surrogate	Internal Standard
					CARBAZOLE	ETHYLBENZENE
5722 fs1	80	78	79	76	72	121
5726 fs1 dup	89	85	89	84	88	112
5772 ls1	88	81	87	80	82	102
5772 ls1mdup	89	80	87	80	82	103
5704	0	0	0	0	67	110
5714	0	0	0	0	71	109
5724	0	0	0	0	73	114
5771 blk	0	0	0	0	91	108
5734	0	0	0	0	63	105
5744	0	0	0	0	76	105
5754	0	0	0	0	78	99
5764	0	0	0	0	87	109
5774 blk	0	0	0	0	91	104

% RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEP	Surrogate	BARBAN	Internal Standard
				CARBAZOLE		ETHYLBENZENE
5732 fs2	47	95	72	63	54	98
5773 ls2	93	97	95	99	93	97
5704	0	0	0	72	0	110
5714	0	0	0	76	0	109
5724	0	0	0	78	0	114
5771 blk	0	0	0	97	0	108
5734	0	0	0	68	0	105
5744	0	0	0	81	0	105
5754	0	0	0	84	0	100
5764	0	0	0	93	0	109
5774 blk	0	0	0	98	0	104

ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 2

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
SPIKE RECOVERY	
991515	4.137
991515 spike (avg)	5.095
spike amount	0.98
%recovery	98%

RELATIVE STANDARD DEVIATION

991515s	5.056
991515sd	5.135
%rsd	0.4%

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 3 - FEBRUARY/MARCH 1999

LAB FORTIFIED SAMPLES				PERCENT RECOVERIES				EPA METHOD 507				
	Spike	Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
JEFF #1	mix 2	102	87	104	96	90	98	98	99	98	101	102

JEFF #4	Spike mix 4	Int. Std. 103	Surrogate 96	Butylate 114	Molinate 122	Chlorpropham 117	Atraton 109	Alachlor 116	Bromazil 116	Tetrachlorvinphos 99	Velpar 115	
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LAB FORTIFIED BLANKS

p5859	mix 2	Int. Std. 96	Surrogate 94	EPTC 92	Phosdrin 96	Prophos 90	Atrazine 87	Propazine 87	Prometryne 86	Terbutryne 87	Triadimefon 90	Diphenamid 88
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p5862	mix 4	Int. Std. 91	Surrogate 89	Butylate 111	Molinate 117	Chlorpropham 111	Atraton 108	Alachlor 117	Bromazil 118	Tetrachlorvinphos 109	Velpar 116	
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NON-FORTIFIED SAMPLES

		Int. Std.	Surrogate
JEFF #1	p5803	102	85
JEFF #2	p5813	100	71
JEFF #3	p5825	95	77
JEFF #4	p5833	102	68
LINC #2	p5843	99	97

METHOD 507

LAB BLANKS

mix 1		Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos					
	p5858	102	73	0	0	0	0					
	p5861	97	87	0	0	0	0					
	p5863	96	74	0	0	0	0					
mix 2		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
	p5858	102	73	0	0	0	0	0	0	0	0	0
	p5861	97	87	0	0	0	0	0	0	0	0	0
	p5863	96	74	0	0	0	0	0	0	0	0	0
mix 3		Int. Std.	Surrogate	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon		
	p5858	102	73	0	0	0	0	0	0	0		
	p5861	97	87	0	0	0	0	0	0	0		
	p5863	96	74	0	0	0	0	0	0	0		
mix 4		Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	
	p5858	102	73	0	0	0	0	0	0	0	0	
	p5861	97	87	0	0	0	0	0	0	0	0	
	p5863	96	74	0	0	0	0	0	0	0	0	
mix 5		Int. Std.	Surrogate	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	Fenarimol		
	p5858	102	73	0	0	0	0	0	0	0		
	p5861	97	87	0	0	0	0	0	0	0		
	p5863	96	74	0	0	0	0	0	0	0		

METHOD 507

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5811	Duplicate p5815	%RSD
EPTC	20.85	16.38	7.70
Phosdrin	19.12	18.1	1.81
Prophos	18.07	16.29	3.40
Atrazine	19.54	18.84	1.21
Propazine	19.62	18.77	1.47
Prometryne	19.79	18.63	1.99
Terbutryne	19.62	18.66	1.66
Triadimefon	20.17	18.78	2.35
Diphenamid	20.31	18.92	2.33

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5859	2ND RUN p5859	%RSD
715140	710185	0.23

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5



METHOD 507 - PHASE VII TRIP 3 --FEBRUARY/MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
9-Mar-99	5803	P7T3507.010	0.849	0	0	0	0	1
9-Mar-99	5813	P7T3507.011	0.705	0	0	0	0	1
17-Mar-99	5825	P7T4507.009	0.765	0	0	0	0	1
9-Mar-99	5858 blk	P7T3507.013	0.732	0	0	0	0	1
9-Mar-99	5833	P7T3507.015	0.68	0	0	0	0	1
9-Mar-99	5843	P7T3507.016	0.973	0	0	0	0	1
10-Mar-99	5861 blk	P7T3507.018	0.87	0	0	0	0	1
10-Mar-99	5863 blk	P7T3507.020	0.739	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamid	TTF
9-Mar-99	5811 fs2	P7T3507.009	0.867	20.854	19.118	18.067	19.543	19.616	19.786	19.624	20.172	20.313	1
17-Mar-99	5815 fs2dup	P7T4507.008	0.695	16.379	18.105	16.295	18.84	18.773	18.633	18.658	18.779	18.915	1
9-Mar-99	5805 fs2	P7T3507.014	0.863	17.643	18.282	17.557	17.854	17.902	17.667	17.68	18.251	18.156	1
9-Mar-99	5859 ls2	P7T3507.017	0.943	18.399	19.125	18.072	17.351	17.406	17.265	17.343	17.935	17.676	1
10-Mar-99	5859 ls2mdup	P7T3507.117	0.941	18.158	19.062	18.113	17.328	17.369	17.048	17.152	17.738	17.55	1
9-Mar-99	5803	P7T3507.010	0.849	0	0	0	0	0	0	0	0	0	1
9-Mar-99	5813	P7T3507.011	0.705	0	0	0	0	0	0	0	0	0	1
17-Mar-99	5825	P7T4507.009	0.765	0	0	0	0	0	0	0	0	0	1
9-Mar-99	5858 blk	P7T3507.013	0.732	0	0	0	0	0	0	0	0	0	1
9-Mar-99	5833	P7T3507.015	0.68	0	0	0	0	0	0	0	0	0	1
9-Mar-99	5843	P7T3507.016	0.973	0	0	0	0	0	0	0	0	0	1
10-Mar-99	5861 blk	P7T3507.018	0.87	0	0	0	0	0	0	0	0	0	1
10-Mar-99	5863 blk	P7T3507.020	0.739	0	0	0	0	0	0	0	0	0	1

METHOD 507 - PHASE VII TRIP 3 --FEBRUARY/MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
9-Mar-99	5803	P7T3507.010	0.849	0	0	0	0	0	0	0	1
9-Mar-99	5813	P7T3507.011	0.705	0	0	0	0	0	0	0	1
17-Mar-99	5825	P7T4507.009	0.765	0	0	0	0	0	0	0	1
9-Mar-99	5858 blk	P7T3507.013	0.732	0	0	0	0	0	0	0	1
9-Mar-99	5833	P7T3507.015	0.68	0	0	0	0	0	0	0	1
9-Mar-99	5843	P7T3507.016	0.973	0	0	0	0	0	0	0	1
10-Mar-99	5861 blk	P7T3507.018	0.87	0	0	0	0	0	0	0	1
10-Mar-99	5863 blk	P7T3507.020	0.739	0	0	0	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample Id	File Name	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
9-Mar-99	5801 fs4	P7T3507.008	0.957	22.834	24.441	23.317	21.835	23.237	23.26	19.847	23.061	1
10-Mar-99	5862 ls4	P7T3507.019	0.891	22.257	23.388	22.203	21.619	23.365	23.593	21.876	23.115	1
9-Mar-99	5803	P7T3507.010	0.849	0	0	0	0	0	0	0	0	1
9-Mar-99	5813	P7T3507.011	0.705	0	0	0	0	0	0	0	0	1
17-Mar-99	5825	P7T4507.009	0.765	0	0	0	0	0	0	0	0	1
9-Mar-99	5858 blk	P7T3507.013	0.732	0	0	0	0	0	0	0	0	1
9-Mar-99	5833	P7T3507.015	0.68	0	0	0	0	0	0	0	0	1
9-Mar-99	5843	P7T3507.016	0.973	0	0	0	0	0	0	0	0	1
10-Mar-99	5861 blk	P7T3507.018	0.87	0	0	0	0	0	0	0	0	1
10-Mar-99	5863 blk	P7T3507.020	0.739	0	0	0	0	0	0	0	0	1

METHOD 507 - PHASE VII TRIP 3 --FEBRUARY/MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxyene	Dichlorvos	Perbutate	Tebuthiuron	Simazine	Simetryne	Devindol	TPP	Fenarimol
9-Mar-99	5803	P7T3507.010	0.849	0	0	0	0	0	0	1	0
9-Mar-99	5813	P7T3507.011	0.705	0	0	0	0	0	0	1	0
17-Mar-99	5825	P7T3507.009	0.765	0	0	0	0	0	0	1	0
9-Mar-99	5858 blk	P7T3507.013	0.732	0	0	0	0	0	0	1	0
9-Mar-99	5833	P7T3507.015	0.68	0	0	0	0	0	0	1	0
9-Mar-99	5843	P7T3507.016	0.973	0	0	0	0	0	0	1	0
10-Mar-99	5861 blk	P7T3507.018	0.87	0	0	0	0	0	0	1	0
10-Mar-99	5863 blk	P7T3507.020	0.739	0	0	0	0	0	0	1	0

METHOD 507 - PHASE VII TRIP 3 --FEBRUARY/MARCH 1999

PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
P7T3507.010	5803	85	0	0	0	0	102
P7T3507.011	5813	71	0	0	0	0	100
P7T4507.009	5825	77	0	0	0	0	95
P7T3507.013	5858 blk	73	0	0	0	0	102
P7T3507.015	5833	68	0	0	0	0	102
P7T3507.016	5843	97	0	0	0	0	99
P7T3507.018	5861 blk	87	0	0	0	0	97
P7T3507.020	5863 blk	74	0	0	0	0	96

PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TTP
P7T3507.009	5811 fs2	87	104	96	90	98	98	99	98	101	102	102
P7T4507.008	5815 fs2dup	70	82	91	81	94	94	93	93	94	95	101
P7T3507.014	5805 fs2	86	88	91	88	89	90	88	88	91	91	103
P7T3507.017	5859 ls2	94	92	96	90	87	87	86	87	90	88	96
P7T3507.117	5859 ls2mdup	94	91	95	91	87	87	85	86	89	88	96
P7T3507.010	5803	85	0	0	0	0	0	0	0	0	0	102
P7T3507.011	5813	71	0	0	0	0	0	0	0	0	0	100
P7T4507.009	5825	77	0	0	0	0	0	0	0	0	0	95
P7T3507.013	5858 blk	73	0	0	0	0	0	0	0	0	0	102
P7T3507.015	5833	68	0	0	0	0	0	0	0	0	0	102
P7T3507.016	5843	97	0	0	0	0	0	0	0	0	0	99
P7T3507.018	5861 blk	87	0	0	0	0	0	0	0	0	0	97
P7T3507.020	5863 blk	74	0	0	0	0	0	0	0	0	0	96

METHOD 507 - PHASE VII TRIP 3 -FEBRUARY/MARCH 1999

PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
P7T3507.010	5803	85	0	0	0	0	0	0	0	102
P7T3507.011	5813	71	0	0	0	0	0	0	0	100
P7T4507.009	5825	77	0	0	0	0	0	0	0	95
P7T3507.013	5858 blk	73	0	0	0	0	0	0	0	102
P7T3507.015	5833	68	0	0	0	0	0	0	0	102
P7T3507.016	5843	97	0	0	0	0	0	0	0	99
P7T3507.018	5861 blk	87	0	0	0	0	0	0	0	97
P7T3507.020	5863 blk	74	0	0	0	0	0	0	0	96

PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
P7T3507.008	5801 fs4	96	114	122	117	109	116	116	99	115	103
P7T3507.019	5862 ls4	89	111	117	111	108	117	118	109	116	91
P7T3507.010	5803	85	0	0	0	0	0	0	0	0	102
P7T3507.011	5813	71	0	0	0	0	0	0	0	0	100
P7T4507.009	5825	77	0	0	0	0	0	0	0	0	95
P7T3507.013	5858 blk	73	0	0	0	0	0	0	0	0	102
P7T3507.015	5833	68	0	0	0	0	0	0	0	0	102
P7T3507.016	5843	97	0	0	0	0	0	0	0	0	99
P7T3507.018	5861 blk	87	0	0	0	0	0	0	0	0	97
P7T3507.020	5863 blk	74	0	0	0	0	0	0	0	0	96

METHOD 507 - PHASE VII TRIP 3 --FEBRUARY/MARCH 1999

PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxyene	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
P7T3507.010	5803	85	0	0	0	0	0	0	102	0
P7T3507.011	5813	71	0	0	0	0	0	0	100	0
P7T4507.009	5825	77	0	0	0	0	0	0	95	0
P7T3507.013	5858 blk	73	0	0	0	0	0	0	102	0
P7T3507.015	5833	68	0	0	0	0	0	0	102	0
P7T3507.016	5843	97	0	0	0	0	0	0	99	0
P7T3507.018	5861 blk	87	0	0	0	0	0	0	97	0
P7T3507.020	5863 blk	74	0	0	0	0	0	0	96	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 3 - FEBRUARY/MARCH 1999

		PERCENT RECOVERIES															
		EPA METHOD 515															
		Internal.St	Surrogate	3,5-D	Dichlorprop	Pentachlorophenol	2,4,5-T	Dinoseb	Dacthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloram	Acifluorfen	
		DBOB	DCAA														
LAB FORTIFIED SAMPLES																	
LINC #2	p5847	105	93	92	96	93	95	89	59								
JEFF #4	p5837	112	83							91	85	89	94	90	76	90	
LAB FORTIFIED BLANKS																	
	p5851	96	96	101	102	101	103	90	80								
	p5852	105	100							94	88	82	91	91	80	75	
NON-FORTIFIED SAMPLES																	
		Average	Average														
JEFF #1	p5808	104	88														
JEFF #2	p5818	102	225														
JEFF #3	p5828	101	90														
JEFF #4	p5838	105	134														
LINC #2	p5848	101	98														
LAB BLANKS																	
		Average	Average														
	p5850	106	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	p5853	102	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5847	Duplicate p5847	%RSD
3,5-D	9.213	9.631	1.49
Dichlorprop	1.913	1.933	0.35
Pentachlorophenol	1.851	1.94	1.58
2,4,5-T	1.908	1.931	0.40
Dinoseb	3.563	3.466	0.92
Dacthal	1.182	1.063	3.47

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

	1ST RUN	2ND RUN	%RSD
p5851	160925	162571	0.34



## METHOD 515 - PHASE VII TRIP 3 - FEBRUARY\MARCH 1999

## CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
3-Mar-99	5847 fs1	P7T3515.006	9.213	0.932	1.913	1	1.851	1.908	3.563	1.182
3-Mar-99	5847 fs1 dup	P7T3515.012	9.631	0.908	1.933	1	1.94	1.931	3.466	1.063
3-Mar-99	5851 fs1	P7T3515.015	10.075	0.959	2.039	1	2.021	2.054	3.601	1.595
3-Mar-99	5851 fs1mdup	P7T3515.215	10.021	0.964	1.986	1	2.017	2.056	3.583	1.593
3-Mar-99	5808	P7T3515.008	0	0.89	0	1	0	0	0	0
3-Mar-99	5818	P7T3515.009	0	2.285	0	1	0	0	0	0
3-Mar-99	5828	P7T3515.010	0	0.909	0	1	0	0	0	0
3-Mar-99	5850 blk	P7T3515.011	0	0.84	0	1	0	0	0	0
3-Mar-99	5838	P7T3515.013	0	1.363	0	1	0	0	0	0
3-Mar-99	5848	P7T3515.014	0	0.993	0	1	0	0	0	0
4-Mar-99	5853 blk	P7T3515.017	0	0.919	0	1	0	0	0	0

## CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUORFEN
3-Mar-99	5837 fs2	P7T3515.007	0.83	5.466	1.707	1	1.772	18.799	18.089	4.548	3.59
4-Mar-99	5852 fs2	P7T3515.016	1.004	5.612	1.752	1	1.843	18.159	18.169	4.779	3.006
3-Mar-99	5808	P7T3515.008	0.859	0	0	1	0	0	0	0	0
3-Mar-99	5818	P7T3515.009	2.203	0	0	1	0	0	0.929	0	0
3-Mar-99	5828	P7T3515.010	0.877	0	0	1	0	0	0	0	0
3-Mar-99	5850 blk	P7T3515.011	0.81	0	0	1	0	0	0	0	0
3-Mar-99	5838	P7T3515.013	1.314	0	0	1	0	0	0	0	0
3-Mar-99	5848	P7T3515.014	0.957	0	0	1	0	0	0	0	0
4-Mar-99	5853 blk	P7T3515.017	0.886	0	0	1	0	0	0	0	0

METHOD 515 - PHASE VII TRIP 3 -- FEBRUARY\MARCH 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
5847 fs1	92	93	96	105	93	95	89	59
5847 fs1 dup	96	91	97	99	97	97	87	53
5851 ls1	101	96	102	95	101	103	90	80
5851 ls1mdup	100	96	99	95	101	103	90	80
5808	0	89	0	101	0	0	0	0
5818	0	229	0	99	0	0	0	0
5828	0	91	0	98	0	0	0	0
5850 blk	0	84	0	103	0	0	0	0
5838	0	136	0	101	0	0	0	0
5848	0	99	0	98	0	0	0	0
5853 blk	0	92	0	99	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
5837 fs2	83	91	85	112	89	94	90	76	90
5852 ls2	100	94	88	105	92	91	91	80	75
5808	86	0	0	107	0	0	0	0	0
5818	220	0	0	105	0	0	5	0	0
5828	88	0	0	104	0	0	0	0	0
5850 blk	81	0	0	109	0	0	0	0	0
5838	131	0	0	108	0	0	0	0	0
5848	96	0	0	104	0	0	0	0	0
5853 blk	89	0	0	105	0	0	0	0	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 3 - FEBRUARY/MARCH 1999

PERCENT RECOVERIES METHOD NPS4

Internal St.	Surrogate									
Ethylbenzene	Carbazole	Cyanazine	Fluometuron	Diuron	Linuron	Propham	Propanil	Swep	Barban	

LAB FORTIFIED SAMPLES

JEFF #3	p5826	112	77	79	72	79	71			
JEFF #4	p5832	104	87					75	88	84 85

LAB FORTIFIED BLANKS

p5855	117	78	82	75	82	75				
p5856	109	81					80	84	81	82

NON-FORTIFIED SAMPLES

		(average)	(average)							
JEFF #1	p5804	112	72							
JEFF #2	p5814	122	72							
JEFF #3	p5824	110	74							
JEFF #4	p5834	105	85							
LINC #2	p5844	115	78							

LAB BLANKS

		(average)	(average)							
p5854	110	85	0	0	0	0	0	0	0	0
p5857	117	79	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5822	Duplicate p5826	%RSD
Cyanazine	4.53	5.13	4.23
Fluometuron	1.33	1.49	3.86
Diuron	0.69	0.79	4.61
Linuron	2.08	2.22	2.19

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5855	2ND RUN p5855	%RSD
88964	68858	0.05

METHOD NPS4 - PHASE VII TRIP 3

CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
9-Mar-99	5822 fs1	P7T3NPS4.018	4.531	1.33	0.694	2.082	0.706	1
8-Mar-99	5826 fs1 dup	P7T3NPS4.012	5.13	1.49	0.792	2.219	0.77	1
9-Mar-99	5855 ls1	P7T3NPS4.015	5.306	1.552	0.816	2.359	0.778	1
9-Mar-99	5855 ls1 mdup	P7T3NPS4.115	5.295	1.571	0.811	2.37	0.779	1
8-Mar-99	5804	P7T3NPS4.008	0	0	0	0	0.711	1
8-Mar-99	5814	P7T3NPS4.009	0	0	0	0	0.717	1
8-Mar-99	5824	P7T3NPS4.010	0	0	0	0	0.731	1
8-Mar-99	5854 blk	P7T3NPS4.011	0	0	0	0	0.838	1
8-Mar-99	5834	P7T3NPS4.013	0	0	0	0	0.842	1
9-Mar-99	5844	P7T3NPS4.014	0	0	0	0	0.774	1
9-Mar-99	5857 blk	P7T3NPS4.017	0	0	0	0	0.787	1

CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Propham	Propanil	Swep	Carbazole	Barban	Ethylbenzene
8-Mar-99	5832 fs2	P7T3NPS4.007	5.769	1.335	6.291	0.867	6.603	1
9-Mar-99	5856 ls2	P7T3NPS4.016	6.117	1.274	6.061	0.809	6.367	1
8-Mar-99	5804	P7T3NPS4.008	0	0	0	0.717	0	1
8-Mar-99	5814	P7T3NPS4.009	0	0	0	0.723	0	1
8-Mar-99	5824	P7T3NPS4.010	0	0	0	0.736	0	1
8-Mar-99	5854 blk	P7T3NPS4.011	0	0	0	0.845	0	1
8-Mar-99	5834	P7T3NPS4.013	0	0	0	0.849	0	1
9-Mar-99	5844	P7T3NPS4.014	0	0	0	0.78	0	1
9-Mar-99	5857 blk	P7T3NPS4.017	0	0	0	0.793	0	1

METHOD NPS4 - PHASE VII TRIP 3

% RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIURON	LINURON	Surrogate	Internal Standard
					CARBAZOLE	ETHYLBENZENE
5822 fs1	70	65	69	67	71	106
5826 fs1 dup	79	72	79	71	77	112
5855 ls1	82	75	82	75	78	117
5855 ls1 mdup	82	76	81	76	78	116
5804	0	0	0	0	71	113
5814	0	0	0	0	72	123
5824	0	0	0	0	73	111
5854 blk	0	0	0	0	84	111
5834	0	0	0	0	84	106
5844	0	0	0	0	77	116
5857 blk	0	0	0	0	79	118

% RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEP	Surrogate	BARBAN	Internal Standard
				CARBAZOLE		ETHYLBENZENE
5832 fs2	75	88	84	87	85	104
5856 ls2	80	84	81	81	82	109
5804	0	0	0	72	0	111
5814	0	0	0	72	0	120
5824	0	0	0	74	0	108
5854 blk	0	0	0	85	0	109
5834	0	0	0	85	0	104
5844	0	0	0	78	0	113
5857 blk	0	0	0	79	0	115

ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 3

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
SPIKE RECOVERY	
991988	0.03
991988 spike (avg)	0.952
spike amount	0.98
%recovery	94%

RELATIVE STANDARD DEVIATION

991988s	1.005
991988sd	0.903
%rsd	10.7%

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 4- MARCH 1999

PERCENT RECOVERIES

EPA METHOD 507

LAB FORTIFIED SAMPLES

	Spike	Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
WHI #1	mix 2	96	85	115	101	96	101	101	101	102	100	104

	Spike	Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar
LON #13	mix 4	72	76	99	109	107	110	112	104	101	102

LAB FORTIFIED BLANKS

		Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos
p5942	mix 1	68	93	98	100	107	106

NON-FORTIFIED SAMPLES

		Int. Std.	Surrogate
WHI #1	p5903	85	103
LON #13	p5913	74	69
LON #14	p5923	79	74
LON #15	p5933	75	100

METHOD 507

LAB BLANKS

mix 1		Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos						
	p5940	73	112	0	0	0	0						
	p5941	75	94	0	0	0	0						
mix 2		Int. Std.	Surrogate	EPTC	Phosdrin	Propfos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	
	p5940	73	112	0	0	0	0	0	0	0	0	0	
	p5941	75	94	0	0	0	0	0	0	0	0	0	
mix 3		Int. Std.	Surrogate	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon			
	p5940	73	112	0	0	0	0	0	0	0			
	p5941	75	94	0	0	0	0	0	0	0			
mix 4		Int. Std.	Surrogate	Butylate	Mofinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar		
	p5940	73	112	0	0	0	0	0	0	0	0		
	p5941	75	94	0	0	0	0	0	0	0	0		
mix 5		Int. Std.	Surrogate	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	Fenarimol			
	p5940	73	112	0	0	0	0	0	0	0			
	p5941	75	94	0	0	0	0	0	0	0			



METHOD 507

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5901	Duplicate p5905	%RSD
EPTC	115	90	7.81
Phosdrin	101	102	0.33
Prophos	96	103	2.37
Atrazine	101	99	0.66
Propazine	101	98	1.00
Prometryne	101	97	1.34
Terbutryne	102	98	1.32
Triadimefon	100	97	1.01
Diphenamid	104	99	1.63

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5942	2ND RUN p5942	%RSD
370578	385329	1.31

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507 - PHASE VII TRIP 4 -- MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
17-Mar-99	5942 ls1	P7T4507.019	0.925	19.507	19.9	21.313	21.288	1
17-Mar-99	5942 ls1mdup	P7T4507.119	0.901	19.496	18.811	21.258	21.367	1
17-Mar-99	5903	P7T4507.012	1.082	0	0	0	0	1
17-Mar-99	5940 blk	P7T4507.013	1.119	0	0	0	0	1
17-Mar-99	5913	P7T4507.015	0.686	0	0	0	0	1
17-Mar-99	5923	P7T4507.016	0.739	0	0	0	0	1
17-Mar-99	5933	P7T4507.017	0.995	0	0	0	0	1
17-Mar-99	5941 blk	P7T4507.018	0.936	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamid	TTP
17-Mar-99	5901 fs2	P7T4507.010	0.849	23.005	20.286	19.271	20.212	20.162	20.254	20.31	20.026	20.756	1
17-Mar-99	5905 fs2dup	P7T4507.014	0.75	18.051	20.494	20.689	19.708	19.617	19.321	19.647	19.375	19.79	1
17-Mar-99	5903	P7T4507.012	1.082	0	0	0	0	0	0	0	0	0	1
17-Mar-99	5940 blk	P7T4507.013	1.119	0	0	0	0	0	0	0	0	0	1
17-Mar-99	5913	P7T4507.015	0.686	0	0	0	0	0	0	0	0	0	1
17-Mar-99	5923	P7T4507.016	0.739	0	0	0	0	0	0	0	0	0	1
17-Mar-99	5933	P7T4507.017	0.995	0	0	0	0	0	0	0	0	0	1
17-Mar-99	5941 blk	P7T4507.018	0.936	0	0	0	0	0	0	0	0	0	1

METHOD 507 - PHASE VII TRIP 4 -- MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norfiurazon	TTP
17-Mar-99	5903	P7T4507.012	1.082	0	0	0	0	0	0	0	1
17-Mar-99	5940 blk	P7T4507.013	1.119	0	0	0	0	0	0	0	1
17-Mar-99	5913	P7T4507.015	0.686	0	0	0	0	0	0	0	1
17-Mar-99	5923	P7T4507.016	0.739	0	0	0	0	0	0	0	1
17-Mar-99	5933	P7T4507.017	0.995	0	0	0	0	0	0	0	1
17-Mar-99	5941 blk	P7T4507.018	0.936	0	0	0	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample Id	File Name	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
18-Mar-99	5911 fs4*	P7T4507.026	0.758	19.826	20.046	21.329	22.09	22.305	20.833	20.238	20.398	1
17-Mar-99	5903	P7T4507.012	1.082	0	0	0	0	0	0	0	0	1
17-Mar-99	5940 blk	P7T4507.013	1.119	0	0	0	0	0	0	0	0	1
17-Mar-99	5913	P7T4507.015	0.686	0	0	0	0	0	0	0	0	1
17-Mar-99	5923	P7T4507.016	0.739	0	0	0	0	0	0	0	0	1
17-Mar-99	5933	P7T4507.017	0.995	0	0	0	0	0	0	0	0	1
17-Mar-99	5941 blk	P7T4507.018	0.936	0	0	0	0	0	0	0	0	1
17-Mar-99	5943 ls4	P7T4507.020	0.685	7.808	23.613	22.936	22.846	22.786	23.023	22.213	23.717	1

METHOD 507 - PHASE VII TRIP 4 --MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxylene	Dichlorvos	Perbutate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
17-Mar-99	5903	P7T4507.012	1.082	0	0	0	0	0	0	1	0
17-Mar-99	5940 blk	P7T4507.013	1.119	0	0	0	0	0	0	1	0
17-Mar-99	5913	P7T4507.015	0.686	0	0	0	0	0	0	1	0
17-Mar-99	5923	P7T4507.016	0.739	0	0	0	0	0	0	1	0
17-Mar-99	5933	P7T4507.017	0.995	0	0	0	0	0	0	1	0
17-Mar-99	5941 blk	P7T4507.018	0.936	0	0	0	0	0	0	1	0

METHOD 507 - PHASE VII TRIP 4 - MARCH 1999

PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
P7T4507.019	5942 ls1	93	98	100	107	106	68
P7T4507.119	5942 ls1mdup	90	97	94	106	107	73
P7T4507.012	5903	108	0	0	0	0	85
P7T4507.013	5940 blk	112	0	0	0	0	73
P7T4507.015	5913	69	0	0	0	0	74
P7T4507.016	5923	74	0	0	0	0	79
P7T4507.017	5933	100	0	0	0	0	75
P7T4507.018	5941 blk	94	0	0	0	0	75

PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TTP
P7T4507.010	5901 fs2	85	115	101	96	101	101	101	102	100	104	96
P7T4507.014	5905 fs2dup	75	90	102	103	99	98	97	98	97	99	72
P7T4507.012	5903	108	0	0	0	0	0	0	0	0	0	85
P7T4507.013	5940 blk	112	0	0	0	0	0	0	0	0	0	73
P7T4507.015	5913	69	0	0	0	0	0	0	0	0	0	74
P7T4507.016	5923	74	0	0	0	0	0	0	0	0	0	79
P7T4507.017	5933	100	0	0	0	0	0	0	0	0	0	75
P7T4507.018	5941 blk	94	0	0	0	0	0	0	0	0	0	75

METHOD 507 - PHASE VII TRIP 4 -MARCH 1999

PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
P7T4507.012	5903	108	0	0	0	0	0	0	0	85
P7T4507.013	5940 blk	112	0	0	0	0	0	0	0	73
P7T4507.015	5913	69	0	0	0	0	0	0	0	74
P7T4507.016	5923	74	0	0	0	0	0	0	0	79
P7T4507.017	5933	100	0	0	0	0	0	0	0	75
P7T4507.018	5941 blk	94	0	0	0	0	0	0	0	75

PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	TPP
P7T4507.026	5911 fs4*	76	99	100	107	110	112	104	101	102	72
P7T4507.012	5903	108	0	0	0	0	0	0	0	0	85
P7T4507.013	5940 blk	112	0	0	0	0	0	0	0	0	73
P7T4507.015	5913	69	0	0	0	0	0	0	0	0	74
P7T4507.016	5923	74	0	0	0	0	0	0	0	0	79
P7T4507.017	5933	100	0	0	0	0	0	0	0	0	75
P7T4507.018	5941 blk	94	0	0	0	0	0	0	0	0	75
P7T4507.020	5943 ls4	69	39	118	115	114	114	115	111	119	87

