SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

DIVISION OF DISEASE CONTROL AND
ENVIRONMENTAL HEALTH SERVICES

GROUNDWATER CONTAMINATION WITH ALDICARB

Part I A Brief Review and Status Report
Part II Laboratory Testing for Aldicarb
Part III Chronological Listing of Events

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GROUNDWATER CONTAMINATION WITH ALDICARB

Part I

A Brief Review and Status Report

January 2, 1980

GROUNDWATER CONTAMINATION WITH ALDICARB

Background

* On August 24, 1979, the United States Environmental Protection Agency informed the Suffolk County Department of Health Services that water samples collected from a few wells in eastern Suffolk County contained traces of a pesticide, aldicarb, and that additional water samples would be collected for confirmatory purposes. The Agency informed the County that initial testing had been performed by the Union Carbide Corporation in co-operation with Cornell's Long Island Horticultural Reference Laboratory.

* Aldicarb carbamate pesticide is manufactured by the Union Carbide Corporation under the trade name of Temik. Aldicarb controls insects, mites, and nematodes in plants, basically by systemic action. The pesticide has been found to be very effective against two pests which plagued potato farmers for years, the golden nematode and the Colorado potato beetle. It is estimated that over 20,000 acres of potatoes are grown in eastern Suffolk County, the majority of which are treated with aldicarb.

* When first registered for use on potatoes in 1974, EPA accepted a rate of three pounds of active aldicarb per acre for the control of the Colorado potato beetle and the suppression of the golden nematode.

* In 1975, New York State approved the use of five pounds per acre for the control of the golden nematode.

* In 1977, EPA amended the Temik federal label to allow the use of five pounds per acre in Long Island, New York only.

* In June 1978, New York State approved the use of post-emergence side-dress application of two pounds of active aldicarb per acre in addition to the five pounds applied at planting.

* EPA countermanded New York State's recommendation until it was conclusively shown that aldicarb residues in potatoes were less than the established tolerance of 1 ppm.

* These data were procured in 1978 and New York State reinstituted the post-emergence side-dress application in May, 1979.

Toxicity and Health Effects

* Aldicarb is a highly toxic, oxime carbamate pesticide. It acts by inhibiting acetylcholinesterase. Acute oral LD_{50}

to rats is 1 mg/kg. In spite of its high toxicity, accidental poisoning is rather infrequent. During 1977, 9 individuals who ate cucumbers contaminated with 8,000-10,000 ppb of aldicarb experienced one or more of the following symptoms: nausea, vomiting, blurred vision, dyspnea, perspiration, headache, and temporary paralysis of extremeties which lasted only 4-12 hours with no residual effects.

* A single dose human feeding study was conducted by the Union Carbide Corporation using three groups of four adult males. The three groups received different doses of aldicarb of 0.1, 0.05, and 0.025 mg/kg. Cholinergic symptoms appeared at the highest dose. At the other doses non-significant cholinesterase depression was noted. Six hours later, all cholinesterase levels returned back to normal.

* Toxicological studies have shown that aldicarb and its carbamate metabolites, aldicarb sulfoxide, and aldicarb sulfone are not carcinogenic, mutagenic, or teratogenic.

Recommended Acceptable Level

* Because of the scarcity of chronic toxicity studies of aldicarb, the World Health Organization and Food and Agricultural Organization did not adopt an acceptable daily intake. Based on available data, the highest no-adverse-effect level was found to be 0.1 mg/kg/day. Using an uncertainty factor of 100, an acceptable daily intake of 0.001 mg/kg/day was recommended.

* The recommended no-adverse-effect level in drinking water is 7 parts per billion. This level has been calculated under the following assumptions:

    1. Acceptable daily intake is 0.001 mg/kg/day.

    2. The average adult weighs 70 kgs.

    3. The average adult drinks 2 liters of water/day.

Monitoring Program

* On August 29, 1979 a meeting was held in the Department of Health Services and was attended by representatives of EPA Washington, the Regional EPA Office, New York State Department of Environmental Conservation, New York State Department of Health, United States Geological Survey, Suffolk County Cooperative Extension, and the Cornell University Research Farm.

