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**AN  
EPIDEMIOLOGIC REPORT  
ON  
DRINKING WATER  
AND FLUORIDATION**



**Environmental Health Service**

Jim Florio  
Governor

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Bruce Siegel, M.D., M.P.H.  
Acting State Commissioner of Health

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**November 1992**



State of New Jersey  
DEPARTMENT OF HEALTH

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November 30, 1992

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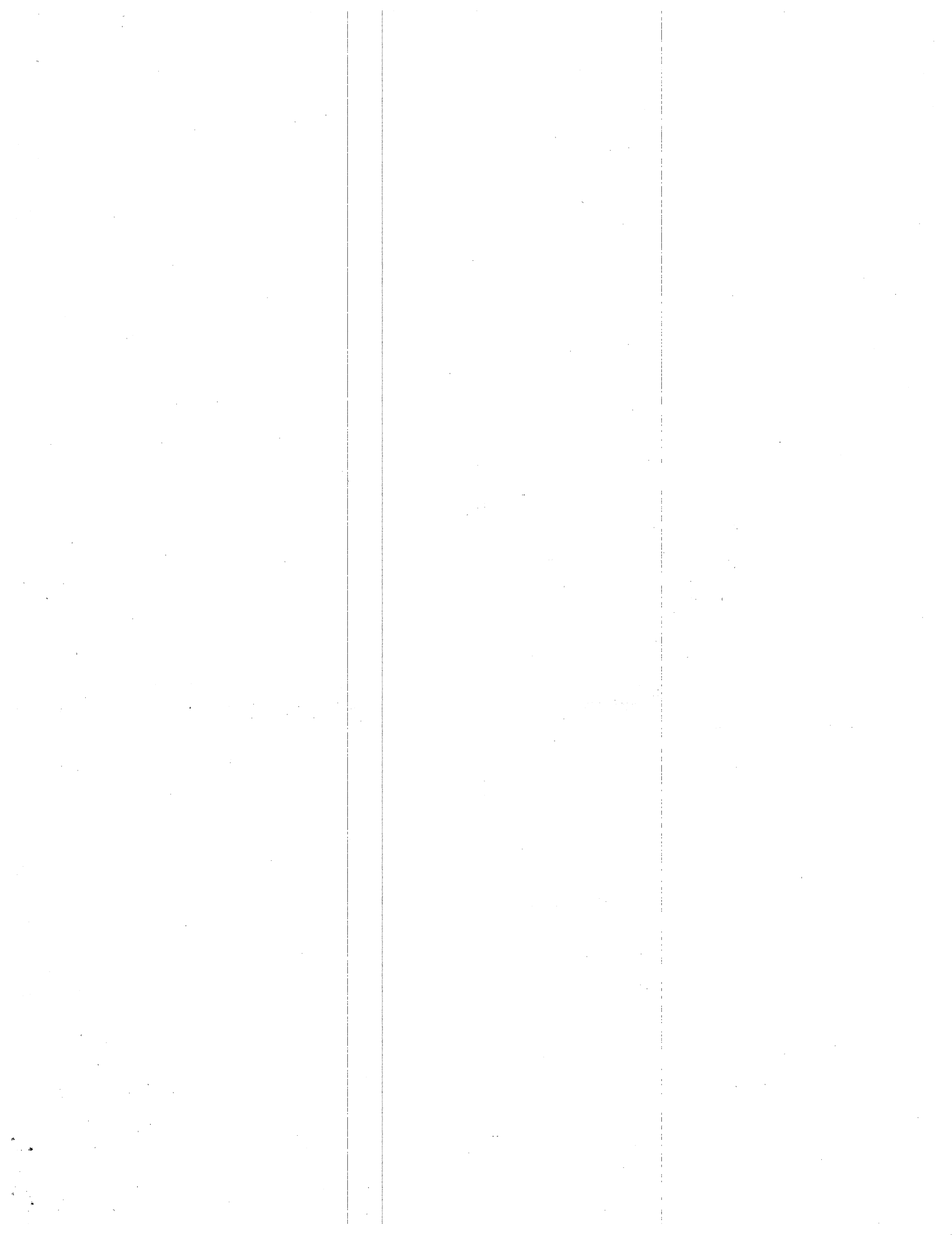
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William E. Parkin, D.V.M., Dr.P.H.  
Assistant Commissioner  
Division of Epidemiology,  
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## EXECUTIVE SUMMARY

It is well known that fluoride provides important public health benefits by effectively preventing dental caries in children. The Public Health Service (1991) endorses artificial fluoridation of drinking water at a concentration of 0.7-1.2 milligrams of fluoride per liter of water (or parts per million) as the optimally beneficial level for preventing dental caries. The U.S. Environmental Protection Agency (USEPA) allows up to 2 parts per million for artificial fluoridation and up to 4 parts per million for naturally-occurring fluoride (National Primary Drinking Water Regulations, 40 CFR 141.11 and 143.3). Other potential sources of fluoride ingestion include food, vitamins, and swallowed toothpaste.

Recently, a national study of drinking water fluoridation at the county level found a significant association with osteosarcoma incidence among males under 20 years of age (Hoover et al., 1991). However, the meaning of the association was questioned by the authors because of the absence of a linear trend of association with the duration of time for which the water supplies were fluoridated. Furthermore, the simple study design used did not have individual information on the average amount of water ingested daily, use of dental fluoride supplements, long term residence, other potentially confounding (or causal) exposures, or genetic involvement.

As a follow-up to the study by Hoover et al., a small study of similar design was initiated by the New Jersey Department of Health to compare drinking water fluoridation at the municipal level with the municipal residence of osteosarcoma cases at the time of diagnosis. No interviews were conducted and data on individual residential history, average amount of water ingested, use of dental fluoride supplements, exposure to other carcinogens and familial cancer history were not available. In addition, the total number

of cases was small. Therefore, observations should be interpreted cautiously because: 1) exposure misclassification could lead to under- or overestimation of effects, 2) unmeasured confounding by other potential causes of osteosarcomas could introduce bias leading to under- or overestimation of effects of exposure, and 3) an observed association could be due to chance.

Osteosarcoma incidence between 1979 and 1987 was compared by ecologic epidemiology methods to water supply fluoridation in seven counties in central New Jersey. Twelve cases were diagnosed among males under age 20 in fluoridated municipalities vs eight cases in non-fluoridated municipalities. The rate ratio of incidence in fluoridated vs non-fluoridated municipalities was 3.4 with a 95% statistical confidence interval (95%CI) between 1.8 and 6.0. All twelve cases in fluoridated municipalities resided in a three county area with the greatest prevalence of fluoridation. The rate ratio of incidence in fluoridated vs non-fluoridated municipalities in the three county area was 5.1 (95%CI 2.7-9.0). Among 10-19 year old males in those three counties, the rate ratio was 6.9 (95%CI 3.3-13). No other age/sex groups exhibited significant association with fluoridation.

Because of the limitations of the study design and the small numbers of cases that occurred, this analysis does not imply a causal connection between fluoridation and osteosarcoma. From a public health perspective, the findings are not sufficient to recommend that fluoridation of water supplies be halted, but do support the importance of investigating the possible link between osteosarcoma and overall ingestion of fluoride. In addition, it is recommended that dentists identify whether children reside in fluoridated communities and appropriately advise on fluoride supplementation.

## INTRODUCTION

Osteosarcoma is the most common primary malignant tumor of the bone and is one of the principal cancers of childhood, although it is rare (2.9 per million average annual overall incidence rate in New Jersey) and only represents 0.2% of all primary cancers (Malawer et al., 1989). Under age 20, it affects males more than females.

Other than ingestion of certain radioisotopes, like radium-226 and -228, or exposure to high doses of x-rays (reviewed in National Research Council, 1988, 1990), there is no known cause of osteosarcoma.

Etiologies may vary in different age groups. For instance, increased osteosarcoma incidence around puberty may be linked to rapid bone growth (Price, 1958; Glass and Fraumeni, 1970; Larsson and Lorentzon, 1974; Polednak et al., 1984). Among older adults, Paget's disease is associated with osteosarcoma incidence (Polednak et al., 1984).

