

PROTOCOL FOR SAMPLING FENAMIPHOS AND ITS
METABOLITES IN WELL WATER

DRAFT

I. INTRODUCTION

Recent soil coring data has indicated that the nematicide fenamiphos (Nemacur) and its metabolites move rapidly through soils posing a threat to ground water. Data from pesticide use reports indicated use of fenamiphos in areas where residues of other pesticides had been found in well water. This study will be conducted to determine whether fenamiphos and/or its metabolites are present in well water in areas of past use.

II. OBJECTIVE

To determine whether fenamiphos or its metabolites are present in well water samples taken from areas where previous ground water contamination has been found.

III. PERSONNEL

John Troiano is responsible for study design and analysis of data. Don Weaver is responsible for coordination of field sampling and laboratory analyses of water samples.

IV. STUDY DESIGN

Well water samples will be drawn in areas where fenamiphos has been used and where data in the Well Inventory Data Base has indicated previous detections of other pesticide residues in well water. Data for three years (1983-1985) of fenamiphos use, a restricted material, has indicated two spatial patterns of use: Type I where large amounts were applied within a single section, and Type II where total use in sections was less but it was spread out among more sections. The sampling design will be different for each pattern of use.

Two sections exhibiting Type I area high use were observed in Kern County but data were lacking in the Well Inventory Data Base on previous sampling in the respective townships. However, since positive pesticide detections were observed in other areas of Kern county, well water samples will be taken from four wells in each of the high use sections.

Sections exhibiting Type II fenamiphos use with previous positive detections of other pesticide residues in well water were noted in three counties in the Central Valley. The pattern of well sampling in those areas will be to sample 2 wells in 5 sections in each of three counties. Table 1 indicates the areas and number of samples to be taken for each use pattern.

Well logs will be obtained to determine the presence of casings and seals. Cased and sealed wells will be sampled. Standard sampling procedures will be followed and chemical analyses will be conducted by a contracted laboratory using standard quality control procedures.

7/10/87

Table 1. Number of wells to be sampled for fenamiphos residues in each county.

Use Pattern and County	Township	Range	Section	Lbs Fenamiphos (1983-1985)	# of Samples	
<u>Type I</u>						
Kern	31S	30E	31	3,461	4	1
			20	1,141	4	2
	32S	28E	13	2,538	4	3
<u>Type II</u>						
Fresno	14S	22E	16	665	2	1
			1	617	2	2
			26	348	2	3
	15S	21E	16	304	2	4
			17	229	2	5
			6	180	2	6
San Joaquin	4N	7E	22	770	2	1
	3N	7E	15	405	2	2
	4N	4E	7	400	2	3
	3N	6E	27	336	2	4
	4N	7E	32	305	2	5
Tulare	16S	25E	29	690	2	1
			10	282	2	2
			7	212	2	3
	16S	24E	26	179	2	4
			5	89	2	5
			6		2	6
TOTAL WELLS					42	
Kern	13	30E	19		2	
	31S	30E	20		4	
	31S	30E	20		4	
	32S	28E	13		4	
	14S	22E	16		2	
	14S	22E	1		2	
	14S	22E	26		2	
	15S	21E	16		2	
	15S	21E	17		2	
	15S	21E	6		2	
	4N	7E	22		2	
	3N	7E	15		2	
	4N	4E	7		2	
	3N	6E	27		2	
	4N	7E	32		2	
	16S	25E	29		2	
	16S	24E	10		2	
	16S	24E	7		2	
	16S	24E	26		2	
	16S	24E	5		2	
	16S	24E	6		2	

John Bahadur (30) x 1000
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