The main issues which were discussed during the meeting included:

1. Monitoring survey, extent, and frequency.
2. Laboratory assistance.
3. The actionable level.
4. Role of the various agencies.

* In view of the scarcity of laboratories which are capable of testing for aldicarb, Suffolk County requested assistance from EPA, the State Health Department, and the Union Carbide Corporation. The County also indicated that emphasis will be placed on public water supplies.

* Union Carbide representatives indicated that their corporation would be able to provide immediate laboratory support. The following day several water samples were shipped to the Union Carbide laboratory.

* As of December 27, 1979, the Department of Health Services has collected 333 samples from 174 community, non-community, and private wells. The results of testing are shown in the following table:

Type	Number	Exceeding Guidelines	Showing Traces	Repeat Samples
Community Water Systems	45	2	7	16
Non-Community Water Systems	26	3	3	17
Private Wells	95	27	11	93
Others (irrigation wells, barn wells, etc.)	8	4	1	21
	174	36	22	147

* Laboratory support has been provided by the following agencies:

Union Carbide	204
EPA	120
New York State	9

* The wells which have exceeded the recommended levels are located in the following areas:

Community Water Supplies

Greenport Water District, Town of Southold
Long Springs Road, Town of Southampton

Non-Community Water Supplies

Brown's Hills Estates, Town of Southold
Sagaponack School, Town of Southampton
Sagg Store, Town of Southampton

Private Wells

Cutchogue, Town of Southold
Laurel, Town of Southold
Orient, Town of Southold
Southold, Town of Southold
Bridgehampton, Town of Southampton
Sagaponack, Town of Southampton
Watermill, Town of Southampton
Wainscott, Town of East Hampton

* Whenever a well exceeds the 7 ppb level, the homeowner is advised not to use the water for drinking purposes and to obtain an alternate supply. In the case of community water systems, a recommendation is made to the purveyor to suspend the use of the contaminated well and to switch to other uncontaminated ones.

Other Actions Taken by the Department

Apart from the monitoring program, the department took the following actions:

1. Asked the State Commissioner of Health to consider and take the necessary steps to reduce the allowable dose of aldicarb used per acre in Long Island.
2. Negotiated a joint research project with the Union Carbide Corporation for testing the efficacy of activated carbon filters in removing aldicarb in

a few selected homes. The project is currently in progress.

3. Participated actively with the staff of the University of South Carolina (who are contracted by EPA) in planning and conducting the health survey. This survey involved the interviewing of residents using contaminated and uncontaminated wells. The department, however, expressed certain reservations relating to the conclusions which could be drawn from the survey.

4. Requested additional laboratory assistance from the State Health Department and EPA for the detection of other commonly used pesticides in groundwater. Both requests are still under consideration.

Recommendations for Future Action

1. Since groundwater is our sole source of potable water, continuous monitoring of water quality should be given top priority in environmental health services. To this end, support of all levels of government, local, state, and federal, should be sought and procured.

   At present, the County Public Health Laboratory is heavily involved with the testing for synthetic organic contaminants and will not be able to absorb any additional load. It is urgently requested that the Environmental Protection Agency and the State Health Department provide adequate laboratory support for pesticide detection.

2. One of the most serious questions facing us, at present, relates to the validity of current recommended guidelines of 7 ppb and the interpretation of health effects resulting from the consumption of water containing these trace concentrations.

   A re-evaluation of the guidelines should be made in light of the present situation, the hydrology of Long Island, economy, farming, industry, and other pertinent determinants.

   The health effects (both pathological and clinical) resulting from the presence of traces of aldicarb in biological samples should be evaluated.

3. The responsibility of drinking water quality rests with the Suffolk County Department of Health Services as agents of the State Department of Health. It, thus, stands to reason that all activities in this respect, whether state or federal, should be conducted in concert and

with the knowledge of the County Health Department.