Several other risk factors have been proposed. Possible viral involvement has been noted in laboratory animals (Finkel, 1975), but not among humans (Operskalski et al., 1987). In addition, a small number of cancer families include individuals with osteosarcoma (Coyler et al., 1979; Operskalski et al., 1987), indicating a potential role for genetic propensity. Among the chemical candidates are vinyl chloride, beryllium compounds, and fluorides. Beryllium compounds have produced osteosarcomas in rabbits, but the risk for humans has not been shown (IARC, 1980). Vinyl chloride has produced osteosarcomas in rats, but only benign bone lesions in humans (IARC, 1979). During the last twenty years a number of epidemiologic studies using ecologic or case-control methods did not find an association between bone cancer mortality and fluoridation (Kaminsky et al., 1990). However, in addition to the problems associated with death certificate registries, most

studies either used large aggregate areas, such as counties, and/or did not provide separate information on childhood mortality. Recently, a national ecologic epidemiology study of drinking water fluoridation at the county level found a significant association with osteosarcoma incidence among males under 20 years of age (Hoover et al., 1991). However, the meaning of the association was questioned by the authors because of the absence of linear trend of association with duration of time the water supplies were fluoridated.

A study of tumor induction in rodents suggested that fluoride can cause osteosarcoma, although this was not the conclusion of the reviewing scientific panel (National Toxicology Program, 1990), who concluded that borderline statistical significance and issues about fluoride levels in the feed of rodents constituting the "historical" control group prevented the use of this study as evidence about carcinogenicity of fluoride.

Potential sources of fluoride exposure include food, vitamins, swallowed toothpaste, and drinking water. The Public Health Service (1991) endorses 0.7-1.2 milligrams of fluoride per liter (parts per million) as the optimally beneficial level of for preventing dental caries. The U.S. Environmental Protection Agency (USEPA) and the New Jersey Department of Environmental Protection and Energy (NJDEPE) allow up to 2 parts per million for artificial fluoridation and up to 4 parts per million for naturally occurring fluoride (National Primary Drinking Water Regulations, 40 CFR 141.11 and 143.3).

Based on the study by Hoover et al. (1991), a small study of relatively simple design was conducted by the NJDOH. (It should be noted that the study was not initiated because of cancer cluster concerns.) It was based solely on the address of osteosarcoma cases at the time of diagnosis. No interviews were conducted and data on individual residential and exposure histories were

not available. The study observed an association between fluoridation of water and osteosarcomas among males under 20 years of age in seven Central New Jersey counties.

## METHODS

### Case Ascertainment

Incident cases of osteosarcoma were compiled from the New Jersey Cancer Registry (NJSCR) for the years 1979-1987. New Jersey law requires mandatory reporting to the NJSCR and agreements with hospitals in neighboring states insures completeness. Available information includes age, race, sex, and address at the time of diagnosis. The 1980 U.S. Census was the source of population data on a municipality level for the calculation of annual rates. To check on the possibility that significant population shifts skewed the rates between 1980 and 1990, the 1983 (study period midpoint) and 1987 (last year of the study) populations were calculated by proportionately interpolating the 1990 U.S. Census with the 1980 Census. In the seven county and three county study areas (see below), the relative population shifts from fluoridated to unfluoridated areas are estimated to have been 2-4% in 1983 and 4-8% in 1987. This includes the effect of migration into and out of the study area as a whole.

### Exposure Assessment

Information on fluoridation of drinking water supplies on a municipality level was received from the NJDEPE. In New Jersey individual municipalities have authority to decide whether to implement fluoridation. Seventy municipalities in New Jersey received fluoridated water for at least part of the year as of the early 1970's. In addition, water supplies on three military bases and one hospital in four other municipalities are fluoridated. The overall prevalence of fluoridation in New Jersey is 15% of the population.

For this analysis, municipalities were considered "fluoridated" if greater than 85% of the population was supplied with fluoridated water from at least the early 1970s until at least 1987. (In practical terms, this meant

that if private wells supplied more than 15% of the population in a municipality with a fluoridated public water supply, the municipality was excluded from the analysis.) Municipalities were considered "non-fluoridated" if less than 10% of the population was supplied with fluoridated water. Municipalities with mixed supplies due to partial bulk purchase were excluded from the computations. Non-fluoridated municipalities seasonally augmented with bulk-purchased fluoridated water were also excluded. Municipalities with the fluoridated military bases were also excluded.

Municipalities in ten New Jersey counties account for all of the eligible artificially fluoridated municipalities. Part of Gloucester County is naturally fluoridated and is analyzed separately (see below). However, 98% of the population in eligible municipalities receiving artificially fluoridated water reside in seven central New Jersey counties: Atlantic, Burlington, Mercer, Middlesex, Monmouth, Somerset and Union Counties. (The remaining municipalities are small and mostly in parts of the State geographically separate from the central New Jersey study area.) Furthermore, almost three-quarters of the fluoridated population in New Jersey resides in a contiguous three county area (Mercer, Middlesex and Monmouth Counties).

Of 91 municipalities in the three counties, twelve were ineligible and excluded from analysis. Of the remaining municipalities in the other four counties, twelve were excluded. In the seven counties, all but three of the currently fluoridated supplies became fluoridated between the 1950s and the early 1970s. Among the other three municipalities, one began fluoridation in the late 1970s, one in 1989 and one in 1990. The water supply that began fluoridation in the late 1970s was excluded from analysis, while the other two were categorized as unfluoridated. Two other water companies ended fluoridation in 1980 and 1985 and were also excluded from the analysis. Only

two cases resided in municipalities excluded from analysis, yielding no major effect on results.

In Gloucester County there are thirteen municipalities whose public water supplies draw from a formation producing water containing fluoride in the 0.5-3.3 ppm range (nine were under 2.0 ppm). In eleven out of the thirteen municipalities, public supplies provide water for more than 85% of the population. (In addition, in one of the eleven a third of the municipal population is supplied by a second water company that provides artificially fluoridated water.) Since the boundary of the natural fluoridation is not clear, only the eleven municipalities were included in the analysis.

The USEPA Toxic Release Inventory Database from 1988 was received from NJDEPE. Carcinogenic compounds released to the air were totaled by municipality. The compounds were categorized as carcinogenic if they are classified as known, probable or possible human carcinogens by USEPA.

#### Statistical Analysis

In the present analysis, the relative rate ratios were determined for osteosarcoma rates in fluoridated vs non-fluoridated areas. The confidence intervals were calculated using tables from Haenszel et al. (1962).

## RESULTS

In New Jersey between 1979 and 1987, 116 and 78 cases of osteosarcomas among males and females, respectively, were reported to the New Jersey Cancer Registry. Under age 20 there were 51 and 37 cases, of which 45 and 33 were between ages 10 and 19. During 1979-1987 the average annual rates in the 10-19 age group were 7.6 per million and 5.8 per million, respectively.

### Seven County Study Area

In the seven county study area, irrespective of study eligibility (see Methods), there were 22 males and 10 females under age 20 diagnosed with osteosarcoma. In the eligible fluoridated municipalities, there were 12 males under age 20 diagnosed with osteosarcoma, an average annual rate of 11.9 per million. In the eligible non-fluoridated municipalities the rate was 3.5 per million, based on eight cases. (Two occurred in excluded municipalities.) The incidence rate ratio between fluoridated vs non-fluoridated municipalities was 3.4 with a 95% confidence interval (95%CI) of 1.8 to 6.0. Seventeen of the 20 male cases were between ages 10 and 19 (Table 1) with the same rate ratio, 3.4 (95%CI 1.7-6.4). Among white males in the 10-19 age group the rate ratio was 4.8 (95%CI 2.3-8.8).

Rate ratios were not elevated among females or among men in older age groups.

### Three County Study Area

All 12 cases among males under age 20 in the fluoridated municipalities of the 7 counties were residents of fluoridated municipalities in the three county sub-area at the time of diagnosis (Table 2). The average annual rate among males under 20 in this subgroup of fluoridated municipalities was 14.9 per million. Three cases occurred in non-fluoridated municipalities in the

three county area, giving an average annual rate of 2.9 per million. The rate ratio of osteosarcoma incidence among males under 20 in fluoridated vs non-fluoridated municipalities of the three county area was 5.1 (95%CI 2.7-9.0). For males between ages 10 and 19 the rates in fluoridated and non-fluoridated areas were 22.0 per million and 3.2 per million, respectively, yielding a rate ratio of 6.9 (95%CI 3.3-13). Among white males in this age group the rate ratio was 8.0 (95%CI 3.9-15). When the rate in the fluoridated municipalities in the three counties was compared with the State rate for males aged 10-19, the RR was 2.9 (95%CI 1.4-5.3).

The average annual rate for osteosarcoma among males under 20 in the three county study area, irrespective of fluoridation, was 8.5 per million, yielding an RR of 1.7 (95%CI 1.0-2.8) for these counties when compared with the State rate. If the three counties are removed from the State rate calculation for this age/sex group, the State average annual rate becomes 4.2 per million. The RR of osteosarcoma in the three counties compared to the State rate excluding those three counties is 2.0 (95%CI 1.2-3.2).