METHOD 507 - PHASE VII TRIP 4 --MARCH 1999

PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxyene	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
P7T4507.012	5903	108	0	0	0	0	0	0	85	0
P7T4507.013	5940 blk	112	0	0	0	0	0	0	73	0
P7T4507.015	5913	69	0	0	0	0	0	0	74	0
P7T4507.016	5923	74	0	0	0	0	0	0	79	0
P7T4507.017	5933	100	0	0	0	0	0	0	75	0
P7T4507.018	5941 blk	94	0	0	0	0	0	0	75	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 4 - MARCH 1999

		PERCENT RECOVERIES										EPA METHOD 515				
		Internal St	Surrogate													
		DBOB	DCAA	3,5-D	Dichlorprop	Pentachlorophenol	2,4,5-T	Dinoseb	Daofthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloram	Acifluorfen
LAB FORTIFIED SAMPLES																
LON #14	p5927	107	81	90	102	90	90	86	63							
LON #14	P5927d	105	87	94	88	90	90	91	58							
LON #15	p5937	102	89							92	92	92	94	92	83	91
LAB FORTIFIED BLANKS																
	p5954	107	85	82	97	80	80	80	68							
	p5955	95	88							69	70	68	68	70	68	66
NON-FORTIFIED SAMPLES																
		Average	Average													
WH# #1	p5908	107	83													
LON #13	p5918	103	88													
LON #14	p5928	104	82													
LON#15	p5938	61	85													
LAB BLANKS																
		Average	Average													
	P5945	103	94	0	0	0	0	0	0	0	0	0	0	0	0	0
	P5953	95	93	0	0	0	0	0	0	0	0	0	0	0	0	0
	P5958	101	88	0	0	0	0	0	0	0	0	0	0	0	0	0



DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5 <sup>5</sup> 27	Duplicate p5 <sup>9</sup> 27	%RSD
3,5-D	8.98	9.439	1.68
Dichlorprop	2.038	1.923	1.32
Pentachlorophenol	1.806	1.798	0.15
2,4,5-T	1.799	1.794	0.09
Dinoseb	3.454	3.626	1.63
Dacthal	1.257	1.165	2.50

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

	1ST RUN	2ND RUN	%RSD
p59E4	146445	146194	0.06

METHOD 515 - PHASE VII TRIP 4 -- MARCH 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACIHAL
1-Apr-99	5927 fs1	P7T4515.005	8.98	0.912	2.038	1	1.806	1.799	3.454	1.257
2-Apr-99	5954 fs1ndup	P7T4515.117	8.262	0.345	1.754	1	1.58	1.566	3.176	1.306
2-Apr-99	5954 fs1	P7T4515.017	8.162	0.851	1.94	1	1.593	1.6	3.186	1.31
1-Apr-99	5927 fs1d	P7T4515.011	9.439	0.869	1.923	1	1.798	1.794	3.626	1.165
1-Apr-99	5908	P7T4515.007	0	0.834	0	1	0	0	0	0
1-Apr-99	5918	P7T4515.008	0	0.882	0	1	0	0	0	0
1-Apr-99	5928	P7T4515.009	0	0.917	0	1	0	0	0	0
1-Apr-99	5945 blk	P7T4515.010	0	0.937	0	1	0	0	0	0
2-Apr-99	5938	P7T4515.022	0	0.851	0	1	0	0	0	0
2-Apr-99	5818	P7T4515.015	0	0.292	0	1	0	0	0	0
2-Apr-99	5953 blk	P7T4515.016	0	0.926	0	1	0	0	0	0
2-Apr-99	5956 blk	P7T4515.019	0	0.878	0	1	0	0	0	0

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	FICLORAM	ACIFLUORFEN
1-Apr-99	5908	P7T4515.007	0.8	0	0	1	0	0	0	0	0
1-Apr-99	5918	P7T4515.008	0.846	0	0	1	0	0	0	0	0
1-Apr-99	5928	P7T4515.009	0.879	0	0	1	0	0	0	0	0
1-Apr-99	5945 blk	P7T4515.010	0.898	0	0	1	0	0	0	0	0
2-Apr-99	5938	P7T4515.022	0.816	0	0	1	0	0	0	0	0
2-Apr-99	5818	P7T4515.015	0.28	0	0	1	0	0	0.91	0	0
2-Apr-99	5953 blk	P7T4515.016	0.888	0	0	1	0	0	0	0	0
2-Apr-99	5955 fs2	P7T4515.018	0.677	4.112	1.396	1	1.364	13.587	13.337	3.952	2.649
2-Apr-99	5956 blk	P7T4515.019	0.842	0	0	1	0	0	0	0	0
1-Apr-99	5937 fs2	P7T4515.006	0.895	5.515	1.845	1	1.842	18.828	18.38	5.005	3.62

FF2  
recovered  
from  
trip 3

METHOD 515 - PHASE VII TRIP 4 -- MARCH 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
5327 fs1	90	91	102	107	90	90	86	63
5954 ls1mdup	83	85	88	107	79	78	79	65
5954 ls1	82	85	97	107	80	80	80	66
5927 fs1d	94	87	96	105	90	90	91	59
5908	0	83	0	107	0	0	0	0
5918	0	88	0	103	0	0	0	0
5928	0	92	0	104	0	0	0	0
5945 blk	0	94	0	103	0	0	0	0
5938	0	95	0	105	0	0	0	0
5818	0	29	0	110	0	0	0	0
5953 blk	0	93	0	95	0	0	0	0
5956 blk	0	88	0	101	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLOPAM	ACIFLUROFEN
5308	80	0	0	107	0	0	0	0	0
5918	85	0	0	104	0	0	0	0	0
5928	88	0	0	104	0	0	0	0	0
5945 blk	90	0	0	104	0	0	0	0	0
5938	82	0	0	105	0	0	0	0	0
5818	28	0	0	111	0	0	5	0	0
5953 blk	89	0	0	95	0	0	0	0	0
5955 ls2	68	69	70	103	68	68	70	65	66
5956 blk	84	0	0	102	0	0	0	0	0
5937 fs2	89	92	92	104	92	94	92	83	91

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 4 - MARCH 1999

PERCENT RECOVERIES

METHOD NPS4

	Internal St. Ethylbenzene	Surrogate Carbazole	Cyanazine	Fluometuron	Diuron	Linuron	Propham	Propanil	Swep	Barban
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LAB FORTIFIED SAMPLES

LONOKE #14	p5922	100	90	95	91	95	94			
LONOKE #15	p5934	100	77					79	83	79 88

LAB FORTIFIED BLANKS

	p5948	100	79	93	83	93	89			
	p5947	113	75					79	79	79 78

NON-FORTIFIED SAMPLES

		(average)	(average)							
WHITE #1	p5904	107	81							
LON #13	p5914	110	80							
LON #14	p5924	112	86							
LON #15	p5935	99	98							

LAB BLANKS

		(average)	(average)							
	p5950	113	88	0	0	0	0	0	0	0
	p5951	99	86	0	0	0	0	0	0	0
	p5952	109	76	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p5922	Duplicate p5926	%RSD
Cyanazine	6.181	6.997	4.22
Fluometuron	1.82	2.141	5.55
Diuron	0.953	1.095	4.73
Linuron	2.819	3.327	5.67

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p5946	2ND RUN p5946	%RSD
60360	60688	0.17

METHOD NPS4 - PHASE VII TRIP 4

CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
23-Mar-99	5922 fs1	P7T4NPS4.006	6.181	1.82	0.953	2.819	0.896	1
23-Mar-99	5926 fs1d	P7T4NPS4.012	6.997	2.141	1.095	3.327	1.031	1
24-Mar-99	5946 ls1	P7T4NPS4.019	6.062	1.704	0.93	2.774	0.794	1
24-Mar-99	5946 ls1 md	P7T4NPS4.119	6.074	1.743	0.929	2.804	0.803	1
23-Mar-99	5904	P7T4NPS4.008	0	0	0	0	0.856	1
23-Mar-99	5914	P7T4NPS4.009	0	0	0	0	0.848	1
23-Mar-99	5924	P7T4NPS4.010	0	0	0	0	0.911	1
23-Mar-99	5950 blk	P7T4NPS4.011	0	0	0	0	0.939	1
24-Mar-99	5935	P7T4NPS4.013	0	0	0	0	1.035	1
24-Mar-99	5951 blk	P7T4NPS4.017	0	0	0	0	0.91	1
24-Mar-99	5952 blk	P7T4NPS4.021	0	0	0	0	0.81	1

CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Propham	Propanil	Swep	Carbazole	Barban	Ethylbenzene
23-Mar-99	5934 fs2	P7T4NPS4.007	6.018	1.235	5.896	0.767	6.648	1
24-Mar-99	5947 ls2	P7T4NPS4.020	6.085	1.2	5.94	0.747	6.099	1
23-Mar-99	5904	P7T4NPS4.008	0	0	0	0.749	0	1
23-Mar-99	5914	P7T4NPS4.009	0	0	0	0.743	0	1
23-Mar-99	5924	P7T4NPS4.010	0	0	0	0.798	0	1
23-Mar-99	5950 blk	P7T4NPS4.011	0	0	0	0.822	0	1
24-Mar-99	5935	P7T4NPS4.013	0	0	0	0.906	0	1
24-Mar-99	5951 blk	P7T4NPS4.017	0	0	0	0.796	0	1
24-Mar-99	5952 blk	P7T4NPS4.021	0	0	0	0.709	0	1

METHOD NPS4 - PHASE VII TRIP 4

% RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIURON	LINURON	Surrogate CARBAZOLE	Internal Standard ETHYLBENZENE
5922 fs1	95	88	95	90	90	101
5926 fs1d	108	104	110	106	103	92
5946 ls1	93	83	93	89	79	100
5946 ls1 md	94	85	93	90	80	99
5904	0	0	0	0	86	99
5914	0	0	0	0	85	101
5924	0	0	0	0	91	104
5950 blk	0	0	0	0	94	104
5935	0	0	0	0	104	92
5951 blk	0	0	0	0	91	91
5952 blk	0	0	0	0	81	100

% RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEP	Surrogate CARBAZOLE	BARBAN	Internal Standard ETHYLBENZENE
5934 fs2	78	82	79	77	85	117
5947 ls2	79	79	79	75	78	113
5904	0	0	0	75	0	115
5914	0	0	0	74	0	118
5924	0	0	0	80	0	120
5950 blk	0	0	0	82	0	121
5935	0	0	0	91	0	106
5951 blk	0	0	0	80	0	106
5952 blk	0	0	0	71	0	117

ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 4

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
SPIKE RECOVERY	
992052	0.017
992052 spike (avg)	0.942
spike amount	0.98
%recovery	94%

RELATIVE STANDARD DEVIATION	
992052s	0.954
992052sd	0.98
%rsd	0.7%

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE 7 TRIP 5 - MAY/JUNE 1999

PERCENT RECOVERIES

EPA METHOD 507

LAB FORTIFIED SAMPLES

CRIT #	Spike	Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
CRIT #4	mix 2	91	83	84	126	139	91	98	87	87	98	85
CRIT #5	mix 4	77	80	99	111	103	110	115	106	121	112	

LAB FORTIFIED BLANKS

		Int. Std.	Surrogate	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
p6019	mix 2	87	83	131	143	91	97	85	86	93	81
p6021	mix 4	75	86	102	110	101	107	113	107	120	109

NON-FORTIFIED SAMPLES

		Int. Std.	Surrogate
SF #1	p2822.2	100	70
CRIT #2	p2823.3	81	82
CRIT #3	p2824.3	82	83
CRIT #4	p2825.3	74	79
SF #1	p2822.3	80	70
CRIT #7	p2828.3	74	85
CRIT #5	p2826.4	85	100
CRIT #6	p2827.4	93	82



METHOD 507

LAB BLANKS

Mix	Sample	Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos						
mix 1	p6020	83	75	0	0	0	0						
	p6023	76	84	0	0	0	0						
	p6024	83	97	0	0	0	0						
mix 2		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	
	p6020	83	75	0	0	0	0	0	0	0	0	0	
	p6023	76	84	0	0	0	0	0	0	0	0	0	
mix 3		Int. Std.	Surrogate	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon			
	p6020	83	75	0	0	0	0	0	0	0			
	p6023	76	84	0	0	0	0	0	0	0			
mix 4		Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar		
	p6020	83	75	0	0	0	0	0	0	0	0		
	p6023	76	84	0	0	0	0	0	0	0	0		
mix 5		Int. Std.	Surrogate	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	Fenarimol			
	p6020	83	75	0	0	0	0	0	0	0			
	p6023	76	84	0	0	0	0	0	0	0			
	p6024	83	97	0	0	0	0	0	0	0			

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p6019  
104580

2ND RUN p6019  
100143

%RSD  
1.43

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507 -ASPB Phase7Trip 5

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
22-May-99	2822.2	D:\SW599507.026	0.704	0	0	0	0	1
22-May-99	2823.3	D:\SW599507.027	0.816	0	0	0	0	1
22-May-99	2824.3	D:\SW599507.028	0.834	0	0	0	0	1
22-May-99	6020bl	D:\SW599507.029	0.754	0	0	0	0	1
22-May-99	2825.3	D:\SW599507.033	0.782	0	0	0	0	1
22-May-99	2822.3dup	D:\SW599507.038	0.698	0	0	0	0	1
22-May-99	2828.3	D:\SW599507.039	0.85	0	0	0	0	1
22-May-99	6023bl	D:\SW599507.040	0.84	0	0	0	0	1
26-May-99	2826.4	D:\SW599507.603	0.999	0	0	0	0	1
26-May-99	2827.4	D:\SW599507.604	0.822	0	0	0	0	1
26-May-99	6024bl	D:\SW599507.605	0.973	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamic
21-May-99	2825.2ms2	D:\SW599507.024	0.832	16.792	25.161	27.828	18.24	19.553	17.361	17.496	19.536	16.987
21-May-99	6019ls2	D:\SW599507.025	0.825	16.541	26.267	28.633	18.111	19.342	17.073	17.106	18.541	16.221
21-May-99	6019ls2mdup	D:\SW599507.125	0.785	15.816	26.181	28.045	17.519	18.747	16.553	16.584	17.714	15.631
22-May-99	2822.2	D:\SW599507.026	0.704	0	0	0	0.157	0	0	0	0	0
22-May-99	2823.3	D:\SW599507.027	0.816	0	0	0	0	0	0	0	0	0
22-May-99	2824.3	D:\SW599507.028	0.834	0	0	0	0	0	0	0	0	0
22-May-99	6020bl	D:\SW599507.029	0.754	0	0	0	0	0	0	0	0	0
22-May-99	2825.3	D:\SW599507.033	0.782	0	0	0	0	0	0	0	0	0
22-May-99	2822.3dup	D:\SW599507.038	0.698	0	0	0	0	0	0	0	0	0
22-May-99	2828.3	D:\SW599507.039	0.85	0	0	0	0	0	0	0	0	0
22-May-99	6023bl	D:\SW599507.040	0.84	0	0	0	0	0	0	0	0	0
26-May-99	2826.4	D:\SW599507.603	0.999	0	0	0	0	0	0	0	0	0
26-May-99	2827.4	D:\SW599507.604	0.822	0	0	0	0	0	0	0	0	0
26-May-99	6024bl	D:\SW599507.605	0.973	0	0	0	0	0	0	0	0	0