To oversee all such activities, it is strongly recommended that a committee be formed of top level representatives from the State Health Department, the State Department of Environmental Conservation, the Regional EPA office, EPA Washington, the Cooperative Extension Service, and the Cornell University Research team with the Suffolk County Health Department as the lead agency.

The function of this committee would be to review ongoing activities, to coordinate efforts of the various agencies, to improve lines of communication, and to make recommendations.

GROUNDWATER CONTAMINATION WITH ALDICARB

Part II

Laboratory Testing for Aldicarb

Community Water Systems
Non-Community Water Systems
Private Wells

January 2, 1980

ALDICARB SURVEY

COMMUNITY WATER SYSTEMS

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Greenport W.D.				
Village of Greenport				
Southold				
Well #3	40'	9/13/79	N.D.	EPA
Well #5	60'	8/30/79	N.D.	U.C.
Well #6-1	97'	8/30/79	12	U.C.
		9/4/79	12	U.C.
		9/18/79	7.8	EPA
		9/18/79	2	U.C.
		9/18/79	8.4	N.Y.S.
		10/15/79	6	U.C.
		11/15/79	6	U.C.
Well #6-2	82'	8/30/79	6	U.C.
		9/4/79	6	U.C.
		11/15/79	1	U.C.
Well #4-6	80'	9/4/79	2	U.C.
Well #4-7	80'	9/4/79	1	U.C.
Well #4-8	80'	9/4/79	N.D.	U.C.
Distribution		9/4/79	5	U.C.
Test Well		11/15/79	N.D.	U.C.
Bridgehampton W.D.				
Southampton				
Well #3	110'	9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Well #4	150'	8/30/79	N.D.	U.C.

COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Captain Kidd W.C. Southold				
Well #2	101'	9/4/79	N.D.	U.C.
Reeves Beach W.C. Riverhead				
Well #2	165'	8/30/79	N.D.	U.C.
Suffolk County Water Authority				
Oakview Highway East Hampton				
Well #1	162'	9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Well #2	466'	9/18/79	N.D.	EPA
Spring Close Hwy. East Hampton				
Well #1	124'	9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Long Springs Rd. Southampton				
Well #1	87'	9/4/79	3	U.C.
Well #2	100'	8/30/79	6	U.C.
		9/4/79	6	U.C.
		9/18/79	4.1	EPA
		9/18/79	2	U.C.
		9/18/79	6.1	N.Y.S.
		10/15/79	3	U.C.

COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Long Springs Rd. Southampton (cont'd)				
Well #3	103'	9/4/79	2	U.C.
Well #4	110'	8/30/79	1	U.C.
Well #5	287'	8/30/79	N.D.	U.C.
West Prospect Southampton				
Well #1	160'	9/18/79	2	EPA
Distribution			3	EPA
Spinney Rd. Southampton				
Well #1	118'	9/14/79	N.D.	U.C.
Well #2	161'	8/30/79	N.D.	U.C.
Moriches-Riverhead Rd. Brookhaven				
Well #1 & Well #2	242' 297'	9/20/79	N.D.	EPA
Bailey Road Brookhaven				
Well #1 & Well #2	143' 137'	9/20/79	N.D.	EPA
Roanoke W.C. Riverhead				
Well #1	162'	8/30/79	N.D.	U.C.

COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
North Shore W.C. Brookhaven				
Well #1	160'	9/20/79	N.D.	EPA
Shorewood W.C. Brookhaven				
Well #1	186'	9/20/79	N.D.	EPA
Well #2	175'	9/20/79	N.D.	EPA
Well #3	97'	9/20/79	N.D.	EPA
Well #4	140'	9/20/79	N.D.	EPA
Riverhead W.C. Riverhead				
Well #1	105'	8/2/79	N.D.	U.C.
Well #2	140'	9/20/79	N.D.	EPA
Well #3	125'	9/20/79	N.D.	EPA
Well #4-2	340'	8/30/79	N.D.	U.C.
Distribution (2)		8/30/79	N.D.	U.C.
Ramble Wood Mobile Home Park Riverhead				
Well #1	95'	9/13/79	N.D.	EPA
Rollin Mobile Home Park Riverhead				
Well #1		9/13/79	N.D.	EPA

COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Thurm's Mobile Home Park Riverhead				
Well #1	130'	9/13/79	N.D.	EPA
Well #2	130'	9/13/79	N.D.	EPA
Aquebogue Mobile Home Park Riverhead				
Well #1 & #2	90'	9/13/79	N.D.	EPA
Well #3	112'	9/13/79	N.D.	EPA
Well #4	212'	9/13/79	N.D.	EPA
East Quogue Mobile Home Park Southampton				
Well #1		9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Well #2		9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Oak Park Mobile Home Park Riverhead		9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Oakland Ridge Mobile Home Park Riverhead		9/18/79	N.D.	EPA

ALDICARB SURVEY

NON-COMMUNITY WATER SYSTEMS

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Browns Hills Estates Southold				
Well	50'	8/30/79	11	U.C.
		9/18/79	26	EPA
		9/18/79	11	U.C.
		9/18/79	11.5	N.Y.S.
		11/15/79	15	U.C.
SCHD Test Well		11/15/79	N.D.	EPA
		11/15/79	N.D.	U.C.
Baiting Hollow Southold				
Well	113'	9/20/79	N.D.	EPA
Hulse Farms Riverhead				
Well	269'	9/13/79	N.D.	EPA
Oakwood on Sound Riverhead				
Well #1		9/13/79	N.D.	EPA
Well #2		9/13/79	N.D.	EPA
Well #3		9/13/79	N.D.	EPA
Well #4		9/13/79	N.D.	EPA
Woodcliff Park Riverhead				
Well #1 & Well #2	110' 100'	9/20/79	N.D.	EPA

NON-COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Aquebogue School Riverhead				
Well #1		9/13/79	N.D.	EPA
Wainscott School Southampton				
Well #1		9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
		9/18/79	<1	N.Y.S.
Sagaponack School Southampton				
Well #1		9/18/79	11.1	EPA
		9/18/79	2	U.C.
		9/18/79	6.5	N.Y.S.
		11/15/79	6	U.C.
South Manor School Brookhaven				
Well #1		9/13/79	N.D.	EPA
		9/13/79	N.D.	U.C.
Sacred Heart School Southold				
Well #1		9/18/79	N.D.	EPA
Southaven School Brookhaven				
Well #1		9/20/79	N.D.	EPA

NON-COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Hampton Day School Southampton				
Well #1		9/20/79	3.5	EPA
Oysterponds Elem. School Southold				
Well #1		9/18/79	N.D.	EPA
Peconic Lane School Southold				
Well #1		9/18/79 11/15/79	5.7 N.D.	EPA U.C.
Mattituck School Southold				
Well #1	30'	9/13/79	N.D.	EPA
Well #2	30'	9/13/79	N.D.	EPA
Well #3	78'	9/13/79	N.D.	EPA
Well #4	80'	9/13/79	N.D.	EPA
Cutchogue School Southold				
Well #1		9/18/79	N.D.	EPA
E. Cutchogue School Southold				
Well #1	35'	9/18/79 9/18/79	2.9 <1	EPA N.Y.S.