#### Gloucester County and Naturally-Occurring Fluoride in Drinking Water

Only one case of osteosarcoma was reported among males between ages 10 and 19 from the municipalities in the naturally fluoridated area of Gloucester County during the study years, yielding an average annual rate of 9.7 per million. (In addition, only one case in this age-sex group was reported in municipalities believed to be largely free of natural fluoridation, but was not included in the analysis, as discussed in the Methods). If the artificially fluoridated municipalities of the seven county study area and the naturally fluoridated municipalities of Gloucester County are analyzed together, the combined rate for the 10-19 year old males is 16.4 per million and the RR is 3.2 (95%CI 1.6-5.8).

### Assessment of Potential Confounding by Other Factors

The relative contribution of ground water and surface water was compared between fluoridated and non-fluoridated municipalities. Among the fluoridated municipalities of both the seven and the three county study areas, surface water supplied about 65% of the male population under 20 and the municipalities where 7 out of the 12 cases resided. Mixed ground water and surface water sources supplied an additional 15% of the fluoridated male population under 20 and the municipalities where 1 out of the 12 cases resided. Ground water supplied 20% and the municipalities where 4 out of 12 cases resided. In the non-fluoridated municipalities of both the seven and the three county study areas, surface water supplied 10% of the male population under 20 (1 out of 8 cases), ground water supplied 55% (4 out of 8 cases), and mixed ground and surface water sources supplied an additional 35% (3 out of the 8 cases). Gloucester County was entirely supplied by ground water. Thus, no clear pattern was clearly discernable. In addition, an analysis of osteosarcoma among males under 20 in the thirteen counties outside the study area found no relationship with the source of water.

To explore a potential association between air toxics and childhood osteosarcoma, the USEPA Toxic Release Inventory Database from 1988 was examined. It did not provide any support for this hypothesis.

## DISCUSSION

This study is very limited because no interviews were conducted and data on individual residential history, average amount of water ingested, use of dental fluoride supplements, exposure to other carcinogens and familial cancer history were not available. In addition, the total number of cases was small. Therefore, the observations should be interpreted cautiously because: 1) exposure misclassification could lead to under- or overestimation of effects, 2) unmeasured confounding by other potential causes of osteosarcomas could introduce bias leading to under- or overestimation of effects of exposure, and 3) the observed association could be due to chance.

The results of this study of osteosarcoma incidence between 1979 and 1987 in the seven central New Jersey counties with artificially fluoridated municipalities suggest that incidence among males between 10 and 19 years old is associated with fluoridation on a municipality level. Among males in this age group there were 10 cases from fluoridated municipalities, compared to seven in the non-fluoridated area with a rate ratio of 3.4 (95%CI 1.7-6.4). No other age/sex group exhibited a significant association with fluoridation. It should be noted that even if these observations represented a causal relationship, less than one additional case per year would be attributed to water fluoridation in New Jersey, based on a population attributable risk proportion of 0.41 (Levin, 1953, cited in Markush, 1977).

Other than radium, high doses of x-rays, and genetic propensity, the etiology of osteosarcoma has not been characterized and there are no additional strong hypotheses. Fluoride exposure is one possible explanation, though others have been proposed.

There has been recent evidence that high concentrations of fluoride (79 ppm or 3.9 mg/kg) in water are marginally significantly associated with the

incidence of osteosarcoma in male rats (National Toxicology Program, 1990). There was no excess osteosarcoma in rats drinking water with 11 ppm of fluoride. These results were not validated by the scientific advisory panel reviewing the data because the cancer excess was marginally significant, because of issues about fluoride levels in the feed, and because mice were not affected. Another study of mice and rats found no evidence of carcinogenicity, but was flawed by inadequate control of diet and incomplete examination of tissues (Carcinogenicity Assessment Committee, 1990). Other data indicate that fluoride is not mutagenic or genotoxic; however, a role as a promoter during bone growth has not been excluded.

If rapidly growing bone in adolescent males is most susceptible to the development of osteosarcomas (Glass and Fraumeni, 1970), it is possible that fluoride acts as a cancer promoter during a narrow window of susceptibility. The interplay of hormonal influences and the intensity of the growth spurts may be potent influences. Since fluoride is toxic to cells and a variety of enzymes at high concentrations (reviewed by Kaminsky et al., 1990; and Public Health Service, 1991), it may exert tumor promoting effects in the osteoblast cell microenvironment during bone deposition. Genetic predisposition may also play a role.

A recent national ecologic study of fluoridation at the county level also found an association of osteosarcoma incidence (1973-1987) with fluoridation (Hoover et al., 1991). While elevated rates were observed among young males in fluoridated areas (a summary rate ratio of 1.43, 95%CI 1.16-1.76, was computed from presented data), it was concluded that the association was not biologically significant because of the absence of linear trend of association with duration of time the water supplies were fluoridated. Since individual residential history was unavailable, this trend test was based on the

assumption that the cases lived their entire lives at the same residence as at the time of diagnosis. A similar, unreported analysis in the current study found that all cases in the fluoridated study area would have been exposed to fluoridated water their entire lives if the same residency assumption is made. However, if fluoride acts as a cancer promoter during periods of bone growth, rather than an initiator, the duration/latency issue may not be pertinent. The Hoover et al. study considered counties fluoridated if greater than 60% of the population were served by fluoridated supplies. In comparison, the current study probably has less exposure misclassification because it required 85% of the population to be served by fluoridated supplies for a municipality to be classified as fluoridated. This type of non-differential misclassification tends to weaken the associations that are observed (Brenner et al., 1992).

Ecologic studies, including the present one, do not have individual information on average amount of water ingested daily or long-term residence or other sources of fluoride in the diet. However, if the exposure of interest is a promoter, then the long-term residency information may not be as important. In addition, there may have been less misclassification due to incomplete or inaccurate residency information in the three county portion of this study than in the seven county study area, since the geography of fluoridation suggests that local relocation within the three counties would tend to keep families within fluoridated or non-fluoridated areas. This hypothesis is consistent with a higher rate ratio in the three counties than in the overall seven counties.

Since all cases among males under 20 occurred in the three county study area, there may have been other exposures that contributed to development of the osteosarcomas. However, the estimated pounds of carcinogenic compounds

released to the air around industrial and commercial sites in each municipality (derived from the USEPA Toxic Release Inventory, 1988) were not associated with the incidence of osteosarcoma. Another possibility is that other chemicals in water may provide a necessary co-factor for any effects of fluoride. However, there were no obvious candidates and there was no discernable relationship between the source of water and osteosarcoma incidence.

Drinking water is one source of fluoride exposure, but other sources include food, swallowing of toothpastes containing fluoride, and the use of prescribed fluoride tablets (Kumpulainen and Koivistoinen, 1977; Public Health Service, 1991). Ingestion of toothpaste and fluoride supplements by children may be responsible for as much intake of fluoride as drinking fluoridated water (Heifetz and Horowitz, 1986; Kaminsky et al., 1990). One survey found that dentists prescribe more fluoride supplementation in fluoridated areas than in non-fluoridated areas (Margolis et al., 1980). However, elevated ingestion of water during the summer months, or in conjunction with sports activities, may also be responsible for increased fluoride uptake. In addition, there have been reported incidents in the U.S., though not in New Jersey, where malfunctioning equipment over-fluoridated water systems, occasionally leading to acutely toxic results (National Center for Preventive Services/Division of Health, 1992). There may be many more unreported incidents at levels below those producing acute toxicity. However, in New Jersey fluoridating systems conduct their own testing at least once a day and the great majority of people are served by systems that conduct two or more tests each day. The biological significance of the cumulative effect of all routes of exposure is underscored by the Public Health Service (1991) report

of a general increase in incidence of tooth discoloration (fluorosis) due to individual overexposure to fluoride from all sources.

In summary, as an exploratory study that did not include detailed residential and other personal information only obtainable from individual interviews, these results should be interpreted cautiously. From a public health perspective, the findings of this study, even when taken with the overall findings currently in the scientific literature, are not sufficient to recommend that fluoridation of water supplies be halted. The results of this study suggest the advisability of further investigation of possible chronic hazards of fluoride intake from all sources.

It is well known that fluoride provides an important public health benefit by effectively preventing dental caries in children. The Public Health Service (1991) endorses 0.7-1.2 milligrams of fluoride per liter (parts per million) as the optimally beneficial level of for preventing dental caries. However, it is recommended that dentists identify whether children reside in fluoridated communities and appropriately advise on fluoride supplementation.

These conclusions are consistent with the comments of an external review panel from academia and government (Appendix).