## METHOD 507 - ASPB PHASE 7 TRIP 5

ME

## CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
22-May-99	2822.2	D:\SW599507.026	0.704	0	0	0	0	0	0	0	1
22-May-99	2823.3	D:\SW599507.027	0.816	0	0	0	0	0	0	0	1
22-May-99	2824.3	D:\SW599507.028	0.834	0	0	0	0	0	0	0	1
22-May-99	6020bl	D:\SW599507.029	0.754	0	0	0	0	0	0	0	1
22-May-99	2825.3	D:\SW599507.033	0.792	0	0	0	0	0	0	0	1
22-May-99	2822.3dup	D:\SW599507.038	0.698	0	0	0	0	0	0	0	1
22-May-99	2828.3	D:\SW599507.039	0.85	0	0	0	0	0	0	0	1
22-May-99	6023bl	D:\SW599507.040	0.84	0	0	0	0	0	0	0	1
26-May-99	2826.4	D:\SW599507.603	0.999	0	0	0	0	0	0	0	1
26-May-99	2827.4	D:\SW599507.604	0.822	0	0	0	0	0	0	0	1
26-May-99	6024bl	D:\SW599507.605	0.973	0	0	0	0	0	0	0	1

## CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample id	File Name	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	trachlorvinpl	Velpar	TPP
22-May-99	2822.2	D:\SW599507.026	0.704	0	0	0	0	0	0	0	0	1
22-May-99	2823.3	D:\SW599507.027	0.816	0	0	0	0	0	0	0	0	1
22-May-99	2824.3	D:\SW599507.028	0.834	0	0	0	0	0	0	0	0	1
22-May-99	6020bl	D:\SW599507.029	0.754	0	0	0	0	0	0	0	0	1
22-May-99	2826.2ms4	D:\SW599507.031	0.797	19.897	22.121	20.555	22.037	23.063	21.185	24.1	22.339	1
22-May-99	6021ls4	D:\SW599507.032	0.859	20.414	22.001	20.212	21.464	22.53	21.406	23.917	21.802	1
22-May-99	2825.3	D:\SW599507.033	0.782	0	0	0	0	0	0	0	0	1
22-May-99	2822.3dup	D:\SW599507.038	0.698	0	0	0	0	0	0	0	0	1
22-May-99	2828.3	D:\SW599507.039	0.85	0	0	0	0	0	0	0	0	1
22-May-99	6023bl	D:\SW599507.040	0.84	0	0	0	0	0	0	0	0	1
26-May-99	2826.4	D:\SW599507.603	0.999	0	0	0	0	0	0	0	0	1
26-May-99	2827.4	D:\SW599507.604	0.822	0	0	0	0	0	0	0	0	1
26-May-99	6024bl	D:\SW599507.605	0.973	0	0	0	0	0	0	0	0	1

METHOD 507 - ASPB PHASE 7 TRIP 5

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxyline	Dichlorvos	Perbulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
22-May-99	2822.2	D:\SW599507.026	0.704	0	0	0	0	0	0		1 0
22-May-99	2823.3	D:\SW599507.027	0.816	0	0	0	0	0	0		1 0
22-May-99	2824.3	D:\SW599507.028	0.834	0	0	0	0	0	0		1 0
22-May-99	6020bl	D:\SW599507.029	0.754	0	0	0	0	0	0		1 0
22-May-99	2825.3	D:\SW599507.033	0.782	0	0	0	0	0	0		1 0
22-May-99	2822.3dup	D:\SW599507.038	0.698	0	0	0	0	0	0		1 0
22-May-99	2828.3	D:\SW599507.039	0.85	0	0	0	0	0	0		1 0
22-May-99	6023bl	D:\SW599507.040	0.84	0	0	0	0	0	0		1 0
26-May-99	2826.4	D:\SW599507.603	0.999	0	0	0	0	0	0		1 0
26-May-99	2827.4	D:\SW599507.604	0.822	0	0	0	0	0	0		1 0
26-May-99	6024bl	D:\SW599507.605	0.973	0	0	0	0	0	0		1 0

METHOD 507 - ASPB PHASE 7 TRIP 5

PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP	Date
D:\SW599507.2822.2		70	0	0	0	0	100	22-1
D:\SW599507.2823.3		82	0	0	0	0	81	22-1
D:\SW599507.2824.3		83	0	0	0	0	82	22-1
D:\SW599507.6020bl		75	0	0	0	0	83	22-1
D:\SW599507.2825.3		78	0	0	0	0	74	22-1
D:\SW599507.2822.3dup		70	0	0	0	0	80	22-1
D:\SW599507.2828.3		85	0	0	0	0	74	22-1
D:\SW599507.6023bl		84	0	0	0	0	76	22-1
D:\SW599507.2826.4		100	0	0	0	0	85	26-1
D:\SW599507.2827.4		82	0	0	0	0	93	26-1
D:\SW599507.6024bl		97	0	0	0	0	83	26-1

PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TTP	Date
D:\SW599507.2825.2ms2		83	84	126	139	91	98	87	87	98	85	91	21-1
D:\SW599507.6019ls2		83	83	131	143	91	97	85	86	93	81	87	21-1
D:\SW599507.6019ls2mdup		79	79	131	140	88	94	83	83	89	78	87	21-1
D:\SW599507.2822.2		70	0	0	0	1	0	0	0	0	0	100	22-1
D:\SW599507.2823.3		82	0	0	0	0	0	0	0	0	0	81	22-1
D:\SW599507.2824.3		83	0	0	0	0	0	0	0	0	0	82	22-1
D:\SW599507.6020bl		75	0	0	0	0	0	0	0	0	0	83	22-1
D:\SW599507.2825.3		78	0	0	0	0	0	0	0	0	0	74	22-1
D:\SW599507.2822.3dup		70	0	0	0	0	0	0	0	0	0	80	22-1
D:\SW599507.2828.3		85	0	0	0	0	0	0	0	0	0	74	22-1
D:\SW599507.6023bl		84	0	0	0	0	0	0	0	0	0	76	22-1
D:\SW599507.2826.4		100	0	0	0	0	0	0	0	0	0	85	26-1
D:\SW599507.2827.4		82	0	0	0	0	0	0	0	0	0	93	26-1
D:\SW599507.6024bl		97	0	0	0	0	0	0	0	0	0	83	26-1

## METHOD 507 ASPB PHASE 7 TRIP 5

## PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylen	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
D:\SW599507.2822.2		70	0	0	0	0	0	0	0	100
D:\SW599507.2823.3		82	0	0	0	0	0	0	0	81
D:\SW599507.2824.3		83	0	0	0	0	0	0	0	82
D:\SW599507.6020bl		75	0	0	0	0	0	0	0	83
D:\SW599507.2825.3		78	0	0	0	0	0	0	0	74
D:\SW599507.2822.3dup		70	0	0	0	0	0	0	0	80
D:\SW599507.2828.3		85	0	0	0	0	0	0	0	74
D:\SW599507.6023bl		84	0	0	0	0	0	0	0	76
D:\SW599507.2826.4		100	0	0	0	0	0	0	0	85
D:\SW599507.2827.4		82	0	0	0	0	0	0	0	93
D:\SW599507.6024bl		97	0	0	0	0	0	0	0	83

## PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylen	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	trachlorvinpt	Velpar	TPP
D:\SW599507.2822.2		70	0	0	0	3	0	0	0	0	100
D:\SW599507.2823.3		82	0	0	0	0	0	0	0	0	81
D:\SW599507.2824.3		83	0	0	0	3	0	0	0	0	82
D:\SW599507.6020bl		75	0	0	0	3	0	0	0	0	83
D:\SW599507.2826.2ms4		80	99	111	103	110	115	106	121	112	77
D:\SW599507.6021ls4		86	102	110	101	107	113	107	120	109	75
D:\SW599507.2825.3		78	0	0	0	4	0	0	0	0	74
D:\SW599507.2822.3dup		70	0	0	0	3	0	0	0	0	80
D:\SW599507.2828.3		85	0	0	0	4	0	0	0	0	74
D:\SW599507.6023bl		84	0	0	0	3	0	0	0	0	76
D:\SW599507.2826.4		100	0	0	0	0	0	0	0	0	85
D:\SW599507.2827.4		82	0	0	0	0	0	0	0	0	93
D:\SW599507.6024bl		97	0	0	0	0	0	0	0	0	83

METHOD 507 - PHASE 7 TRIP 5 --MARCH 1999

PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxylene	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
D:\SW599507.026	2822.2	70	0	0	0	0	0	0	100	0
D:\SW599507.027	2823.3	82	0	0	0	0	0	0	81	0
D:\SW599507.028	2824.3	83	0	0	0	0	0	0	82	0
D:\SW599507.029	6020bl	75	0	0	0	0	0	0	83	0
D:\SW599507.033	2825.3	78	0	0	0	0	0	0	74	0
D:\SW599507.038	2822.3dup	70	0	0	0	0	0	0	80	0
D:\SW599507.039	2828.3	85	0	0	0	0	0	0	74	0
D:\SW599507.040	6023bl	84	0	0	0	0	0	0	76	0
D:\SW599507.603	2826.4	100	0	0	0	0	0	0	85	0
D:\SW599507.604	2827.4	82	0	0	0	0	0	0	93	0
D:\SW599507.605	6024bl	97	0	0	0	0	0	0	83	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 5 -MAY 1999

	PERCENT RECOVERIES										EPA METHOD 515						
	Internal SSurrogate DFOB	DCAA	3,5-D	Dichlorprop	Pentachloro	2,4,5-T	Dinoseb	Dacthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloram	Acifluofen		
LAB FORTIFIED SAMPLES																	
2827.8 ms	98	83	93	95	95	89	109	75									
2828.8 ms	106	110							97	97	95	94	95	94	84		
LAB FORTIFIED BLANKS																	
6025 Is1	98	84	96	95	95	91	87	80									
6025 Is1	98	82	95	94	94	89	91	80									
6027 Is2	107	100							96	95	95	91	93	91	85		
NON-FORTIFIED SAMPLES																	
	Average Average																
2822.8	111	86															
2823.8	103	85															
2824.8	92	97															
2825.8	106	98															
2826.8	106	83															
2827.9	106	93															
2828.9a	106	97															
2822.9 fdt	103	99															
2828.9b	106	85															
BLANKS																	
	Average Average																
6026	98	90	0	0	0	0	0	0	0	0	0	0	0	0	0		
6028	103	86	0	0	0	0	0	0	0	0	0	0	0	0	0		



QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 5 -MAY 1999

DUPLICATE ANALYSIS

FIELD DUPLICATE - SURROGATE AREA COMPARISON

	2822	2822DUP	%RSD
SURR	168458	172013	0.70

MACHINE DUPLICATE - CONCENTRATION COMPARISON

	1ST RUN	2ND RUN	%RSD
3,5-D	9.591	9.451	0.49
DICHLORPROP	1.896	1.883	0.23
PENTACHLOROPHEN	1.905	1.875	0.53
2,4,5-T	1.812	1.798	0.26
DINOSEB	3.482	3.657	1.65
DACTHAL	1.609	1.590	0.40

METHOD 515 - PHASE VII TRIP5 --MAY 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
3-Jun-99	6025 ls1	P7T5515.006	9.591	0.843	1.896	1	1.905	1.812	3.482	1.609
3-Jun-99	6025 ls1	P7T5515.106	9.451	0.821	1.883	1	1.875	1.789	3.657	1.59
3-Jun-99	2827.8 ms1	P7T5515.007	9.271	0.83	1.852	1	1.889	1.777	4.374	1.501
3-Jun-99	2822.8	p7t5515.008	0	0.813	0	1	0	0	0	0
3-Jun-99	2823.8	p7t5515.009	0	0.849	0	1	0	0	0	0
4-Jun-99	2824.8	p7t5515.010	0	0.941	0	1	0	0	0	0
4-Jun-99	6026 blk	p7t5515.011	0	0.811	0	1	0	0	0	0
4-Jun-99	2825.8	p7t5515.014	0	0.881	0	1	0	0	0	0
4-Jun-99	2826.8	p7t5515.015	0	0.869	0	1	0	0	0	0
4-Jun-99	2827.9	p7t5515.016	0	0.902	0	1	0	0	0	0
4-Jun-99	2828.9a	p7t5515.017	0	0.878	0	1	0	0	0	0
4-Jun-99	2822.9 fdup	p7t5515.018	0	0.89	0	1	0	0	0	0
4-Jun-99	6028 blk	p7t5515.019	0	0.773	0	1	0	0	0	0
4-Jun-99	2828.9b	p7t5515.020	0	0.77	0	1	0	0	0	0

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUORFEN
4-Jun-99	6027 ls2	0.996	5.743	1.904	1	1.908	18.282	18.666	5.458	3.387
4-Jun-99	6027 ls2mdup	0.985	5.69	1.922	1	1.889	18.305	18.503	5.429	3.34
4-Jun-99	2828.8 ms2	1.097	5.817	1.935	1	1.909	18.782	19.029	5.639	3.342
4-Jun-99	2828.9a	1.074	0	0	1	0	0	0	0	0
4-Jun-99	2822.9 fdup	1.089	0	0	1	0	0	8.265	0	0
4-Jun-99	6028 blk	0.946	0	0	1	0	0	0	0	0
4-Jun-99	2828.9b	0.942	0	0	1	0	0	0	0	0
3-Jun-99	2822.8	0.947	0	0	1	0	0	7.677	0	0
3-Jun-99	2823.8	0.855	0	0	1	0	0	0	0	0
4-Jun-99	6026 blk	0.992	0	0	1	0	0	0	0	0
4-Jun-99	2825.8	1.078	0	0	1	0	0	0	0	0
4-Jun-99	2826.8	0.8	0	0	1	0	0	0	0	0
4-Jun-99	2827.9	0.964	0	0	1	0	0	0	0	0
4-Jun-99	2824.8	1.151	0	0	1	0	0	0	0	0

METHOD 515 - PHASE VII TRIP5 --MAY 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
6025 ls1	96	84	95	98	95	91	87	80
6025 ls1	95	82	94	98	94	89	91	80
2827.8 ms1	93	83	93	102	94	89	109	75
2822.9	0	81	0	107	0	0	0	0
2823.8	0	85	0	100	0	0	0	0
2824.8	0	94	0	83	0	0	0	0
6026 blk	0	81	0	95	0	0	0	0
2825.8	0	88	0	102	0	0	0	0
2826.8	0	87	0	103	0	0	0	0
2827.9	0	90	0	102	0	0	0	0
2828.9a	0	88	0	102	0	0	0	0
2822.9 fdup	0	89	0	100	0	0	0	0
6028 blk	0	77	0	100	0	0	0	0
2828.9b	0	77	0	103	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
6027 ls2	100	96	95	107	95	91	93	91	85
6027 ls2ndup	99	95	96	113	94	92	93	90	84
2828.8 ms2	110	97	97	106	95	94	95	94	84
2828.9a	107	0	0	108	0	0	0	0	0
2822.9 fdup	109	0	0	106	0	0	41	0	0
6028 blk	95	0	0	106	0	0	0	0	0
2828.9b	94	0	0	109	0	0	0	0	0
2822.8	95	0	0	114	0	0	38	0	0
2823.8	86	0	0	106	0	0	0	0	0
6026 blk	99	0	0	101	0	0	0	0	0
2825.8	108	0	0	108	0	0	0	0	0
2826.8	80	0	0	109	0	0	0	0	0
2827.9	96	0	0	108	0	0	0	0	0
2824.8	115	0	0	87	0	0	0	0	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 5 - MAY 1999

PERCENT RECOVERIES METHOD NPS4

Internal St. Surrogate:  
Ethylbenzene Carbazole Cyanazine Fluometuron Diuron Linuron Propham Propanil Swep Barban

LAB FORTIFIED SAMPLES

CRIT #2	p2823.2	86	38	113	103	117	108		84	98	82	36
CRIT #3	p2824.2	102	31									

LAB FORTIFIED BLANKS

p6014	99	34	98	88	39	94		92	97	87	34
p6016	105	38									

NON-FORTIFIED SAMPLES

		(average)	(average)
SF#1	p2822.1	80	34
CRIT #2	p2823.5	103	77
CRIT #3	p2824.1	104	38
CRIT #4	p2825.1	83	72
CRIT #5	p2826.1	83	31
CRIT #6	p2827.2	96	31
CRIT #7	p2828.1	102	30