NON-COMMUNITY WATER SYSTEMS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Laurel School Riverhead				
Well #1		9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
Riley Ave. School Riverhead				
Well #1	115'	9/18/79	N.D.	EPA
		9/18/79	N.D.	U.C.
		9/18/79	<1	N.Y.S.
Sagaponack Southampton				
Sagg Store		11/7/79	12	EPA

ALDICARB SURVEY

PRIVATE WELLS

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Bridgehampton / Southampton				
A. Wesnofski		8/27/79	N.D.	EPA
		8/27/79	N.D.	U.C.
T. Tiska		8/27/79	N.D.	EPA
		8/27/79	2	U.C.
P. Babinski		8/27/79	15	EPA
		8/27/79	18	U.C.
		9/4/79	4	U.C.
		9/25/79	5	U.C.
		10/15/79	8	U.C.
		11/15/79	10	U.C.
E. Zebroski		9/20/79	N.D.	EPA
N. Goodman		12/8/79	N.D.	U.C.
Cutchogue / Southold				
A. Zukoski	97'	10/15/79	2	U.C.
		11/15/79	5	U.C.
Flemming		10/25/79	N.D.	EPA
		11/15/79	N.D.	EPA
W. Crump		10/31/79	13	EPA
A. Cybulski		11/7/79	N.D.	EPA
B. Horton		11/7/79	N.D.	EPA
M. Finnican		12/11/79	N.D.	U.C.
A. Simon		12/11/79	N.D.	U.C.
E. Simon		12/11/79	N.D.	U.C.
M. Brooks		12/11/79	N.D.	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Jamesport Riverhead				
Jamesport Manor		9/20/79	N.D.	EPA
		9/20/79	N.D.	U.C.
Laurel Southold				
R. Miller		10/31/79	N.D.	EPA
Young		11/15/79	10	EPA
Mattituck Southold				
Jacoby		10/25/79	N.D.	EPA
L. Russell		10/25/79	N.D.	EPA
Orient Southold				
H. Demarest		8/2/79	N.D.	U.C.
		8/23/79	N.D.	U.C.
		9/8/79	N.D.	EPA
Demarest Barn		8/2/79	N.D.	U.C.
		8/23/79	2,3	U.C.
		9/8/79	N.D.	EPA
C. Demarest		9/8/79	<1	EPA
L. Demarest		9/8/79	<1	EPA
F. Terry, Jr.		9/13/79	25	EPA
		11/15/79	12	U.C.
F. Terry, Sr.		11/15/79	14	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Orient Southold (cont'd)				
M. Trent		9/18/79 9/18/79	N.D. <1	EPA
C. Baker		10/25/79	N.D.	EPA
R. Tabor		10/25/79	N.D.	EPA
R. Douglass		10/25/79	12	EPA
Kelemen		10/25/79	20	EPA
E. Latham		10/31/79	N.D.	EPA
R. Pluschan Old well		11/7/79	180	EPA
New well		12/8/79	400	U.C.
W. Rose		11/15/79	N.D.	U.C.
J. Burton		12/11/79	N.D.	U.C.
Riverhead Riverhead				
C. Wulfurst (Irrigation Well)		8/27/79 8/27/79	N.D. N.D.	U.C. EPA
C. Wulfurst (Home well)		8/27/79 8/27/79	1 N.D.	U.C. EPA
F. Lewin		8/27/79 8/27/79 11/15/79	5 4 3	U.C. EPA U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
L.I. Horticultural Sta. Riverhead				
Irrigation Well	120'	8/2/79	10,9	U.C.
		10/15/79	12	U.C.
		11/15/79	15	U.C.
Potable Well	90	8/23/79	N.D.	U.C.
		9/25/79	N.D.	U.C.
		10/15/79	N.D.	U.C.
Distribution		10/15/79	N.D.	U.C.
Sagaponack Southampton				
C. Foster		8/27/79	1	U.C.
		8/27/79	N.D.	EPA
Roesel		9/18/79	5.9	EPA
S. Lord		10/31/79	10	EPA
D. Wiggins		10/31/79	N.D.	EPA
H. Barbour		10/31/79	N.D.	EPA
R. Conrad		11/7/79	N.D.	EPA
Spellman		12/8/79	7	U.C.
Dash		12/8/79	N.D.	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Southampton Southampton				
P. Downs		8/27/79	N.D.	U.C.
		8/27/79	N.D.	EPA