## CONCLUSIONS AND RECOMMENDATIONS

This exploratory study suggested an association between the fluoridation of drinking water and the incidence of childhood osteosarcoma among males and corroborates the results of a similar type of study conducted nationally by the National Cancer Institute. Since interviews were not conducted in either study, detailed exposure and residency information was not available. Therefore, even taking both studies together, there is insufficient basis to draw conclusions about whether osteosarcoma incidence and fluoridation are causally linked. Furthermore, this study, while more detailed, is based on the small number of cases that occurred during the study years in the fluoridated areas of New Jersey. Because there is definite public health value in the decreased number of dental caries resulting from exposure to the beneficial level of fluoride, additional epidemiologic investigations should be conducted in order to pursue the issue of relative risks and benefits of fluoride ingestion from all sources. In the meantime, the following recommendations are made:

- 1) Dentists should identify whether individuals reside in fluoridated communities before prescribing fluoride treatments.
- 2) Use of over-the-counter fluoride supplements, such as fluoride-containing toothpastes, should be re-evaluated with respect to overall fluoride intake.

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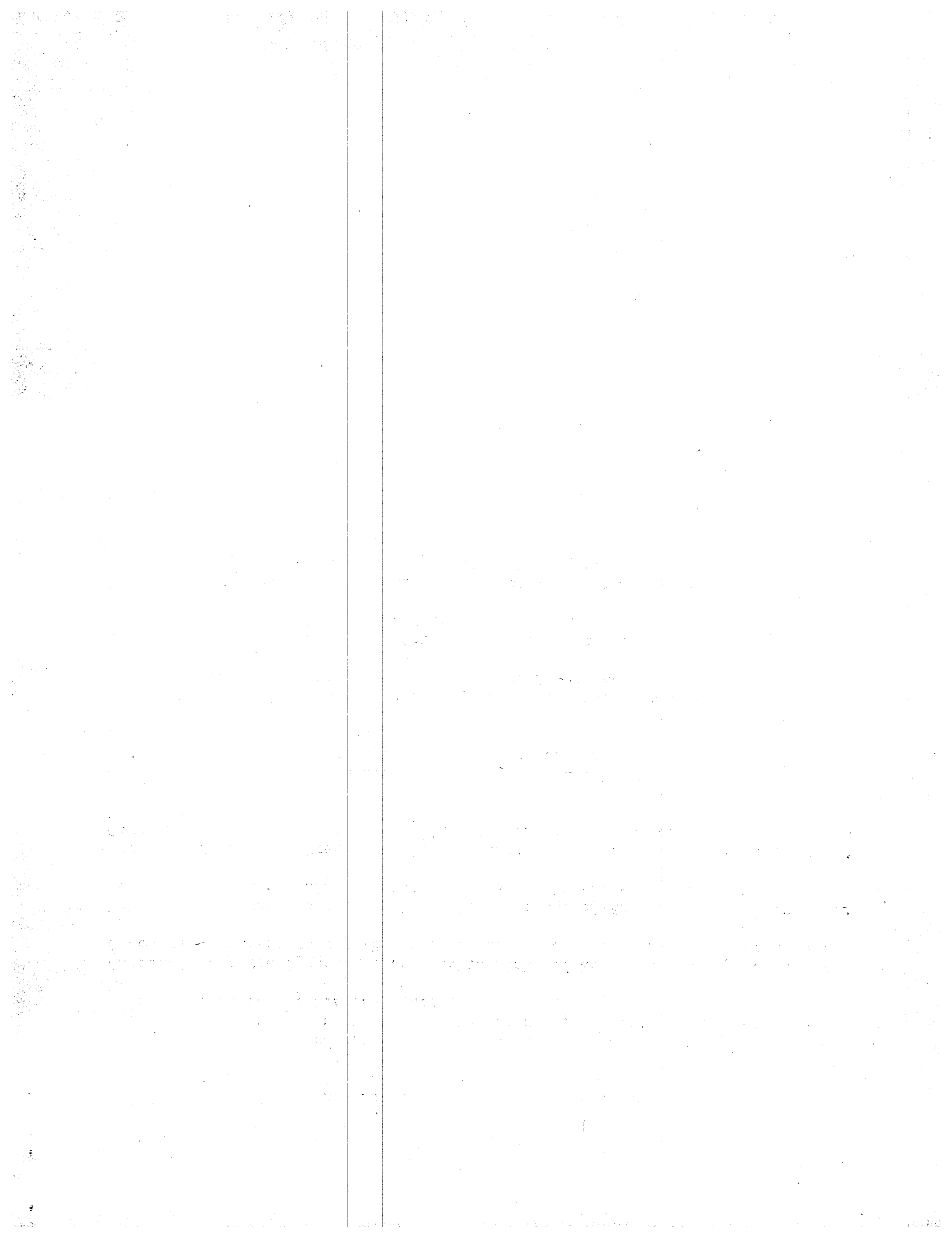


TABLE 1 Age-/Sex-Specific Osteosarcoma Incidence in Fluoridated vs Non-fluoridated Municipalities in Seven Counties in the Central New Jersey Study Area, Number of Cases (1979-1987), Population and Average Annual Incidence Rate (Cases Per Million), All Races; NJDOH, 1992.

Sex	Age		Cases	Population	Rates	
Males	0-9	Fluoridated	2	48,129	4.6	
		Non-fluoridated	1	102,123	1.0	
	10-19	Fluoridated	10	62,990	17.6	
		Non-fluoridated	7	151,384	5.1	
	20-49	Fluoridated	5	141,439	3.9	
		Non-fluoridated	5	348,570	1.5	
	50-69	Fluoridated	0	65,126	0	
		Non-fluoridated	7	161,459	4.8	
	70+	Fluoridated	1	21,614	5.1	
		Non-fluoridated	4	48,649	9.1	
	Females	0-9	Fluoridated	0	45,936	0
			Non-fluoridated	2	103,462	2.1
10-19		Fluoridated	3	61,533	5.4	
		Non-fluoridated	5	145,790	3.8	
20-49		Fluoridated	2	152,173	1.4	
		Non-fluoridated	5	362,616	1.5	
50-69		Fluoridated	1	76,461	1.4	
		Non-fluoridated	2	182,912	1.2	
70+		Fluoridated	5	37,634	14.7	
		Non-fluoridated	4	77,708	5.7	