LAB BLANKS

	(average)	(average)								
p6015	128	38	0	0	0	0	0	0	0	0
p6017	95	108	0	0	0	0	0	0	0	0
p6018	96	37	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

FIELD DUPLICATE - SURROGATE AREA COMPARISON

	Sample p2828.1	Duplicate p2828.2	%FSD
SURR. AREA	62284	68242	3.08

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p6016	2ND RUN p6016	%FSD
74599	73871	0.42

## METHOD N

## CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
24-May-99	6014 ls	P7T5NPS4.004	6.412	1.806	0.987	2.929	1.873	-
24-May-99	2823.2 ms1	P7T5NPS4.005	7.548	2.119	1.168	3.32	1.762	-
24-May-99	2822.1	P7T5NPS4.006	0	0	0	0	2.023	-
24-Jun-99	2823.5	P7T7NPSB.008	0	0	0	0	0.744	-
24-May-99	2824.1	P7T5NPS4.008	0	0	0	0	1.895	-
24-May-99	2825.1	P7T5NPS4.012	0	0	0	0	0.772	-
24-May-99	2826.1	P7T5NPS4.013	0	0	0	0	0.983	-
25-May-99	2827.2	P7T5NPS4.018	0	0	0	0	0.979	-
25-May-99	2828.1	P7T5NPS4.016	0	0	0	0	0.857	-
25-May-99	2828.2 fdup	P7T5NPS4.017	0	0	0	0	1.014	-
24-May-99	6015 blank	P7T5NPS4.009	0	0	0	0	1.9	-
25-May-99	6017 blank	P7T5NPS4.015	0	0	0	0	1.143	-
25-May-99	6018 blank	P7T5NPS4.019	0	0	0	0	0.939	-

## CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Propham	Propanil	Swep	Carbazole	Barban	Ethylbenzene
24-May-99	6016 ls2	P7T5NPS4.010	7.049	1.469	7.291	0.877	7.348	-
24-May-99	6016 ls2mdup	P7T5NPS4.110	7.206	1.501	7.432	0.874	7.565	-
24-May-99	2824.2 ms2	P7T5NPS4.011	6.458	1.48	6.887	0.809	7.452	-
24-May-99	2822.1	P7T5NPS4.006	0	0	0	1.717	0	-
24-Jun-99	2823.5	P7T7NPSB.008	0	0	0	0.805	0	-
24-May-99	2824.1	P7T5NPS4.008	0	0	0	1.609	0	-
24-May-99	2825.1	P7T5NPS4.012	0	0	0	0.655	0	-
24-May-99	2826.1	P7T5NPS4.013	0	0	0	0.834	0	-
25-May-99	2827.2	P7T5NPS4.018	0	0	0	0.831	0	-
25-May-99	2828.1	P7T5NPS4.016	0	0	0	0.728	0	-
25-May-99	2828.2 fdup	P7T5NPS4.017	0	0	0	0.861	0	-
24-May-99	6015 blank	P7T5NPS4.009	0	0	0	1.613	0	-
25-May-99	6017 blank	P7T5NPS4.015	0	0	0	0.971	0	-
25-May-99	6018 blank	P7T5NPS4.019	0	0	0	0.798	0	-

METHOD NPS4 - PHASE 7 TRIP 5

% RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIURON	LINURON	Surrogate	Internal Standard
					CARBAZOLE	ETHYLBENZENE
6014 Is1	99	88	99	94	94	99
2823.2 ms1	116	103	117	106	88	86
2822.1	0	0	0	0	101	76
2823.5	0	0	0	0	74	98
2824.1	0	0	0	0	95	99
2825.1	0	0	0	0	77	98
2826.1	0	0	0	0	98	79
2827.2	0	0	0	0	98	91
2828.1	0	0	0	0	86	97
2828.2 fdup	0	0	0	0	101	89
6015 blank	0	0	0	0	95	97
6017 blank	0	0	0	0	114	83
6018 blank	0	0	0	0	94	101
0	0	0	0	0	0	0

% RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEP	Surrogate	Internal Standard	
				CARBAZOLE		BARBAN
6016 Is2	92	97	97	88	94	105
6016 Is2mdup	94	99	99	87	97	104
2824.2 ms2	84	98	92	81	96	102
2822.1	0	0	0	86	0	84
2823.5	0	0	0	80	0	107
2824.1	0	0	0	80	0	108
2825.1	0	0	0	66	0	107
2826.1	0	0	0	83	0	86
2827.2	0	0	0	83	0	100
2828.1	0	0	0	73	0	106
2828.2 fdup	0	0	0	86	0	98
6015 blank	0	0	0	81	0	106
6017 blank	0	0	0	97	0	91
6018 blank	0	0	0	80	0	110

ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 5

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
SPIKE RECOVERY	
992822	0.005
992822 spike (avg)	0.956
spike amount	0.98
%recovery	97%

RELATIVE STANDARD DEVIATION

992822s	0.971
992822sd	0.941
%rsd	0.8%

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE 7 TRIP 6 - JUNE 1999

PERCENT RECOVERIES

EPA METHOD 507

LAB FORTIFIED SAMPLES

DESHA #1	Spike mix 2	Int. Std. 66	Surrogate 109	EPTC 93	Phosdrin 105	Propos 99	Atrazine 108	Propazine 108	Prometryne 107	Terbutryne 106	Triadimefon 107	Diphenamid 108
DESHA #2	Spike mix 4	Int. Std. 105	Surrogate 100	Butylate 113	Molinate 122	Chlorpropham 124	Atraton 125	Alachlor 122	Bromazil 126	Tetrachlorvinphos 115	Velpar 123	

LAB FORTIFIED BLANKS

p7610	mix 2	Int. Std. 107	Surrogate 111	Phosdrin 106	Propos 101	Atrazine 110	Propazine 111	Prometryne 108	Terbutryne 109	Triadimefon 108	Diphenamid 109
p7612	mix 4	Int. Std. 97	Surrogate 117	Butylate 97	Molinate 104	Chlorpropham 107	Atraton 105	Alachlor 105	Bromazil 108	Tetrachlorvinphos 100	Velpar 107

NON-FORTIFIED SAMPLES

		Int. Std.	Surrogate
DESHA #1	p3064.2	96	100
DESHA #2	p3065.2	105	106
DESHA #3	p3066.2	105	106
DESHA #4	p3067.2	114	106
DESHA #5	p3068.2	105	105
DESHA #6	p3069.2	71	112
DESHA #7	p3070.2	89	112
DESHA #8	p3071.2	92	101



METHOD 507

LAB BLANKS

mix 1		Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos						
	p7611	110	105	0	0	0	0						
	p7613	81	114	0	0	0	0						
mix 2		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	
	p7611	110	105	0	0	0	0	0	0	0	0	0	
	p7613	81	114	0	0	0	0	0	0	0	0	0	
mix 3		Int. Std.	Surrogate	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norfurazon			
	p7611	110	105	0	0	0	0	0	0	0			
	p7613	81	114	0	0	0	0	0	0	0			
mix 4		Int. Std.	Surrogate	Butylate	Mofinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar		
	p7611	110	105	0	0	0	0	0	0	0	0		
	p7613	81	114	0	0	0	0	0	0	0	0		
mix 5		Int. Std.	Surrogate	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	Fenarimol			
	p7611	110	105	0	0	0	0	0	0	0			
	p7613	81	114	0	0	0	0	0	0	0			

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN  
N/A

2ND RUN  
N/A

%RSD

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p3064.1	Duplicate p3064.4	%RSD
EPTC	18.636	17.73	1.65
Phosdrin	21.072	20.564	0.81
Prophos	19.891	19.634	0.43
Atrazine	21.586	19.633	3.11
Propazine	21.635	19.686	3.10
Prometryne	21.414	19.475	3.11
Terbutryne	21.265	19.382	3.04
Triadimefon	21.329	19.472	2.99
Diphenamid	21.545	19.308	3.59

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN	2ND RUN	%RSD
N/A	N/A	#DIV/0!

\* All internal standard and surrogate values calculated from mean RF values for mixes 1-5

METHOD 507 - Phase7Trip 6

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylen	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
9-Jul-99	3065.2	p7t6507.008	1.045	0	0	0	0	1
9-Jul-99	3066.2	p7t6507.009	1.048	0	0	0	0	1
10-Jul-99	3067.2	p7t6507.010	1.138	0	0	0	0	1
10-Jul-99	7611 blk	p7t6507.011	1.095	0	0	0	0	1
10-Jul-99	3068.2	p7t6507.016	1.048	0	0	0	0	1
10-Jul-99	3069.2	p7t6507.017	0.712	0	0	0	0	1
10-Jul-99	3070.2	p7t6507.018	0.891	0	0	0	0	1
10-Jul-99	7613 blk	p7t6507.019	0.811	0	0	0	0	1
10-Jul-99	3064.2	p7t6507.020	0.959	0	0	0	0	1
10-Jul-99	3071.2	p7t6507.021	0.922	0	0	0	0	1
10-Jul-99	3070.1 sdup	p7t6507.022	0.84	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylen	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamic TT
9-Jul-99	3064.1 ms2	P7T6507.007	0.658	18.636	21.072	19.891	21.586	21.635	21.414	21.265	21.329	21.545
9-Jul-99	7610 ls2	P7T6507.006	1.074	20.599	21.182	20.222	22.096	22.27	21.678	21.735	21.669	21.857
9-Jul-99	3065.2	p7t6507.008	1.045	0	0	0	0	0	0	0	0	0
9-Jul-99	3066.2	p7t6507.009	1.048	0	0	0	0	0	0	0	0	0
10-Jul-99	3067.2	p7t6507.010	1.138	0	0	0	0	0	0	0	0	0
10-Jul-99	7611 blk	p7t6507.011	1.095	0	0	0	0	0	0	0	0	0
10-Jul-99	3068.2	p7t6507.016	1.048	0	0	0	0	0	0	0	0	0
10-Jul-99	3069.2	p7t6507.017	0.712	0	0	0	0	0	0	0	0	0
10-Jul-99	3070.2	p7t6507.018	0.891	0	0	0	0	0	0	0	0	0
10-Jul-99	7613 blk	p7t6507.019	0.811	0	0	0	0	0	0	0	0	0
10-Jul-99	3064.2	p7t6507.020	0.959	0	0	0	0	0	0	0	0	0
10-Jul-99	3071.2	p7t6507.021	0.922	0	0	0	0	0	0	0	0	0
10-Jul-99	3070.1 sdup	p7t6507.022	0.84	0	0	0	0	0	0	0	0	0
10-Jul-99	3064.4	p7t6507.023	0.826	17.73	20.564	19.634	19.633	19.686	19.475	19.382	19.472	19.308

METHOD 507 - PHASE 7 TRIP 6

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxyline	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
9-Jul-99	3065.2	p7t6507.008	1.045	0	0	0	0	0	0	0	1
9-Jul-99	3066.2	p7t6507.009	1.048	0	0	0	0	0	0	0	1
10-Jul-99	3067.2	p7t6507.010	1.138	0	0	0	0	0	0	0	1
10-Jul-99	7611 blk	p7t6507.011	1.095	0	0	0	0	0	0	0	1
10-Jul-99	3068.2	p7t6507.016	1.048	0	0	0	0	0	0	0	1
10-Jul-99	3069.2	p7t6507.017	0.712	0	0	0	0	0	0	0	1
10-Jul-99	3070.2	p7t6507.018	0.891	0	0	0	0	0	0	0	1
10-Jul-99	7613 blk	p7t6507.019	0.811	0	0	0	0	0	0	0	1
10-Jul-99	3064.2	p7t6507.020	0.959	0	0	0	0	0	0	0	1
10-Jul-99	3071.2	p7t6507.021	0.922	0	0	0	0	0	0	0	1
10-Jul-99	3070.1 sdup	p7t6507.022	0.84	0	0	0	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample Id	File Name	Nitroxyline	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	alachlorvinyl	Velpar	TPP
10-Jul-99	7612 is4	P7T6507.012	0.965	19.381	20.824	21.409	21.091	21.096	21.699	20.09	21.445	1
10-Jul-99	3065.1 ms4	P7T6507.013	1.049	22.576	24.492	24.85	24.989	24.328	25.143	23.055	24.606	1
9-Jul-99	3065.2	p7t6507.008	1.045	0	0	0	0	0	0	0	0	1
9-Jul-99	3066.2	p7t6507.009	1.048	0	0	0	0	0	0	0	0	1
10-Jul-99	3067.2	p7t6507.010	1.138	0	0	0	0	0	0	0	0	1
10-Jul-99	7611 blk	p7t6507.011	1.095	0	0	0	0	0	0	0	0	1
10-Jul-99	3068.2	p7t6507.016	1.048	0	0	0	0	0	0	0	0	1
10-Jul-99	3069.2	p7t6507.017	0.712	0	0	0	0	0	0	0	0	1
10-Jul-99	3070.2	p7t6507.018	0.891	0	0	0	0	0	0	0	0	1
10-Jul-99	7613 blk	p7t6507.019	0.811	0	0	0	0	0	0	0	0	1
10-Jul-99	3064.2	p7t6507.020	0.959	0	0	0	0	0	0	0	0	1
10-Jul-99	3071.2	p7t6507.021	0.922	0	0	0	0	0	0	0	0	1
10-Jul-99	3070.1 sdup	p7t6507.022	0.84	0	0	0	0	0	0	0	0	1

METHOD 507 - PHASE 7 TRIP 6

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxylen	Dichlorvos	Perbutate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
9-Jul-99	3065.2	p7t6507.008	1.045	0	0	0	0	0	0	1	0
9-Jul-99	3066.2	p7t6507.009	1.048	0	0	0	0	0	0	1	0
10-Jul-99	3067.2	p7t6507.010	1.138	0	0	0	0	0	0	1	0
10-Jul-99	7611 blk	p7t6507.011	1.095	0	0	0	0	0	0	1	0
10-Jul-99	3068.2	p7t6507.016	1.048	0	0	0	0	0	0	1	0
10-Jul-99	3069.2	p7t6507.017	0.712	0	0	0	0	0	0	1	0
10-Jul-99	3070.2	p7t6507.018	0.891	0	0	0	0	0	0	1	0
10-Jul-99	7613 blk	p7t6507.019	0.811	0	0	0	0	0	0	1	0
10-Jul-99	3064.2	p7t6507.020	0.959	0	0	0	0	0	0	1	0
10-Jul-99	3071.2	p7t6507.021	0.922	0	0	0	0	0	0	1	0
10-Jul-99	3070.1 sdup	p7t6507.022	0.84	0	0	0	0	0	0	1	0

METHOD 507 - PHASE 7 TRIP 6

PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
p7t6507.008	3065.2	105	0	0	0	0	106
p7t6507.009	3066.2	105	0	0	0	0	106
p7t6507.010	3067.2	114	0	0	0	0	106
p7t6507.011	7611 blk	110	0	0	0	0	105
p7t6507.016	3068.2	105	0	0	0	0	105
p7t6507.017	3069.2	71	0	0	0	0	112
p7t6507.018	3070.2	89	0	0	0	0	112
p7t6507.019	7613 blk	81	0	0	0	0	114
p7t6507.020	3064.2	96	0	0	0	0	100
p7t6507.021	3071.2	92	0	0	0	0	101
p7t6507.022	3070.1 sdup	84	0	0	0	0	98

PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TPP
P7T6507.007	3064.1 ms2	66	93	105	99	108	108	107	106	107	108	109
P7T6507.006	7610 ls2	107	103	106	101	110	111	108	109	108	109	111
p7t6507.008	3065.2	105	0	0	0	0	0	0	0	0	0	106
p7t6507.009	3066.2	105	0	0	0	0	0	0	0	0	0	106
p7t6507.010	3067.2	114	0	0	0	0	0	0	0	0	0	106
p7t6507.011	7611 blk	110	0	0	0	0	0	0	0	0	0	105
p7t6507.016	3068.2	105	0	0	0	0	0	0	0	0	0	105
p7t6507.017	3069.2	71	0	0	0	0	0	0	0	0	0	112
p7t6507.018	3070.2	89	0	0	0	0	0	0	0	0	0	112
p7t6507.019	7613 blk	81	0	0	0	0	0	0	0	0	0	114
p7t6507.020	3064.2	96	0	0	0	0	0	0	0	0	0	100
p7t6507.021	3071.2	92	0	0	0	0	0	0	0	0	0	101
p7t6507.022	3070.1 sdup	84	0	0	0	0	0	0	0	0	0	98
p7t6507.023	3064.4	83	89	103	98	98	98	97	97	97	97	98

## METHOD 507 - PHASE 7 TRIP 6

## PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
p7t6507.008	3065.2	105	0	0	0	0	0	0	0	106
p7t6507.009	3066.2	105	0	0	0	0	0	0	0	106
p7t6507.010	3067.2	114	0	0	0	0	0	0	0	106
p7t6507.011	7611 blk	110	0	0	0	0	0	0	0	105
p7t6507.016	3068.2	105	0	0	0	0	0	0	0	105
p7t6507.017	3069.2	71	0	0	0	0	0	0	0	112
p7t6507.018	3070.2	89	0	0	0	0	0	0	0	112
p7t6507.019	7613 blk	81	0	0	0	0	0	0	0	114
p7t6507.020	3064.2	96	0	0	0	0	0	0	0	100
p7t6507.021	3071.2	92	0	0	0	0	0	0	0	101
p7t6507.022	3070.1 sdup	84	0	0	0	0	0	0	0	98

## PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	trachlorvinpt	Velpar	TPP
P7T6507.012	7612 ls4	97	97	104	107	105	105	103	100	107	117
P7T6507.013	3065.1 ms4	105	113	122	124	125	122	126	115	123	100
p7t6507.008	3065.2	105	0	0	0	0	0	0	0	0	106
p7t6507.009	3066.2	105	0	0	0	0	0	0	0	0	106
p7t6507.010	3067.2	114	0	0	0	0	0	0	0	0	106
p7t6507.011	7611 blk	110	0	0	0	0	0	0	0	0	105
p7t6507.016	3068.2	105	0	0	0	0	0	0	0	0	105
p7t6507.017	3069.2	71	0	0	0	0	0	0	0	0	112
p7t6507.018	3070.2	89	0	0	0	0	0	0	0	0	112
p7t6507.019	7613 blk	81	0	0	0	0	0	0	0	0	114
p7t6507.020	3064.2	96	0	0	0	0	0	0	0	0	100
p7t6507.021	3071.2	92	0	0	0	0	0	0	0	0	101
p7t6507.022	3070.1 sdup	84	0	0	0	0	0	0	0	0	96

METHOD 507 - PHASE 7 TRIP 6 --JULY 1999

PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxylyene	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
p7t6507.008	3065.2	105	0	0	0	0	0	0	106	0
p7t6507.009	3066.2	105	0	0	0	0	0	0	106	0
p7t6507.010	3067.2	114	0	0	0	0	0	0	106	0
p7t6507.011	7611 blk	110	0	0	0	0	0	0	105	0
p7t6507.016	3068.2	105	0	0	0	0	0	0	105	0
p7t6507.017	3069.2	71	0	0	0	0	0	0	112	0
p7t6507.018	3070.2	89	0	0	0	0	0	0	112	0
p7t6507.019	7613 blk	81	0	0	0	0	0	0	114	0
p7t6507.020	3064.2	96	0	0	0	0	0	0	100	0
p7t6507.021	3071.2	92	0	0	0	0	0	0	101	0
p7t6507.022	3070.1 sdup	84	0	0	0	0	0	0	98	0



QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 6 -JUNE 1999

	PERCENT RECOVERIES										EPA METHOD 515					
	Internal.SS		Surrogate													
	DBOB	DCAA	3,5-D	Dichlorprop	Pentachloro	2,4,5-T	Dinoseb	Dacthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloram	Acifluorfen	
LAB FORTIFIED SAMPLES																
3068	111	109	92	96	95	95	98	72								
3069	114	112								93	92	91	92	90	97	90
LAB FORTIFIED BLANKS																
7600LS1	116	113	87	87	88	86	84	69								
7602LS2	80	124								99	96	97	96	95	98	92
NON-FORTIFIED SAMPLES																
	Average		Average													
3064	121	113														
3065	118	121														
3066	117	117														
3067	113	114														
3068	118	91														
3069	112	115														
3070	116	110														
3071	149	90														
3065DUP	125	106														
BLANKS																
	Average		Average													
7601	125	129	0	0	0	0	0	0	0	0	0	0	0	0	0	

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 6 - JUNE 1999

EPA METHOD 515

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - RECOVERY COMPARISON

	3069	3069DUP	%RSD
Dicamba	93	78	8.77
2,4-D	92	82	5.75
Silvex	91	78	7.69
2,4-DB	92	80	6.98
Bentazon	90	79	6.51
Picloram	97	78	10.86
Acifluofen	90	76	8.43

MACHINE DUPLICATE - RECOVERY COMPARISON

	1ST RUN - Is2	2ND RUN - Is2	%RSD
Dicamba	99	91	4.21
2,4-D	96	89	3.78
Silvex	97	89	4.30
2,4-DB	96	90	3.23
Bentazon	95	87	4.40
Picloram	98	89	4.81
Acifluofen	92	84	4.55

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METHOD 515 - PHASE VII TRIP - JUNE 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
4-Jun-99	7600 ls1	P7T6515.021	8.73	1.128	1.743	1	1.758	1.721	3.374	1.379
4-Jun-99	3068.9 ms1	P7T6515.022	9.235	1.089	1.927	1	1.894	1.892	3.934	1.439
4-Jun-99	3064.8	p7t6515.023	0	1.123	0	1	0	0	0	0
4-Jun-99	3065.8	p7t6515.024	0	1.084	0	1	0	0	0	0
4-Jun-99	3066.8	p7t6515.025	0	1.045	0	1	0	0	0	0
4-Jun-99	7601 blk	p7t6515.026	0	1.16	0	1	0	0	0	0
4-Jun-99	3067.8	p7t6515.029	0	1.025	0	1	0	0	0	0
5-Jun-99	3068.8	p7t6515.030	0	0.82	0	1	0	0	0	0
5-Jun-99	3069.8	p7t6515.031	0	1.041	0	1	0	0	0	0
5-Jun-99	3070.8	p7t6515.032	0	0.98	0	1	0	0	0	0
5-Jun-99	3071.8	p7t6515.033	0	0.811	0	1	0	0	0	0
5-Jun-99	3065.9	p7t6515.034	0	0.952	0	1	0	0	0	0

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUORFEN	
4-Jun-99	7602 ls2	P7T6515.027	1.239	5.923	1.929	1	1.934	19.198	19.009	5.859	3.696
4-Jun-99	7602 ls2mdup	P7T6515.127	1.165	5.438	1.788	1	1.777	17.952	17.468	5.366	3.377
4-Jun-99	3069.9a ms2	P7T6515.028	1.118	5.592	1.847	1	1.825	18.492	18.073	5.816	3.584
5-Jun-99	3069.9b ms2	P7T6515.036	1.41	4.684	1.648	1	1.566	16.046	15.851	4.663	3.049
4-Jun-99	3064.8	P7T6515.023	1.15	0	0	1	0	0	0	0	0
4-Jun-99	3065.8	p7t6515.024	1.326	0	0	1	0	0	0	0	0
4-Jun-99	3066.8	p7t6515.025	1.278	0	0	1	0	0	0	0	0
4-Jun-99	7601 blk	p7t6515.026	1.418	0	0	1	0	0	0	0	0
4-Jun-99	3067.8	p7t6515.029	1.254	0	0	1	0	0	0	0	0
5-Jun-99	3068.8	p7t6515.030	1.003	0	0	1	0	0	0	0	0
5-Jun-99	3069.8	p7t6515.031	1.273	0	0	1	0	0	0	0	0
5-Jun-99	3070.8	p7t6515.032	1.199	0	0	1	0	0	0	0	0
5-Jun-99	3071.8	p7t6515.033	0.991	0	0	1	0	0	0	0	0
5-Jun-99	3065.9	p7t6515.034	1.164	0	0	1	0	0	0	0	0

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METHOD 515 - PHASE VII TRIP - JUNE 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
7600 ls1	87	113	87	116	88	86	84	69
3068.9 ms1	92	109	96	111	95	95	98	72
3064.8	0	112	0	117	0	0	0	0
3065.8	0	108	0	115	0	0	0	0
3066.8	0	105	0	114	0	0	0	0
7601 blk	0	116	0	122	0	0	0	0
3067.8	0	103	0	109	0	0	0	0
3068.8	0	82	0	114	0	0	0	0
3069.8	0	104	0	109	0	0	0	0
3070.8	0	98	0	112	0	0	0	0
3071.8	0	81	0	145	0	0	0	0
3065.9	0	95	0	121	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
7602 ls2	124	99	96	80	97	96	95	98	92
7602 ls2mdup	117	91	89	89	89	90	87	89	84
3069.9a ms2	112	93	92	114	91	92	90	97	90
3069.9b ms2	141	78	82	122	78	80	79	78	76
3064.8	115	0	0	124	0	0	0	0	0
3065.8	133	0	0	122	0	0	0	0	0
3066.8	128	0	0	120	0	0	0	0	0
7601 blk	142	0	0	129	0	0	0	0	0
3067.8	125	0	0	116	0	0	0	0	0
3068.8	100	0	0	121	0	0	0	0	0
3069.8	127	0	0	115	0	0	0	0	0
3070.8	120	0	0	119	0	0	0	0	0
3071.8	99	0	0	154	0	0	0	0	0
3065.9	116	0	0	129	0	0	0	0	0

PERCENT RECOVERIES

METHOD NPS4 *Phase 7 trip 6*

Internal St. Surrogate:  
Ethylbenzene Carbazole Cyanazine Fluometuron Diuron Linuron Propham Propanil Swep Earban

LAB FORTIFIED SAMPLES

DESHA #3	P3066.1	109	37	93	98	95	78				
DESHA #4	P3067.1	97	100					114	119	113	112

LAB FORTIFIED BLANKS

P7606	108	38	93	98	97	80					
P7607	110	37					93	99	97	94	

NON-FORTIFIED SAMPLES

		(average)	(average)
DESHA #1	P3064.3	90	100
DESHA #2	P3065.3	98	100
DESHA #3	P3066.3	100	35
DESHA #4	P3067.3	115	75
DESHA #5	P3068.3	104	75
DESHA #6	P3069.3	102	35
DESHA #7	P3070.3	110	77
DESHA #8	P3071.3	111	74
DESHA #8	P3071.1dup	108	32

LAB BLANKS

	(average)	(average)								
P7606	99	38	0	0	0	0	0	0	0	0
P7608	108	37	0	0	0	0	0	0	0	0
P7609	107	39	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p3067.1	Duplicate p3068.4dup	%RSD
Propham	8.784	7.087	8.90
Propanil	1.301	1.456	8.82
Swep	8.933	7.113	8.94
Barban	8.714	7.021	8.92

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN p7605	2ND RUN p7606dup	%RSD
80631	77811	1.14

METHOD NPS4 - PHASE VII TRIP 6

CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
14-Jun-99	7605 ls1	P7T6NPS4.006	6.257	1.983	0.967	2.498	0.928	1
14-Jun-99	7605 ls1mdup	P7T6NPS4.106	6.297	2.002	0.963	2.525	0.931	1
14-Jun-99	3066.1 ms1	P7T6NPS4.007	6.064	1.913	0.951	2.43	0.868	1
14-Jun-99	3064.3	P7T6NPS4.008	0	0	0	0	0.972	1
14-Jun-99	3065.3	P7T6NPS4.009	0	0	0	0	1.037	1
14-Jun-99	3066.3	P7T6NPS4.010	0	0	0	0	0.983	1
15-Jun-99	7606 blk	P7T6NPS4.011	0	0	0	0	0.993	1
15-Jun-99	3067.3	P7T6NPS4.014	0	0	0	0	0.779	1
15-Jun-99	3068.3	P7T6NPS4.015	0	0	0	0	0.776	1
15-Jun-99	3069.3	P7T6NPS4.016	0	0	0	0	0.875	1
15-Jun-99	7608 blk	P7T6NPS4.017	0	0	0	0	0.895	1
15-Jun-99	3070.3	P7T6NPS4.018	0	0	0	0	0.8	1
15-Jun-99	3071.3	P7T6NPS4.019	0	0	0	0	0.764	1
15-Jun-99	3071.1 dup	P7T6NPS4.020	0	0	0	0	0.849	1
15-Jun-99	7609 blk	P7T6NPS4.023	0	0	0	0	0.922	1

CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Protham	Propanil	Swep	Carbazole	Barban	Ethylbenzene
14-Jun-99	3064.3	P7T6NPS4.008	0	0	0	1.04	0	1
14-Jun-99	3065.3	P7T6NPS4.009	0	0	0	0.956	0	1
14-Jun-99	3066.3	P7T6NPS4.010	0	0	0	0.907	0	1
15-Jun-99	7606 blk	P7T6NPS4.011	0	0	0	0.915	0	1
15-Jun-99	7607 ls2	P7T6NPS4.012	7.178	1.496	7.283	0.872	7.325	1
15-Jun-99	3067.1 ms2	P7T6NPS4.013	8.764	1.801	8.833	1.002	8.714	1
15-Jun-99	3067.3	P7T6NPS4.014	0	0	0	0.718	0	1
15-Jun-99	3068.3	P7T6NPS4.015	0	0	0	0.716	0	1
15-Jun-99	3069.3	P7T6NPS4.016	0	0	0	0.807	0	1
15-Jun-99	7608 blk	P7T6NPS4.017	0	0	0	0.825	0	1
15-Jun-99	3070.3	P7T6NPS4.018	0	0	0	0.737	0	1
15-Jun-99	3071.3	P7T6NPS4.019	0	0	0	0.705	0	1
15-Jun-99	3071.1 dup	P7T6NPS4.020	0	0	0	0.783	0	1
15-Jun-99	3066.4ms2dup	P7T6NPS4.021	7.067	1.456	7.113	0.801	7.021	1
15-Jun-99	7609 blk	P7T6NPS4.023	0	0	0	0.85	0	1

METHOD NPS4 - PHASE VII TRIP 6

% RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIURON	LINURON	Surrogate	Internal Standard
					CARBAZOLE	ETHYLBENZENE
7605 ls1	96	96	97	80	93	108
7605 ls1mdup	97	97	96	81	93	104
3066.1 ms1	93	93	95	78	87	109
3064.3	0	0	0	0	97	90
3065.3	0	0	0	0	104	90
3066.3	0	0	0	0	98	92
7606 blk	0	0	0	0	99	91
3067.3	0	0	0	0	78	106
3068.3	0	0	0	0	78	96
3069.3	0	0	0	0	88	94
7608 blk	0	0	0	0	90	98
3070.3	0	0	0	0	80	101
3071.3	0	0	0	0	76	102
3071.1 dup	0	0	0	0	85	98
7609 blk	0	0	0	0	92	99

% RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEET	Surrogate	BARBAN	Internal Standard
				CARBAZOLE		ETHYLBENZENE
3064.3	0	0	0	104	0	90
3065.3	0	0	0	96	0	105
3066.3	0	0	0	91	0	107
7606 blk	0	0	0	92	0	106
7607 ls2	93	99	97	87	94	110
3067.1 ms2	114	119	118	100	112	97
3067.3	0	0	0	72	0	123
3068.3	0	0	0	72	0	112
3069.3	0	0	0	81	0	109
7608 blk	0	0	0	83	0	114
3070.3	0	0	0	74	0	118
3071.3	0	0	0	71	0	119
3071.1 dup	0	0	0	78	0	114
3066.4ms2dup	92	96	95	80	90	115
7609 blk	0	0	0	85	0	115

ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 6

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
SPIKE RECOVERY	
993064	0.001
993064 spike (avg)	0.958
spike amount	0.98
%recovery	98%

RELATIVE STANDARD DEVIATION

991515s	0.958
991515sd	0.959
%rsd	0.0%



QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 7 - JUNE 1999

	Internal.SSurogate		PERCENT RECOVERIES										EPA METHOD 515			
	DBOB	DCAA	3,5-D	Dichlorprop	Pentachloro	2,4,5-T	Dinoseb	Dacthal	Dicamba	2,4-D	Silvex	2,4-DB	Bentazon	Picloran	Acifluorfen	
LAB FORTIFIED SAMPLES																
	3175	105	88	80	88	87	97	81	84	72						
	3176	97	105							99	103	97	96	101	106	102
LAB FORTIFIED BLANKS																
	7709	105	90	78	87	85	96	75	83	72						
	7711	102	131							96	107	94	92	96	99	97
NON-FORTIFIED SAMPLES																
	Average Average															
	3175	91	86													
	3176	105	76													
	3177	100	93													
	3178	103	83													
	3179	121	80													
	3180	84	98													
	3181	104	129													
	3182	95	81													
	3183	92	58													
	3179DUP	91	66													
BLANKS																
	Average Average															
	7710	104	89	0	0	0	0	0	0	0	0	0	0	0	0	
	7712	106	94	0	0	0	0	0	0	0	0	0	0	0	0	

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE VII TRIP 7 - JUNE 1999

EPA METHOD 515

DUPLICATE ANALYSIS

FIELD DUPLICATE - SURROGATE AREA COMPARISON

	3179	3179DUP	%RSD
SURR	178554	111616	14.28

MACHINE DUPLICATE - RECOVERY COMPARISON

	1ST RUN	2ND RUN	%RSD
3,5-D	90	91	0.37
Dichlorprop	87	87	0.00
Pentachloro	85	87	0.76
2,4,5-T	96	98	0.69
Dinoseb	75	80	2.17
Dacthal	83	84	0.40

METHOD 515 - PHASE VII TRIP7 -JUNE 1999

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	3,5-D	DCAA	DICHLORPROP	DBOB	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
24-Jun-99	7709 ls1	P7T7515.006	9.033	0.775	1.733	1	1.707	1.915	3.015	1.664
24-Jun-99	7709 ls1mdup	P7T7515.106	9.143	0.763	1.749	1	1.732	1.958	3.191	1.677
24-Jun-99	3175.8 ms1	P7T7515.007	8.756	0.801	1.765	1	1.736	1.935	3.239	1.686
24-Jun-99	3175.9	p7t7515.008	0	0.774	0	1	0	0	0	0
25-Jun-99	3176.9	p7t7515.009	0	0.681	0	1	0	0	0	0
25-Jun-99	3177.8	p7t7515.010	0	0.842	0	1	0	0	0	0
25-Jun-99	7710 blk	p7t7515.011	0	0.798	0	1	0	0	0	0
25-Jun-99	3178.8	p7t7515.014	0	0.751	0	1	0	0	0	0
25-Jun-99	3179.8	p7t7515.015	0	0.72	0	1	0	0	0	0
25-Jun-99	3180.8	p7t7515.016	0	0.88	0	1	0	0	0	0
25-Jun-99	7712 blk	p7t7515.017	0	0.851	0	1	0	0	0	0
25-Jun-99	3181.8	p7t7515.018	0	1.16	0	1	0	0	0	0
25-Jun-99	3182.8	p7t7515.019	0	0.728	0	1	0	0	0	0
25-Jun-99	3183.8	p7t7515.020	0	0.517	0	1	0	0	0	0
25-Jun-99	3179.9	p7t7515.021	0	0.592	0	1	0	0	0	0

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	DCAA	DICAMBA	2,4-D	DBOB	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUORFEN
25-Jun-99	7711 ls2	1.309	5.739	2.132	1	1.88	18.431	19.166	5.954	3.86
25-Jun-99	3176.8 ms2	1.051	5.928	2.05	1	1.941	19.253	20.119	6.368	4.063
24-Jun-99	3175.9	0.95	0	0	1	0	0	0	0	0
25-Jun-99	3176.9	0.836	0	0	1	0	0	0	0	0
25-Jun-99	3177.8	1.032	0	0	1	0	0	0	0	0
25-Jun-99	7710 blk	0.979	0	0	1	0	0	0	0	0
25-Jun-99	3178.8	0.921	0	0	1	0	0	0	0	0
25-Jun-99	3179.8	0.883	0	0	1	0	0	0	0	0
25-Jun-99	3180.8	1.08	0	0	1	0	0	0	0	0
25-Jun-99	7712 blk	1.044	0	0	1	0	0	0	0	0
25-Jun-99	3181.8	1.422	0	0	1	0	0	0	0	0
25-Jun-99	3182.8	0.893	0	0	1	0	0	0	0	0
25-Jun-99	3183.8	0.633	0	0	1	0	0	0.721	0	0
25-Jun-99	3179.9	0.726	0	0	1	0	0	0	0	0

METHOD 515 - PHASE VII TRIP7 -JUNE 1999

% RECOVERY OF COMPOUNDS - MIX 1 INTERNAL STANDARD

Sample Id	3,5-D	DCAA -Surr	DICHLORPROP	DBOB -IS	PENTACHLOROPHENOL	2,4,5-T	DINOSEB	DACTHAL
7709 ls1	90	78	87	105	85	96	75	83
7709 ls1mdup	91	76	87	104	87	98	80	84
3175.8 ms1	88	80	88	105	87	97	81	84
3175.9	0	77	0	94	0	0	0	0
3176.9	0	68	0	108	0	0	0	0
3177.8	0	84	0	103	0	0	0	0
7710 blk	0	80	0	107	0	0	0	0
3178.8	0	75	0	106	0	0	0	0
3179.8	0	72	0	124	0	0	0	0
3180.8	0	88	0	87	0	0	0	0
7712 blk	0	85	0	108	0	0	0	0
3181.8	0	116	0	107	0	0	0	0
3182.8	0	73	0	98	0	0	0	0
3183.8	0	52	0	95	0	0	0	0
3179.9	0	59	0	94	0	0	0	0

% RECOVERY OF COMPOUNDS - MIX 2 INTERNAL STANDARD

Sample Id	DCAA -Surr	DICAMBA	2,4-D	DBOB -IS	SILVEX	2,4-DB	BENTAZON	PICLORAM	ACIFLUROFEN
7711 ls2	131	96	107	102	94	92	96	99	97
3176.8 ms2	105	99	103	97	97	96	101	106	102
3175.9	95	0	0	89	0	0	0	0	0
3176.9	84	0	0	102	0	0	0	0	0
3177.8	103	0	0	97	0	0	0	0	0
7710 blk	98	0	0	101	0	0	0	0	0
3178.8	92	0	0	99	0	0	0	0	0
3179.8	88	0	0	117	0	0	0	0	0
3180.8	108	0	0	82	0	0	0	0	0
7712 blk	104	0	0	102	0	0	0	0	0
3181.8	142	0	0	100	0	0	0	0	0
3182.8	89	0	0	93	0	0	0	0	0
3183.8	63	0	0	89	0	0	4	0	0
3179.9	73	0	0	89	0	0	0	0	0

QUALITY CONTROL DATA FOR PESTICIDE MONITORING: PHASE 7 TRIP 7 - JUNE 1999

PERCENT RECOVERIES

EPA METHOD 507

LAB FORTIFIED SAMPLES

	Spike	Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos
JEFF #2R	mix 1	71	102	89	90	97	96

	Spike	Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar
DESHA #9	mix 4	72	102	74	86	93	93	93	96	98	95

LAB FORTIFIED BLANKS

	Spike	Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos
p7700	mix 1	78	104	89	91	97	97

	Spike	Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar
p7702	mix 4	78	107	86	94	100	102	102	107	103	106

NON-FORTIFIED SAMPLES

		Int. Std.	Surrogate
DESHA #9	p3175.2	84	100
DESHA #10	p3176.2	85	101
DESHA #11	p3177.2	96	102
DESHA #12	p3178.2	66	103
DESHA #13	p3179.2	96	101
ARK #1	p3180.2	78	100
JEFF #5	p3181.2	78	101
JEFF #6	p3182.2	81	98
JEFF #2R	p3183.5	80	101

METHOD 507

LAB BLANKS

mix 1		Int. Std.	Surrogate	Prometon	Ametryne	Phenamiphos	Tributylphos					
	p7701	83	103	0	0	0	0					
	p7703	77	103	0	0	0	0					
mix 2		Int. Std.	Surrogate	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid
	p7701	83	103	0	0	0	0	0	0	0	0	0
	p7703	77	101	0	0	0	0	0	0	0	0	0
mix 3		Int. Std.	Surrogate	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon		
	p7701	83	103	0	0	0	0	0	0	0		
	p7703	101	84	0	0	0	0	0	0	0		
mix 4		Int. Std.	Surrogate	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	Tetrachlorvinphos	Velpar	
	p7701	83	103	0	0	0	0	0	0	0	0	
	p7703	77	101	0	0	0	0	0	0	0	0	
mix 5		Int. Std.	Surrogate	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	Fenarimol		
	p7701	83	103	0	0	0	0	0	0	0		
	p7703	77	101	0	0	0	0	0	0	0		

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN	2ND RUN	%RSD
N/A	N/A	

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p3183.1	Duplicate p3183.3	%RSD
Nitroxylyne	0.706	0.707	0.05
Prometron	17.785	15.125	5.25
Ametryne	18.018	15.509	4.87
Phenamiphos	19.404	17.824	2.79
Tributylpjos	19.208	17.628	2.82
TPP	1	1	0.00

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

1ST RUN	2ND RUN	%RSD
N/A	N/A	

\* All internal standard and surrogate values calculated from mean RF value for mixes 1-5

METHOD 507 - Phase 7 Trip 7

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 1

Date	Sample Id	File Name	Nitroxylenes	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
10-Jul-99	7700 ls1	P7T6507.028	0.778	17.718	18.202	19.349	19.481	1
11-Jul-99	3183.1 ms1	P7T6507.029	0.706	17.785	18.018	19.404	19.208	1
11-Jul-99	3183.3ms1dup	P7T6507.046	0.707	15.125	15.509	17.824	17.628	1
11-Jul-99	7701 blk	p7t6507.030	0.829	0	0	0	0	1
11-Jul-99	3175.2	p7t6507.031	0.84	0	0	0	0	1
11-Jul-99	3176.2	p7t6507.034	0.846	0	0	0	0	1
11-Jul-99	3177.2	p7t6507.035	0.861	0	0	0	0	1
11-Jul-99	3178.2	p7t6507.036	0.66	0	0	0	0	1
11-Jul-99	7703 blk	p7t6507.039	0.774	0	0	0	0	1
11-Jul-99	3179.2	p7t6507.040	0.855	0	0	0	0	1
11-Jul-99	3180.2	p7t6507.041	0.783	0	0	0	0	1
11-Jul-99	3181.2	p7t6507.042	0.775	0	0	0	0	1
11-Jul-99	3182.2	p7t6507.043	0.809	0	0	0	0	1
11-Jul-99	3183.5	p7t6507.044	0.8	0	0	0	0	1
11-Jul-99	3175.3 sdup	p7t6507.045	0.615	0	0	0	0	1

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 2

Date	Sample Id	File Name	Nitroxylenes	EPTC	Phosdrin	Propfos	Atrazine	Propazine	Prometryne	Terbutyne	Triadimefon	Diphenamic	TT
11-Jul-99	7701 blk	p7t6507.030	0.829	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3175.2	p7t6507.031	0.84	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3176.2	p7t6507.034	0.846	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3177.2	p7t6507.035	0.861	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3178.2	p7t6507.036	0.66	0	0	0	0	0	0	0	0	0	0
11-Jul-99	7703 blk	p7t6507.039	0.774	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3179.2	p7t6507.040	0.855	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3180.2	p7t6507.041	0.783	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3181.2	p7t6507.042	0.775	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3182.2	p7t6507.043	0.809	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3183.5	p7t6507.044	0.8	0	0	0	0	0	0	0	0	0	0
11-Jul-99	3175.3 sdup	p7t6507.045	0.615	0	0	0	0	0	0	0	0	0	0



## METHOD 507 - PHASE 7 TRIP 7

## CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 3

Date	Sample Id	File Name	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
11-Jul-99	7701 blk	p7t6507.030	0.829	0	0	0	0	0	0	0	1
11-Jul-99	3175.2	p7t6507.031	0.84	0	0	0	0	0	0	0	1
11-Jul-99	3176.2	p7t6507.034	0.846	0	0	0	0	0	0	0	1
11-Jul-99	3177.2	p7t6507.035	0.861	0	0	0	0	0	0	0	1
11-Jul-99	3178.2	p7t6507.036	0.66	0	0	0	0	0	0	0	1
11-Jul-99	7703 blk	p7t6507.039	0.774	0	0	0	0	0	0	0	1
11-Jul-99	3179.2	p7t6507.040	0.855	0	0	0	0	0	0	0	1
11-Jul-99	3180.2	p7t6507.041	0.783	0	0	0	0	0	0	0	1
11-Jul-99	3181.2	p7t6507.042	0.775	0	0	0	0	0	0	0	1
11-Jul-99	3182.2	p7t6507.043	0.809	0	0	0	0	0	0	0	1
11-Jul-99	3183.5	p7t6507.044	0.8	0	0	0	0	0	0	0	1
11-Jul-99	3175.3 sdup	p7t6507.045	0.615	0	0	0	0	0	0	0	1

## CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 4

Date	Sample Id	File Name	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	rachlorvinpi	Velpar	TPP
11-Jul-99	7701 blk	p7t6507.030	0.829	0	0	0	0	0	0	0	0	1
11-Jul-99	3175.2	p7t6507.031	0.84	0	0	0	0	0	0	0	0	1
11-Jul-99	3176.2	p7t6507.034	0.846	0	0	0	0	0	0	0	0	1
11-Jul-99	3177.2	p7t6507.035	0.861	0	0	0	0	0	0	0	0	1
11-Jul-99	3178.2	p7t6507.036	0.66	0	1.419	0	0	0	0	0	0	1
11-Jul-99	7703 blk	p7t6507.039	0.774	0	0	0	0	0	0	0	0	1
11-Jul-99	3179.2	p7t6507.040	0.855	0	0	0	0	0	0	0	0	1
11-Jul-99	3180.2	p7t6507.041	0.783	0	0	0	0	0	0	0	0	1
11-Jul-99	3181.2	p7t6507.042	0.775	0	0.294	0	0	0	0	0	0	1
11-Jul-99	3182.2	p7t6507.043	0.809	0	0	0	0	0	0	0	0	1
11-Jul-99	3183.5	p7t6507.044	0.8	0	0	0	0	0	0	0	0	1
11-Jul-99	3175.3 sdup	p7t6507.045	0.615	0	0	0	0	0	0	0	0	1
11-Jul-99	3175.1 ms4	P7T6507.033	0.717	14.879	17.151	18.512	18.641	18.56	19.242	19.586	19.025	1
11-Jul-99	7702 ls4	P7T6507.032	0.784	17.185	18.856	20.049	20.386	20.442	21.372	20.585	21.192	1