J. Stachecki		8/27/79	N.D.	U.C.
		8/27/79	N.D.	EPA
F. & J. Stachecki (Barn)		8/27/79	11	U.C.
		8/27/79	13	EPA
T. White		12/11/79	N.D.	U.C.
A. Burke		12/11/79	N.D.	U.C.
Southold Southold				
Dickerson Barn Well		8/2/79	180,140	U.C.
		8/23/79	430,380	U.C.
(Drainage from rotted potatoes, 30 ppb - 8/27/79 U.C. Lab.)		8/25/79	81	U.C.
		8/27/79	390	U.C.
		8/27/79	493	EPA
		9/5/79	360	U.C.
(Scraping from barn well, N.D. - 8/27/79, U.C. Lab.)		9/24/79	150	U.C.
		10/15/79	94	U.C.
		11/15/79	199	U.C.
		12/8/79	194	U.C.
C. Dickerson		8/2/79	80	U.C.
		8/23/79	50	U.C.
(Bottled water from C. Dickerson home (Bonny Brook), N.D. - 11/15/79, EPA Lab.)		8/25/79	6.2	U.C.
		8/27/79	94	U.C.
		8/27/79	53	EPA
		9/5/79	24	U.C.
		9/24/79	44	U.C.
		10/15/79	40	U.C.
		11/15/79	52	U.C.
		12/8/79	40	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Southold				
Southold (cont'd)				
M. Dickerson		8/27/79	51	U.C.
		8/27/79	86	EPA
		9/5/79	9	U.C.
		9/24/79	14	U.C.
		10/15/79	31	U.C.
		11/15/79	81	U.C.
		12/8/79	91	U.C.
Mulhaney-O'Boyle		8/27/79	13	U.C.
		8/27/79	14	EPA
		9/5/79	15	U.C.
		9/24/79	4	U.C.
		10/15/79	8	U.C.
		11/15/79	20	U.C.
		12/8/79	18	U.C.
J. Dickerson		9/24/79	N.D.	U.C.
		10/15/79	N.D.	U.C.
		11/15/79	N.D.	U.C.
Ward		8/27/79	73	U.C.
		8/27/79	65	EPA
		9/5/79	73	U.C.
		9/18/79	74	EPA
		9/18/79	54	N.Y.S.
		9/24/79	19	U.C.
		10/15/79	32	U.C.
		11/15/79	62	U.C.
		12/8/79	76	U.C.
Van Meter		8/27/79	6	U.C.
		8/27/79	6	EPA
		9/24/79	2	U.C.
		10/15/79	5	U.C.
		11/15/79	7	U.C.
Donlon		9/24/79	N.D.	U.C.
Wilinski		9/24/79	N.D.	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Southold				
Southold (cont'd)				
Edwards		9/24/79	N.D.	U.C.
Brown		10/15/79	N.D.	U.C.
Winter		10/15/79	N.D.	U.C.
G. Michel		10/25/79	N.D.	EPA
C. Loucka		10/31/79	N.D.	EPA
R. Olsen		10/31/79	N.D.	EPA
P. Murray		11/7/79	N.D.	EPA
E. Blake		10/25/79	21	EPA
Reichert		12/8/79	1	U.C.
Storm		12/8/79	131	U.C.
D. Corazzini		12/11/79	N.D.	U.C.
W. Wurtz		12/11/79	N.D.	U.C.
Harman & Moso		12/11/79	N.D.	U.C.
Wainscott				
Southampton				
W. Babinski		8/3/79	5	U.C.
		8/23/79	7,6	U.C.
		8/27/79	<1	EPA
		9/25/79	3	U.C.
		10/15/79	4	U.C.
		11/15/79	7	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Wainscott Southampton (cont'd)				
H. Meyer		8/3/79	10	U.C.
		8/23/79	9,8	U.C.
		8/27/79	<1	EPA
		9/5/79	2	U.C.
		9/25/79	4	U.C.
		10/15/79	5	U.C.
		11/15/79	11	U.C.
B. Meyer	50'	9/25/79	N.D.	U.C.
Wainscott Assoc. (Pitcher Pump)		8/27/79	68	EPA
		8/27/79	40	U.C.
		9/25/79	12	U.C.
		10/15/79	18	U.C.
		11/15/79	20	EPA
		11/15/79	41	U.C.
Hutton		9/20/79	22	EPA
		9/25/79	9	U.C.
		10/15/79	52	U.C.
Rensen (Bungalow)	20'	9/25/79	N.D.	U.C.
B. Draper	60'	10/15/79	3	U.C.
		11/15/79	4	U.C.
D. Strong		10/31/79	10	U.C.
H. Hedges		10/31/79	N.D.	U.C.
J. Torrey		11/7/79	N.D.	EPA
T. Noble		11/7/79	N.D.	EPA
M. Elliott		11/7/79	30	EPA
Harvey		12/8/79	16	U.C.
Kincaide		12/8/79	N.D.	U.C.