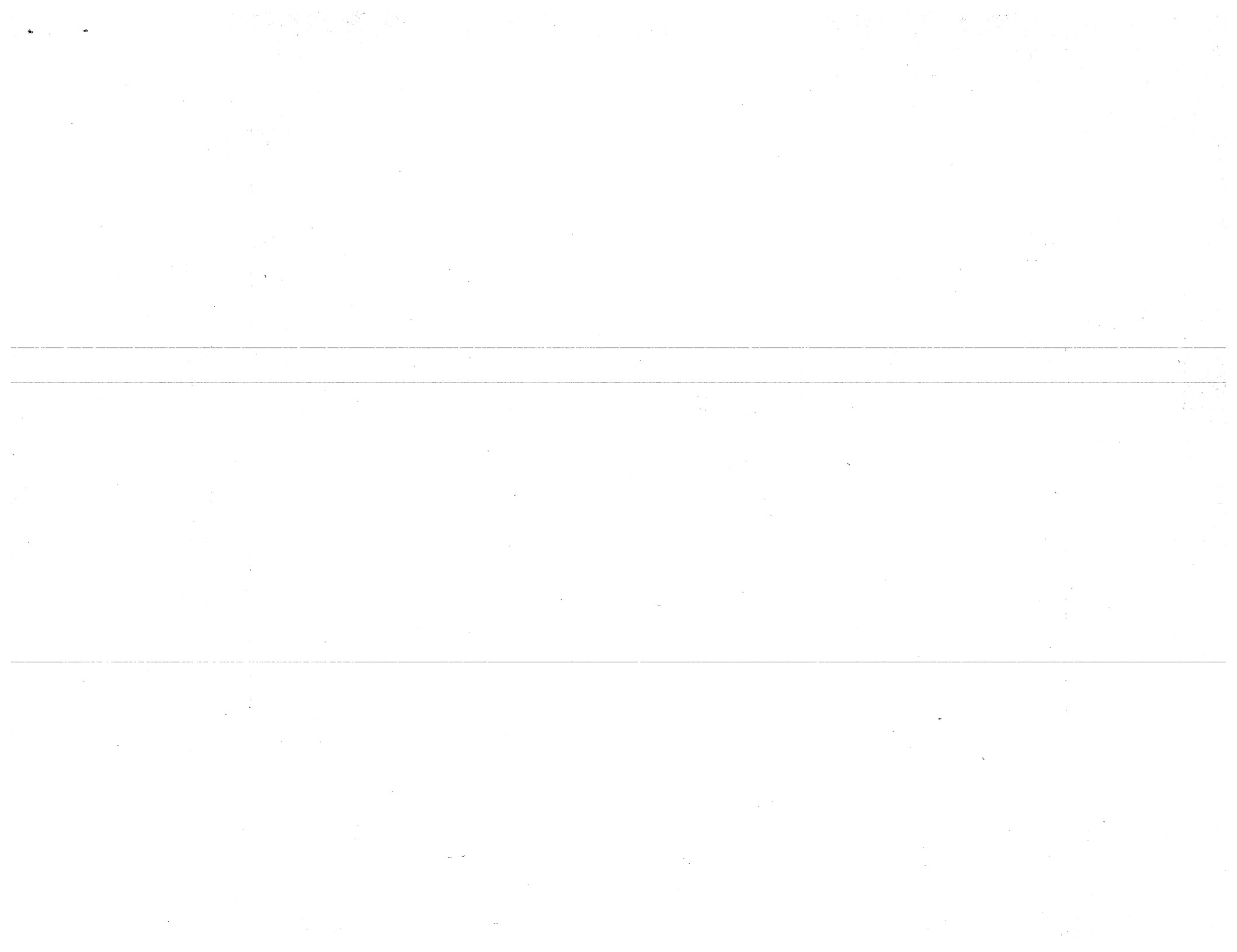
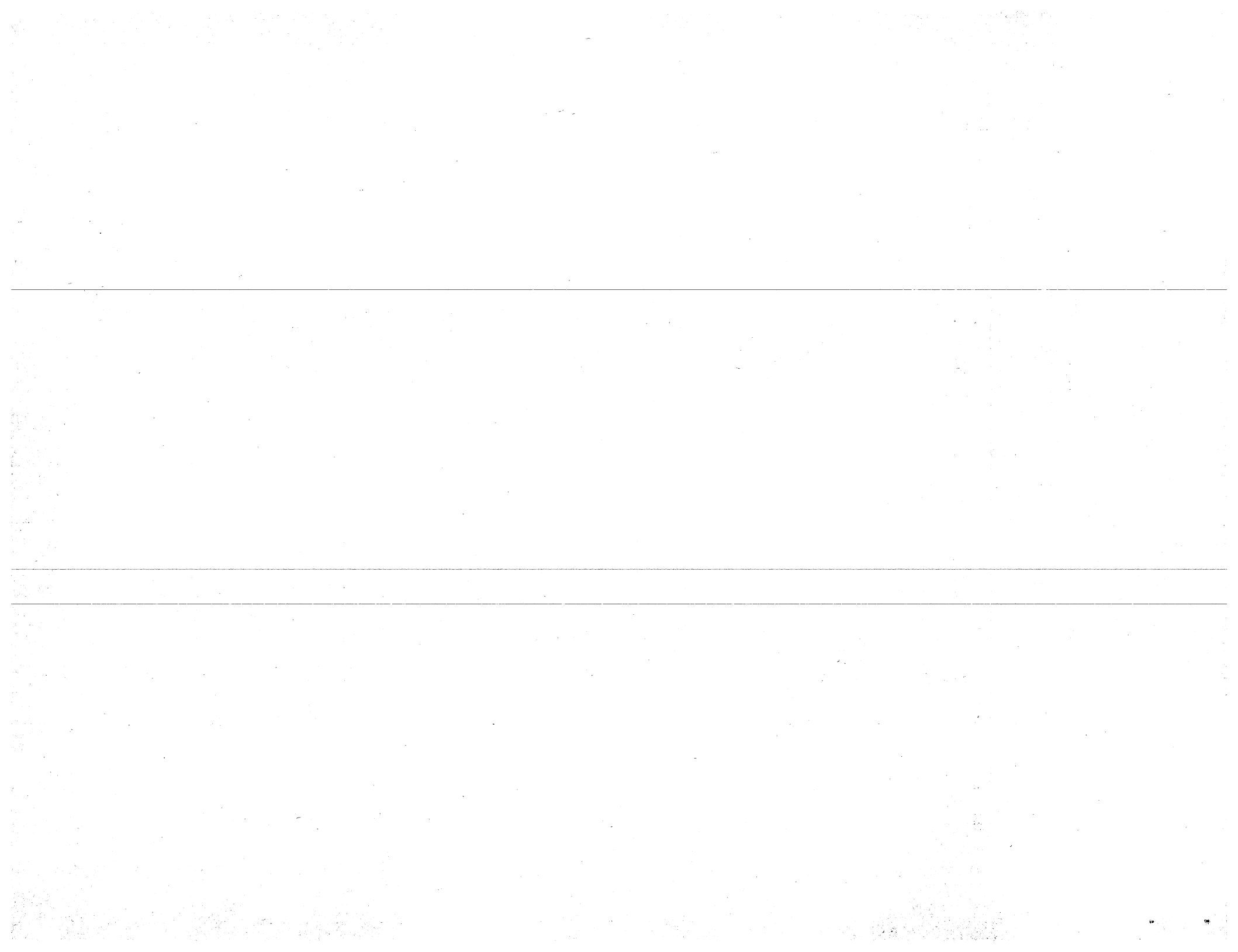
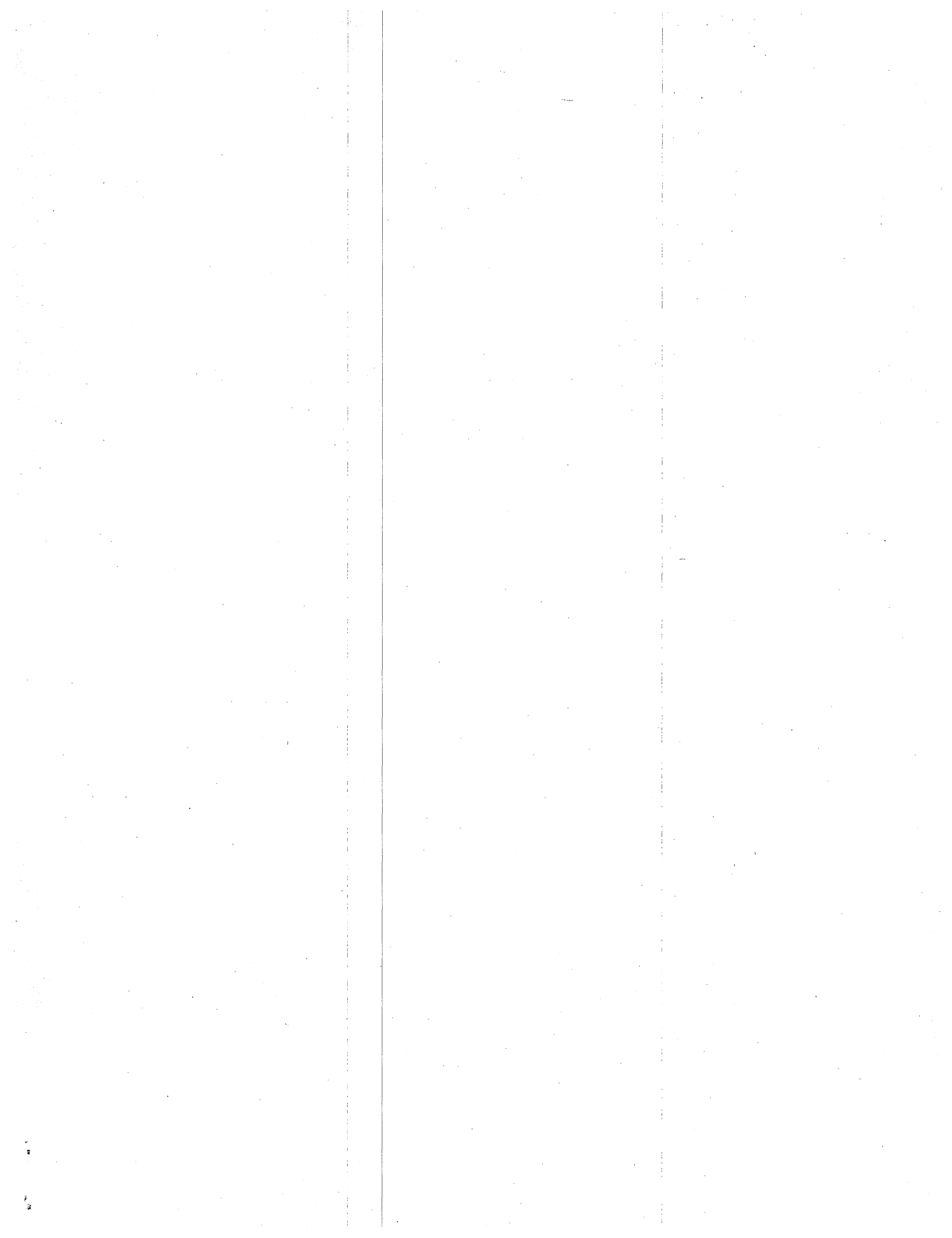


TABLE 2 Age-/Sex-Specific Osteosarcoma Incidence in Fluoridated vs Non-fluoridated Municipalities in Mercer, Middlesex, and Monmouth Counties, Number of Cases (1979-1987), Population and Average Annual Incidence Rate (Cases Per Million), All Races; NJDOH, 1992.