METHOD 507 - PHASE 7 TRIP 7

CONCENTRATIONS OF THE COMPOUNDS RECOVERED OR DETECTED-MIX 5

Date	Sample Id	File Name	Nitroxylyene	Dichlorvos	Perbulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
11-Jul-99	7701 blk	p7t6507.030	0.829	0	0	0	0	0	0	1	0
11-Jul-99	3175.2	p7t6507.031	0.84	0	0	0	0	0	0	1	0
11-Jul-99	3176.2	p7t6507.034	0.846	0	0	0	0	0	0	1	0
11-Jul-99	3177.2	p7t6507.035	0.861	0	0	0	0	0	0	1	0
11-Jul-99	3178.2	p7t6507.036	0.66	0	0	0	0	0	0	1	0
11-Jul-99	7703 blk	p7t6507.039	0.774	0	0	0	0	0	0	1	0
11-Jul-99	3179.2	p7t6507.040	0.855	0	0	0	0	0	0	1	0
11-Jul-99	3180.2	p7t6507.041	0.783	0	0	0	0	0	0	1	0
11-Jul-99	3181.2	p7t6507.042	0.775	0	0	0	0	0	0	1	0
11-Jul-99	3182.2	p7t6507.043	0.809	0	0	0	0	0	0	1	0
11-Jul-99	3183.5	p7t6507.044	0.8	0	0	0	0	0	0	1	0
11-Jul-99	3175.3 sdup	p7t6507.045	0.615	0	0	0	0	0	0	1	0

## METHOD 507 - PHASE 7 TRIP 7

## PERCENT RECOVERIES MIX 1

File Name	Sample Id	Nitroxylyene	Prometon	Ametryne	Phenamiphos	Tributylphos	TPP
F7T6507.028	7700 ls1	78	89	91	97	97	104
P7T6507.029	3183.1 ms1	71	89	90	97	96	102
P7T6507.046	3183.3ms1dup	71	76	78	89	88	101
p7t6507.030	7701 blk	83	0	0	0	0	103
p7t6507.031	3175.2	84	0	0	0	0	101
p7t6507.034	3176.2	85	0	0	0	0	100
p7t6507.035	3177.2	86	0	0	0	0	101
p7t6507.036	3178.2	66	0	0	0	0	102
p7t6507.039	7703 blk	77	0	0	0	0	103
p7t6507.040	3179.2	86	0	0	0	0	101
p7t6507.041	3180.2	78	0	0	0	0	101
p7t6507.042	3181.2	78	0	0	0	0	100
p7t6507.043	3182.2	81	0	0	0	0	101
p7t6507.044	3183.5	80	0	0	0	0	98
p7t6507.045	3175.3 sdup	62	0	0	0	0	101

## PERCENT RECOVERIES MIX 2

File Name	Sample Id	Nitroxylyene	EPTC	Phosdrin	Prophos	Atrazine	Propazine	Prometryne	Terbutryne	Triadimefon	Diphenamid	TTF
p7t6507.030	7701 blk	83	0	0	0	0	0	0	0	0	0	103
p7t6507.031	3175.2	84	0	0	0	0	0	0	0	0	0	100
p7t6507.034	3176.2	85	0	0	0	0	0	0	0	0	0	101
p7t6507.035	3177.2	86	0	0	0	0	0	0	0	0	0	102
p7t6507.036	3178.2	66	0	0	0	0	0	0	0	0	0	103
p7t6507.039	7703 blk	77	0	0	0	0	0	0	0	0	0	101
p7t6507.040	3179.2	86	0	0	0	0	0	0	0	0	0	101
p7t6507.041	3180.2	78	0	0	0	0	0	0	0	0	0	100
p7t6507.042	3181.2	78	0	0	0	0	0	0	0	0	0	101
p7t6507.043	3182.2	81	0	0	0	0	0	0	0	0	0	98
p7t6507.044	3183.5	80	0	0	0	0	0	0	0	0	0	101
p7t6507.045	3175.3 sdup	62	0	0	0	0	0	0	0	0	0	97

METHOD 507 - Phase 7 Trip 7

PERCENT RECOVERIES MIX 3

File Name	Sample Id	Nitroxylyene	Vernolate	Metribuzin	Metolachlor	MGK 264	Butachlor	Carboxin	Norflurazon	TTP
p7t6507.030	7701 blk	83	0	0	0	0	0	0	0	103
p7t6507.031	3175.2	84	0	0	0	0	0	0	0	100
p7t6507.034	3176.2	85	0	0	0	0	0	0	0	101
p7t6507.035	3177.2	86	0	0	0	0	0	0	0	102
p7t6507.036	3178.2	66	0	0	0	0	0	0	0	103
p7t6507.039	7703 blk	77	0	0	0	0	0	0	0	101
p7t6507.040	3179.2	86	0	0	0	0	0	0	0	101
p7t6507.041	3180.2	78	0	0	0	0	0	0	0	100
p7t6507.042	3181.2	78	0	0	0	0	0	0	0	101
p7t6507.043	3182.2	81	0	0	0	0	0	0	0	98
p7t6507.044	3183.5	80	0	0	0	0	0	0	0	101
p7t6507.045	3175.3 sdup	62	0	0	0	0	0	0	0	97

PERCENT RECOVERIES MIX 4

File Name	Sample Id	Nitroxylyene	Butylate	Molinate	Chlorpropham	Atraton	Alachlor	Bromazil	trachlorvinpr	Velpar	TPP
p7t6507.030	7701 blk	83	0	0	0	0	0	0	0	0	103
p7t6507.031	3175.2	84	0	0	0	0	0	0	0	0	100
p7t6507.034	3176.2	85	0	0	0	0	0	0	0	0	101
p7t6507.035	3177.2	86	0	0	0	0	0	0	0	0	102
p7t6507.036	3178.2	66	0	7	0	0	0	0	0	0	103
p7t6507.039	7703 blk	77	0	0	0	0	0	0	0	0	101
p7t6507.040	3179.2	86	0	0	0	0	0	0	0	0	101
p7t6507.041	3180.2	78	0	0	0	0	0	0	0	0	100
p7t6507.042	3181.2	78	0	1	0	0	0	0	0	0	101
p7t6507.043	3182.2	81	0	0	0	0	0	0	0	0	98
p7t6507.044	3183.5	80	0	0	0	0	0	0	0	0	101
p7t6507.045	3175.3 sdup	62	0	0	0	0	0	0	0	0	97
P7T6507.033	3175.1 ms4	72	74	86	93	93	93	96	98	95	102
P7T6507.032	7702 ls4	78	86	94	100	102	102	107	103	106	107

## METHOD 507 - PHASE 7 TRIP 5 --JULY 1999

## PERCENT RECOVERIES MIX 5

File Name	Sample Id	Nitroxylene	Dichlorvos	Pebulate	Tebuthiuron	Simazine	Simetryne	Devrinol	TPP	Fenarimol
p7t6507.030	7701 blk	83	0	0	0	0	0	0	103	0
p7t6507.031	3175.2	84	0	0	0	0	0	0	100	0
p7t6507.034	3176.2	85	0	0	0	0	0	0	101	0
p7t6507.035	3177.2	86	0	0	0	0	0	0	102	0
p7t6507.036	3178.2	66	0	0	0	0	0	0	103	0
p7t6507.039	7703 blk	77	0	0	0	0	0	0	101	0
p7t6507.040	3179.2	86	0	0	0	0	0	0	101	0
p7t6507.041	3180.2	78	0	0	0	0	0	0	100	0
p7t6507.042	3181.2	78	0	0	0	0	0	0	101	0
p7t6507.043	3182.2	81	0	0	0	0	0	0	98	0
p7t6507.044	3183.5	80	0	0	0	0	0	0	101	0
p7t6507.045	3175.3 sdup	62	0	0	0	0	0	0	97	0

PERCENT RECOVERIES

METHOD NPS4

Phase 7-trip 7

Internal St. Surrogate  
 Ethylbenzene Carbazole Cyanazine Fluometuron Diuron Linuron Prophan Propanil Swep Barban

LAB FORTIFIED SAMPLES

DESHA #12	p3178.1	93	96	90	84	92	116				
DESHA #12	p3178.5	123	70					64	77	72	73

LAB FORTIFIED BLANKS

	p7704	97	91	102	101	104	101				
	p7718	119	96					94	98	96	93

NON-FORTIFIED SAMPLES

		(average)	(average)
DESHA #9	p3176.4	110	90
DESHA #10	p3178.3	101	100
DESHA #11	p3177.3	108	94
DESHA #12	p3178.3	110	90
DESHA #12	p3178.1	114	94
ARK #1	p3180.3	102	90
JEFF #5	p3181.3	110	88
JEFF #6	p3182.7	110	72
JEFF #2R	p3183.7	105	76

LAB BLANKS

	(average)	(average)								
P7706	106	91	0	0	0	0	0	0	0	0
P7707	106	81	0	0	0	0	0	0	0	0
P7708	105	81	0	0	0	0	0	0	0	0
p7714	111	84	0	0	0	0	0	0	0	0

DUPLICATE ANALYSIS

MATRIX SPIKE DUPLICATE - ANALYTE CONCENTRATION COMPARISON

Analyte	Sample p3178.5	Duplicate p3178.6dup	%RSD
Prophan	4.903	5.787	5.73
Propanil	1.167	1.397	8.16
Swep	5.376	6.312	5.49
Barban	5.857	6.594	5.23

MACHINE DUPLICATE - SURROGATE AREA COMPARISON

ST RUN p7718	2ND RUN p7713dup	%RSD
74060	74278	0.10

## METHOD NPS4 - PHASE VII TRIP 7

## CONCENTRATIONS RECOVERED OR DETECTED - MIX 1

Date	Sample Id	File Name	Cyanazine	Fluometuron	Diuron	Linuron	Carbazole	Ethylbenzene
19-Jun-99	7704 ls1	P7T7NPS4.007	6.651	2.079	1.043	3.155	0.905	1
19-Jun-99	3178.1 ms1	P7T7NPS4.008	5.861	1.724	0.915	3.589	0.657	1
19-Jun-99	3175.4	P7T7NPS4.009	0	0	0	0	0.775	1
20-Jun-99	3176.1 dup	P7T7NPS4.022	0	0	0	0	0.781	1
19-Jun-99	3176.3	P7T7NPS4.010	0	0	0	0	0.968	1
20-Jun-99	3177.3	P7T7NPS4.011	0	0	0	0	0.822	1
20-Jun-99	7705 bl	P7T7NPS4.012	0	0	0	0	0.887	1
25-Jun-99	3179.1	P7T7NPSB.010	0	0	0	0	0.8	1
20-Jun-99	3178.3	P7T7NPS4.020	0	0	0	0	0.778	1
20-Jun-99	3180.3	P7T7NPS4.016	0	0	0	0	0.777	1
20-Jun-99	7707 bl	P7T7NPS4.018	0	0	0	0	0.789	1
20-Jun-99	3181.3	P7T7NPS4.019	0	0	0	0	0.808	1
20-Jun-99	3176.1 dup	P7T7NPS4.022	0	0	0	0	0.781	1
20-Jun-99	7708 bl	P7T7NPS4.024	0	0	0	0	0.866	1
25-Jun-99	7714 blk	P7T7NPSB.011	0	0	0	0	0.8	1
25-Jun-99	3182.7	P7T7NPSB.013	0	0	0	0	0.689	1
25-Jun-99	3183.7	P7T7NPSB.014	0	0	0	0	0.731	1

## CONCENTRATIONS RECOVERED OR DETECTED - MIX2

Date	Sample Id	File Name	Propham	Propanil	Swep	Carbazole	Barbar	Ethylbenzene
25-Jun-99	3064.5	P7T7NPSB.009	0	0	0	0.873	0	1
19-Jun-99	3175.4	P7T7NPS4.009	0	0	0	0.813	0	1
20-Jun-99	3176.1 dup	P7T7NPS4.022	0	0	0	0.819	0	1
19-Jun-99	3176.3	P7T7NPS4.010	0	0	0	1.016	0	1
20-Jun-99	3177.3	P7T7NPS4.011	0	0	0	0.862	0	1
20-Jun-99	3178.3	P7T7NPS4.020	0	0	0	0.816	0	1
25-Jun-99	3179.1	P7T7NPSB.010	0	0	0	0.866	0	1
20-Jun-99	7705 bl	P7T7NPS4.012	0	0	0	0.931	0	1
20-Jun-99	3180.3	P7T7NPS4.016	0	0	0	0.815	0	1
20-Jun-99	3181.3	P7T7NPS4.019	0	0	0	0.847	0	1
20-Jun-99	7707 bl	P7T7NPS4.018	0	0	0	0.828	0	1
20-Jun-99	7708 bl	P7T7NPS4.024	0	0	0	0.908	0	1
24-Jun-99	7713 ls2	P7T7NPSB.006	7.224	1.483	7.195	0.961	7.213	1
24-Jun-99	7713 ls2mdup	P7T7NPSB.106	7.303	1.485	7.253	0.97	7.252	1
24-Jun-99	3178.5 ms2	P7T7NPSB.007	4.903	1.167	5.376	0.702	5.657	1
25-Jun-99	3178.6ms2dup	P7T7NPSB.012	5.797	1.397	6.312	0.827	6.594	1
25-Jun-99	7714 blk	P7T7NPSB.011	0	0	0	0.866	0	1
25-Jun-99	3182.7	P7T7NPSB.013	0	0	0	0.746	0	1
25-Jun-99	3183.7	P7T7NPSB.014	0	0	0	0.792	0	1

## METHOD NPS4 - PHASE VII TRIP 7

## % RECOVERY OF ANALYTES - MIX 1

SAMPLE ID	CYANAZINE	FLUOMETURON	DIUFON	LINURON	Surrogate	Internal Standard
					CARBAZOLE	ETHYLBENZENE
7704 ls1	102	101	104	101	91	97
3178.1 ms1	90	84	92	115	66	98
3175.4	0	0	0	0	78	101
3176.1 dup	0	0	0	0	78	92
3176.3	0	0	0	0	97	93
3177.3	0	0	0	0	82	98
7705 bl	0	0	0	0	89	98
3179.1	0	0	0	0	80	105
3178.3	0	0	0	0	78	102
3180.3	0	0	0	0	78	94
7707 bl	0	0	0	0	79	97
3181.3	0	0	0	0	81	102
3176.1 dup	0	0	0	0	78	92
7708 bl	0	0	0	0	87	95
7714 blk	0	0	0	0	80	103
3182.7	0	0	0	0	69	102
3183.7	0	0	0	0	73	97

## % RECOVERY OF ANALYTES - MIX 2

SAMPLE ID	PROPHAM	PROPANIL	SWEP	Surrogate	Internal Standard	
				CARBAZOLE	BARBAN	ETHYLBENZENE
3064.5	0	0	0	87	0	96
3175.4	0	0	0	81	0	118
3176.1 dup	0	0	0	82	0	107
3176.3	0	0	0	102	0	108
3177.3	0	0	0	86	0	114
3178.3	0	0	0	82	0	118
3179.1	0	0	0	87	0	122
7705 bl	0	0	0	93	0	114
3180.3	0	0	0	82	0	110
3181.3	0	0	0	85	0	118
7707 bl	0	0	0	83	0	113
7708 bl	0	0	0	91	0	111
7713 ls2	94	98	96	96	93	119
7713 ls2mdup	95	98	97	97	93	118
3178.5 ms2	64	77	72	70	73	123
3178.6ms2dup	75	93	84	83	85	117
7714 blk	0	0	0	87	0	119
3182.7	0	0	0	75	0	119
3183.7	0	0	0	79	0	113



ARKANSAS STATE PLANT BOARD  
NITRATE-NITROGEN  
PHASE VII-TRIP 7

QUALITY CONTROL DATA

Lab Number	NO3-N (mg/L)
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SPIKE RECOVERY

993175	0
993175 spike (avg)	0.94
spike amount	0.98
%recovery	96%

RELATIVE STANDARD DEVIATION

993175s	0.935
993175sd	0.945
%rsd	0.3%