PRIVATE WELLS
(Continued)

Location	Depth of Well	Date of Sample	Result ppb	Laboratory
Watermill Southampton				
Halsey Barn Well		8/3/79	8,9	U.C.
		8/23/79	12,13	U.C.
		8/27/79	<1	EPA
		9/5/79	3	U.C.
		9/25/79	13	U.C.
		10/15/79	9	U.C.
		11/15/79	13	U.C.
J. Halsey		8/3/79	N.D.	U.C.
		8/23/79	2	U.C.
		8/27/79	N.D.	EPA
		9/25/79	N.D.	U.C.
		10/15/79	N.D.	U.C.
		11/15/79	N.D.	U.C.
C. Halsey		8/27/79	N.D.	EPA
		8/27/79	N.D.	U.C.
Corwith		8/27/79	N.D.	EPA
		8/27/79	N.D.	U.C.
E. Halsey		8/3/79	4	U.C.
		8/23/79	3,4	U.C.
		8/27/79	N.D.	EPA
		9/25/79	N.D.	U.C.
		10/15/79	2	U.C.
		11/15/79	4	U.C.
R. Hoeflich		12/11/79	21	U.C.

GROUNDWATER CONTAMINATION WITH ALDICARB PART III

CHRONOLOGICAL LISTING OF EVENTS

August 24, 1979

First notification by EPA of the detection of aldicarb in water.

August 29, 1979

A meeting to discuss the problem was held at the Suffolk County Department of Health Services office in Hauppauge with representatives of Union Carbide, United States Environmental Protection Agency, New York State Department of Environmental Conservation, New York State Health Department, United States Geological Service, Cornell University and the Suffolk County Cooperative Extension.

August 30, 1979

Water samples were collected from private and public water supplies by Suffolk County Department of Health Services staff and forwarded to Union Carbide Laboratory for analysis.

August 31, 1979

Letters were sent by the Department to individuals whose waters exceeded the recommended 7 ppb limit recommending that the water not be used for drinking purposes. Seven private home wells and two barnyard wells exceeded the limit.

A meeting was held with representatives of Cornell University, New York State Department of Environmental Conservation, United States Geological Survey and Intera Environmental Consultants to discuss a program to determine the fate of aldicarb in the groundwater.

Informed the Greenport Water District to restrict the use of Well 6-1 since 12 ppb of aldicarb were detected. The Suffolk County Water Authority was requested to put Long Springs Road Well #2 on last call since the aldicarb was near the allowable limit. The Brown's Hills Estates well also was above the recommended limit.

September 4, 1979

Wainscott Association informed not to use well at Georgica Club.

September 5, 1979

Water samples collected and shipped to Union Carbide laboratories.

September 18-20, 1979

Additional samples collected and forwarded to EPA, New York State Health Department, USGS and Union Carbide laboratories.

October 4, 1979

Results of analyses received, two home wells found to exceed the guideline. The homes were located in Georgica Association and Main Road, Orient.