Sex	Age		Cases	Population	Rates	
Males	0-9	Fluoridated	2	38,654	5.7	
		Non-fluoridated	1	46,708	2.3	
	10-19	Fluoridated	10	50,297	22.0	
		Non-fluoridated	2	67,678	3.2	
	20-49	Fluoridated	4	115,367	3.8	
		Non-fluoridated	2	153,713	1.4	
	50-69	Fluoridated	0	51,853	0	
		Non-fluoridated	2	66,607	3.3	
	70+	Fluoridated	0	16,930	0	
		Non-fluoridated	3	18,478	18.0	
	Females	0-9	Fluoridated	0	36,956	0
			Non-fluoridated	0	44,247	0
		10-19	Fluoridated	3	48,976	6.8
			Non-fluoridated	3	65,120	5.1
20-49		Fluoridated	0	122,936	0	
		Non-fluoridated	1	157,545	0.7	
50-69		Fluoridated	1	60,427	1.8	
		Non-fluoridated	1	74,846	1.4	
70+		Fluoridated	4	29,068	15.2	
		Non-fluoridated	3	28,524	11.6	



**APPENDIX**



CONSENSUS EXTERNAL REVIEW STATEMENT  
ON  
"A BRIEF REPORT ON THE ASSOCIATION OF FLUORIDATION OF DRINKING WATER  
AND THE INCIDENCE OF OSTEOSARCOMA AMONG YOUNG MALES"

May, 1992

With the exceptions noted below, the external review panel generally affirmed that the analysis and conclusions of the draft report were adequate. There were requests for clarifications and suggestions for additional analyses as follows:

Wording

The term "municipalities" should be used throughout, rather than "town" or "township".

The sentence at the top of p. 9 with the phrase, "would tend to keep families within fluoridated or non-fluoridated areas", should read, " suggests that families which move locally would tend to remain in fluoridated areas".

Methods

The three county study area, which encompasses 75% of the fluoridated population in New Jersey, could be expanded to include more of the fluoridated population.

The association of ground water vs surface water sources with osteosarcoma incidence should be examined further since 85% of the fluoridated population in the three county area was supplied by surface water, compared to 30% of the non-fluoridated population. This might be accomplished by adding non-fluoridated municipalities supplied by surface water to the study population or by adding additional counties with fluoridated municipalities that are supplied by ground water sources.

Accurate analysis of the effect of duration and latency of exposure cannot be conducted because individual residential history is not available. However, if the simplifying assumption is made that cases lived their entire lives at the address given at the time of diagnosis, the report could simulate duration/latency data with rough approximation, given the age at diagnosis and the date at which fluoridation was initiated. (Nevertheless, the promoter hypothesis is consistent with shorter latency than an initiation hypothesis.)

The relationship between low pH water with potential higher lead content and the incidence of osteosarcoma should be explored if practicable.

The socioeconomic status (SES) and degree of industrialization of the municipalities in the study area could be added to the analysis (although the SES of individual families in a municipality could vary much more than the relative exposure to drinking water in the municipality).

The results might be fine-tuned by adjusting for population shifts between the 1980 Census and the last year of diagnosis in 1987. This could be accomplished with proportional interpolation using 1990 Census data.

Results

Presentation of results could be usefully separated into the 0-9 and the 10-19 age categories. (Inclusion of ages 20-24 is unnecessary because of the increased potential for in- and out-migration by this age group.)

### Conclusions

As stated in the draft, the study is small and municipality-based. Given the methods and results, conclusions are generally appropriate, but it should be further emphasized that, while the risk of osteosarcoma from fluoride exposure is suggested, it is by no means conclusively demonstrated in this analysis. The review panel concurs with the statement in the report that the absence of individually-based data on residential and exposure histories is a major limitation which should be underscored further.

The panel also would like the report to further emphasize the possible multifactorial causality of osteosarcoma other than fluoride exposure and believes that a larger discussion of risk vs benefit would be useful. This discussion could include a statement about the population attributable risk of developing osteosarcoma due to fluoride exposure.

Therefore, only after other, confirmatory, studies could a risk of osteosarcoma from fluoride exposure be conclusively stated. The results of this report alone should not be enough to recommend that fluoridation be halted, but are sufficient to recommend frequent monitoring of artificial fluoride levels in drinking water.

AUTHORS' RESPONSE TO THE CONSENSUS EXTERNAL REVIEW STATEMENT  
ON THE DRAFT  
"A BRIEF REPORT ON THE ASSOCIATION OF FLUORIDATION OF DRINKING WATER  
AND THE INCIDENCE OF OSTEOSARCOMA AMONG YOUNG MALES"

August, 1992

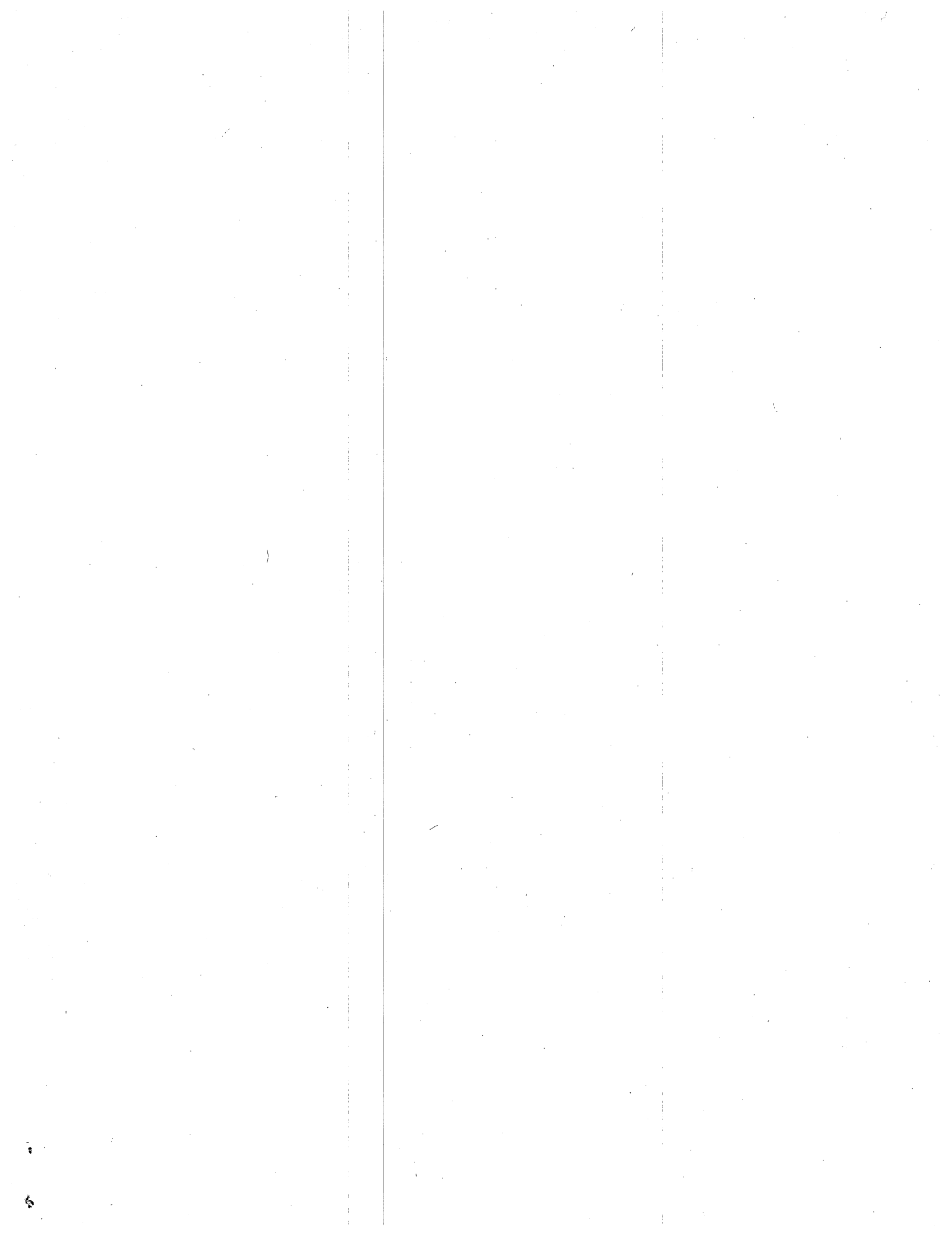
In no instance did the panel find major problems with the study. Many of the comments and recommendations were to emphasize points already addressed in the draft, such as the limitations of ecologic studies, or analyses in the process of being added at the time of the review, such as association of surface water vs ground water with osteosarcoma incidence. Below are listed the comments which have already been incorporated in the final report and those which are deferred for future analyses.