October 5, 1979

A meeting was held at the Suffolk County Cooperative Extension office with Union Carbide, federal and state agencies.

October 9, 1979

Informed representative of Sagaponack School not to use the water supply since the concentration was near limit.

Urine samples collected from individuals with aldicarb contaminated wells and forwarded to the University of Iowa for analysis.

October 15, 1979

Water samples collected and forwarded to Union Carbide laboratories for aldicarb detection.

Samples collected and forwarded to University of South Carolina for analysis of Furadan and Dinoseb.

October 22, 1979

Received information that the FMC Corporation had sampled private wells for Furadan. Concentrations up to 52 ppb were detected.

October 25, 1979

Results from Medical University confirmed the presence of Furadan. The wells affected also contained aldicarb above the recommended limit. Since the Suffolk County Water Authority Long Springs Road WEll #2 contained Furadan, a request was made to restrict the use of the well.

Samples collected and forwarded to EPA lab for analysis of aldicarb.

October 29, 1979

At the request of EPA Regional Office, a list of agricultural pesticides was prepared and a request made that capability be provided to analyze for these pesticides on a priority basis.

October 31, 1979

Additional water samples collected and forwarded to EPA Laboratory for analysis of aldicarb.

November 2, 1979

Received preliminary results from University of South Carolina indicating that two wells had small quantities of Dinoseb.

Also received preliminary results that several individuals had concentrations of aldicarb in urine.

November 5, 1979

Results indicate three additional home supply wells exceed aldicarb standard. Homes located on Main Road and King Street, Orient; and Whitehouse Road, Southold.

November 7, 1979

Samples collected and forwarded to EPA laboratory for analysis of aldicarb.

November 13, 1979

Additional urine samples collected and forwarded to the University of Iowa for analysis of aldicarb.

November 15, 1979

Samples collected and forwarded to EPA laboratory for analysis of aldicarb. Samples also sent to Union Carbide laboratory for aldicarb analysis.

November 16, 1979

Results indicate that three home wells exceed the standard for aldicarb. Homes located on Town Line Road, Wainscott; Parsonage Lane, Sagaponack; and North Road, Cutchogue.

November 19, 1979

Letter sent to EPA Regional Office requesting additional laboratory assistance for aldicarb detection. At this time, the Suffolk County Department of Health Services had no further commitment for laboratory support.

Results indicate that two more private wells exceeded the standard. Homes on Narrow River Road, Orient; and Main Street, Wainscott.

A store on Main Street, Sagaponack exceeded Aldicarb limit.

November 21, 1979

Request sent to New York State Health Department Regional Office requesting laboratory assistance to perform Aldicarb analysis.

November 26, 1979

Meeting held with representatives of Union Carbide to discuss a research project to test the efficacy of carbon filters for removal of aldicarb. Union Carbide also agreed to provide additional laboratory support.

November 27, 1979

Letters sent to Dr. McGrath (USEPA) and Dr. Axelrod requesting additional laboratory support.

November 28, 1979

Received information that Chevron Corporation had collected water samples for analysis of Difolatan, Monitor and Paraquat.

December 3, 1979

Request made to Union Carbide to provide laboratory support to analyze for Carbaryl (Sevin).

December 4, 1979

Additional water samples collected and shipped to the Union Carbide laboratory for aldicarb detection.

December 5, 1979

Meeting was held at Suffolk County Cooperative Extension office in Riverhead to discuss status of aldicarb investigation with representatives of EPA, the State Health Department, State Department of Agriculture, Cornell University and the Suffolk County Department of Health Services.

At the meeting, the Department raised the issue of reducing the dose of aldicarb used per acre. Representatives of the various agencies indicated that this could be done without reducing its efficacy.

The same day the Department of Health Services requested that the State Commissioner of Health consider such a measure and to take the necessary steps with the agencies involved.

December 6, 1979

Results received indicated that one private well in Orient exceeds recommended standard.