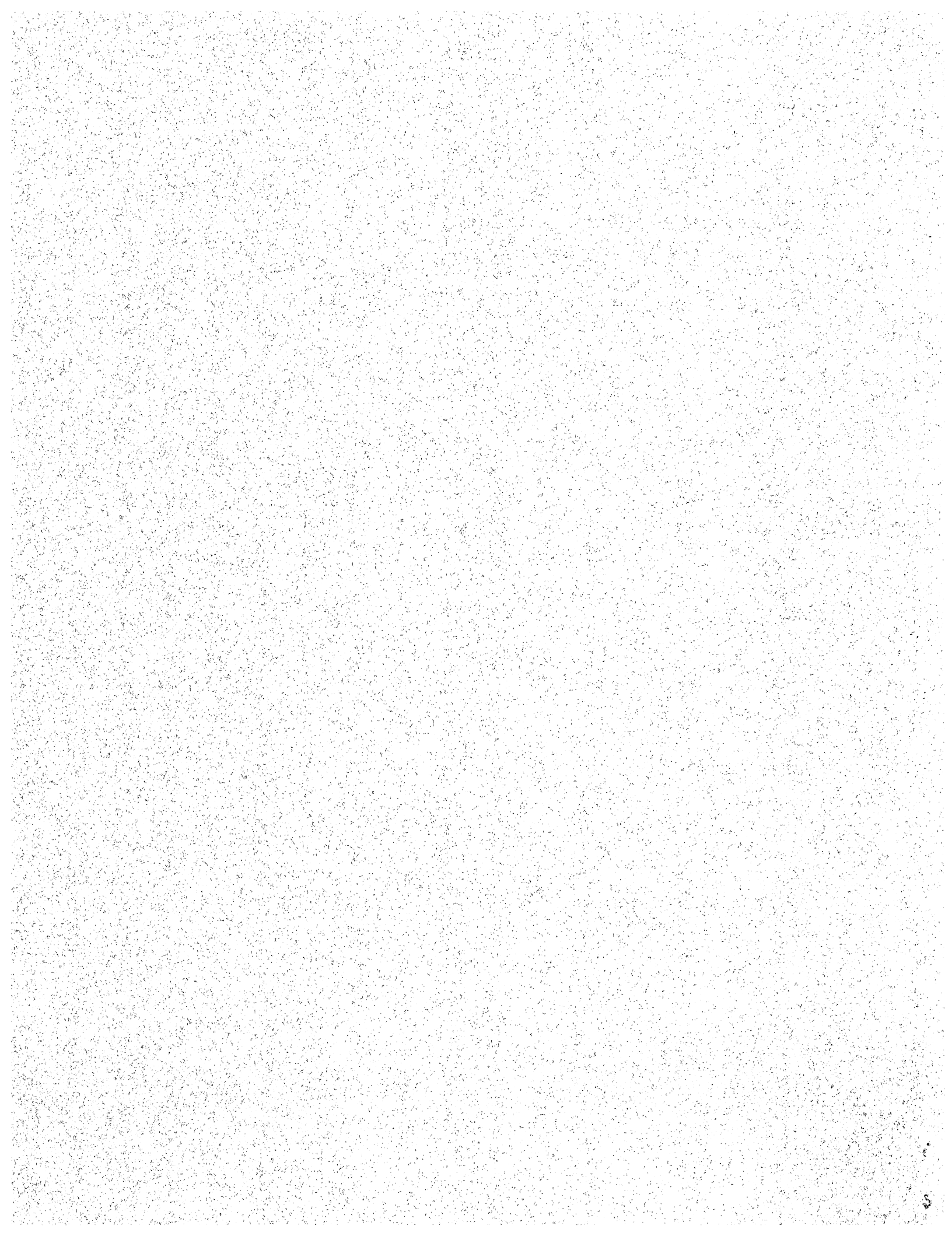
I. Completed and Included in Final Report

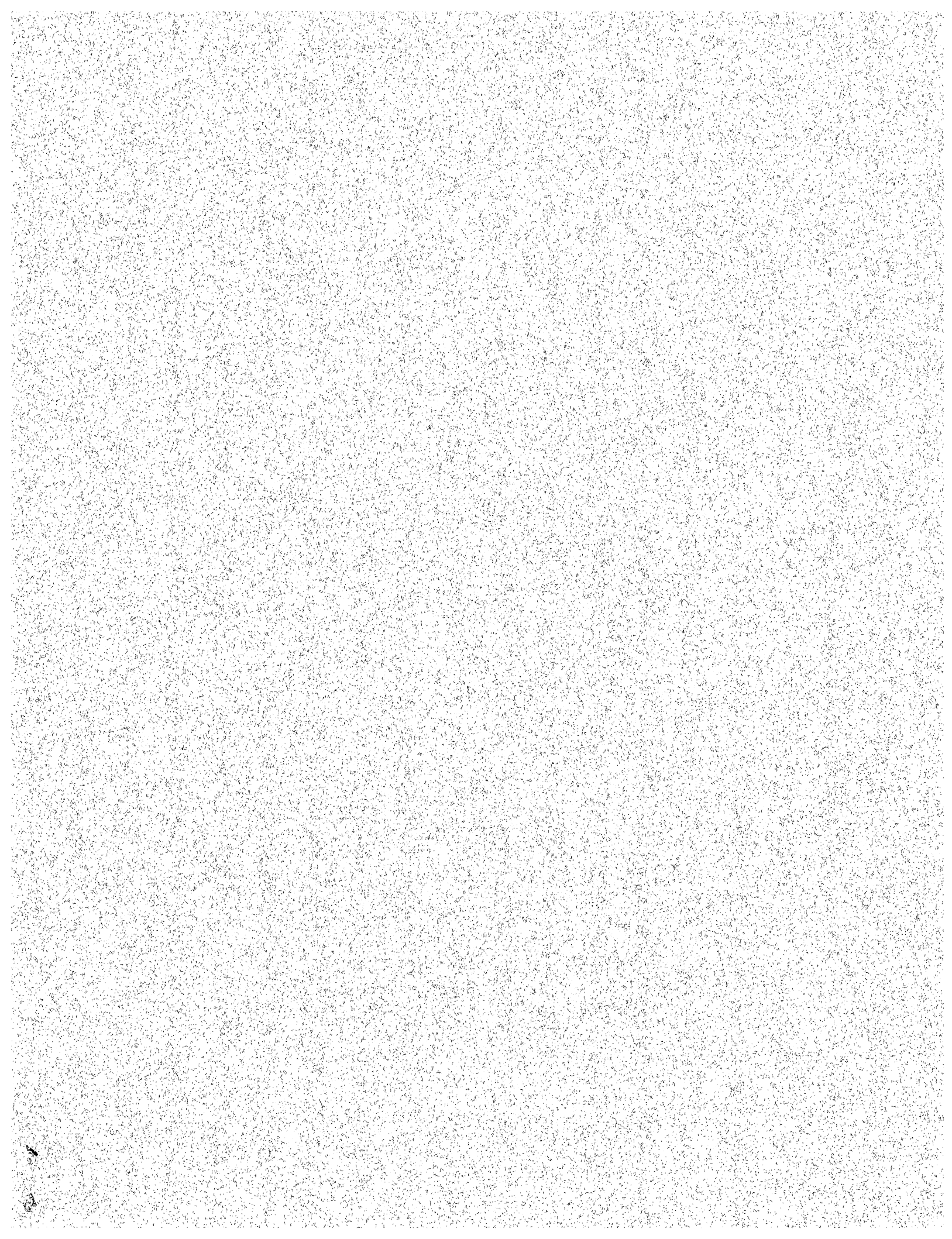
- \* Expansion of study to include municipalities in 7 counties
- \* Effect of duration and latency of exposure, assuming that the residence at the time of diagnosis was the lifetime residence
- \* Association of ground water and surface water with osteosarcoma incidence
- \* Separation of the 0-19 age category into 0-9 and 10-19 age categories
- \* Increased emphasis of the limitations of ecologic studies, the multifactorial causality of osteosarcoma, and the use of only this particular study to set policy
- \* Inclusion of a population attributable risk calculation
- \* Uniform use of the wording "municipalities" vs "town" or "township"
- \* Changing the sentence at the top of page 9 of the draft
- \* Analysis of the effect of population shifts between 1980 and 1990
- \* Analysis of the potential association between osteosarcoma incidence and the release of carcinogenic air toxics (from the U.S.E.P.A. Toxic Release Inventory of 1988)

II. Suggestions for Additional Work

- \* Relationship between low pH water and the incidence of osteosarcoma
- \* Association of socioeconomic status and degree of industrialization of the municipalities with osteosarcoma incidence







90  
W329  
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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF QUALITY ASSURANCE

CERTIFIED DRINKING WATER/WASTEWATER LABORATORIES

NOVEMBER, 1988

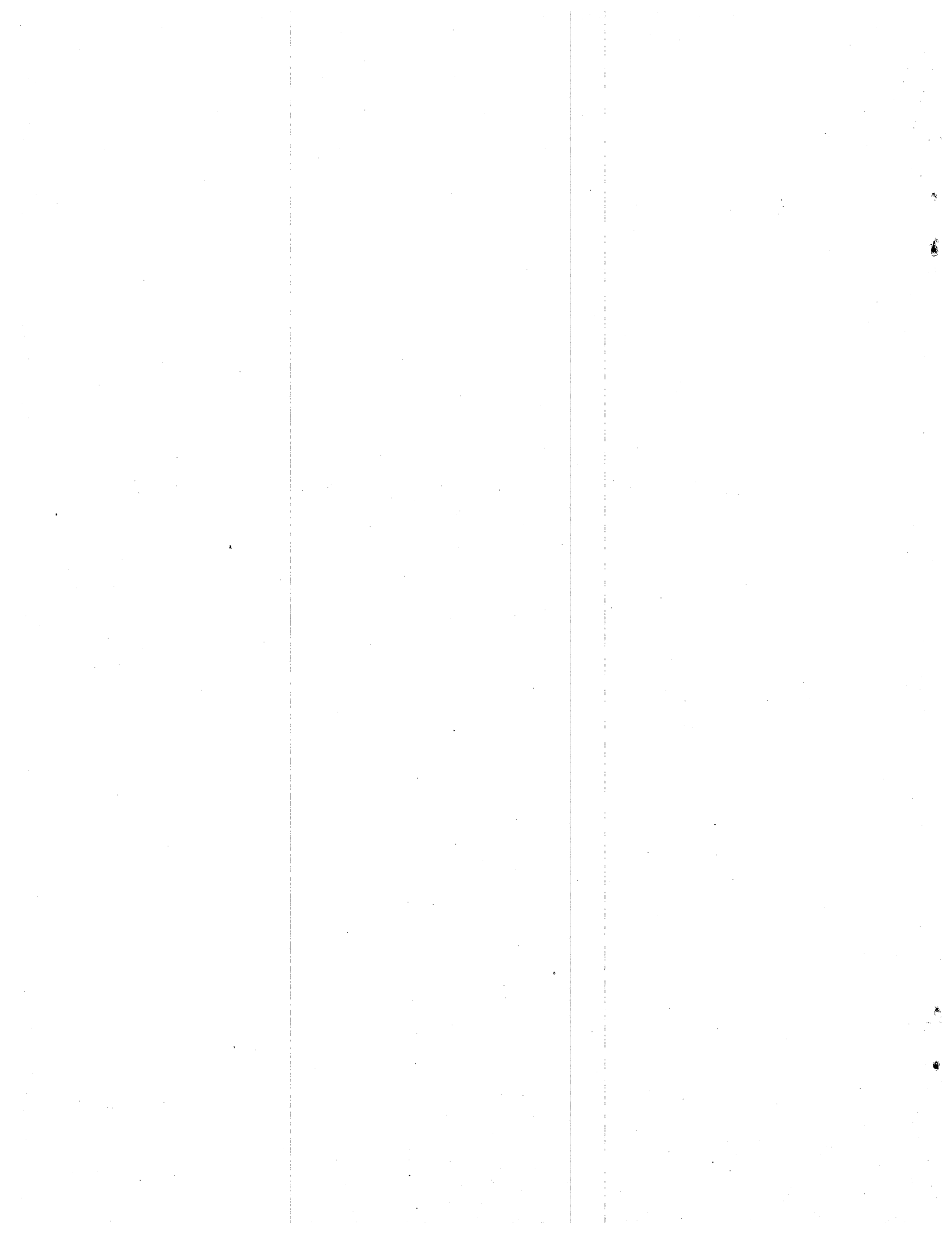
CERTIFIED CATEGORIES

Drinking Water (DW)

1. Microbiology
2. Limited Chemistry
3. Metals
4. Pesticides, Herbicides, THMs
5. Volatile Organics (A-280)
6. Radiochemistry

Wastewater (WW)

1. Microbiology
2. Limited Chemistry
3. Metals
4. Pesticides
5. Volatile Organics
6. Bioassay



ATLANTIC COUNTY

LAB NO.

01001 ATLANTIC CITY WATER DEPARTMENT  
1151 North Main Street  
Pleasantville, NJ 08232  
(609) 641-0024  
DW: 1,2

01057 TESTWELL CRAIG TESTING LABS., INC.  
P.O. Box J  
Mays Landing, NJ 08330  
(609) 625-1700  
DW: 1,2,3,5  
WW: 1,2,3,4,5

01170 ENVIRONMENTAL MEASUREMENTS & ANALYSIS  
2175 South White Horse Pike  
Hammonton, NJ 08330  
(609) 561-4330  
DW: 1,2,3,4  
WW: 1,2,3

01179 NJ-DEP DIVISION OF WATER RESOURCES  
Leeds Point Laboratory  
Star Route, Stony Hill Road  
Absecon, NJ 08201  
(609) 441-3400  
DW: 1,2  
WW: 1,2,3

01204 BOROUGH OF BUENA M.U.A.  
Municipal Building  
Minotola, NJ 08341  
(609) 697-0450  
DW: 2  
WW: 1,2

01246 TOWN OF HAMMONTON  
Hammonton Waste Treatment Laboratory  
City Hall  
Hammonton, NJ 08037  
(609) 561-1159  
WW: 2

01289 ATLANTIC COUNTY UTILITIES AUTHORITY  
1701 Absecon Boulevard  
Atlantic City, NJ 08401  
(609) 348-5500  
DW: 1,2  
WW: 1,2

ATLANTIC COUNTY (continued)

LAB NO.

01402	DOT/FAA TECHNICAL CENTER Chemistry Laboratory Tilton Road, Building 277 Atlantic City, NJ 08405 (609) 484-6909, ext. 6909 DW: 2
01582	DOT/FAA TECHNICAL CENTER Atlantic City Airport Building 68 Atlantic City, NJ 08405 (609) 484-6578 WW: 2
01650	NEW JERSEY EXPRESSWAY AUTHORITY Farley Service Area P.O. Box 351 Hammonton, NJ 08037 (609) 965-6060 WW: 2
01654	LENOX, INC. Tilton Road Pomona, NJ 08240 (609) 641-3700 WW: 2,3
01683	STOCKTON STATE COLLEGE Route #575, Jim Leeds Road Pomona, NJ 08240 (609) 652-4487 WW: 2

BERGEN COUNTY

LAB NO.

02030 SPECTROCHEM LABORATORIES, INC.  
545 Commerce Street  
Franklin Lakes, NJ 07417  
(201) 891-8787  
DW: 2,3  
WW: 2,3

02046 LABORATORY RESOURCES, INC.  
363 Old Hook Road  
Westwood, NJ 07675  
(201) 666-6644  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

02074 HACKENSACK WATER COMPANY  
200 Elm Street  
Oradell, NJ 07649  
(201) 767-9300  
DW: 1,2,3,4,5  
WW: 1,2,3,5

02075 BERGEN PINES CO. HOSPITAL-PUBLIC HEALTH DEPARTMENT  
East Ridgewood Avenue  
Paramus, NJ 07652  
(201) 967-4090  
DW: 1  
WW: 1

02089 RIDGEWOOD WATER DEPARTMENT  
132 North Maple Avenue  
Ridgewood, NJ 07451  
(201) 670-5526  
DW: 1

02093 HAVENS & EMERSON, INC.  
299 Market Street  
Saddle Brook, NJ 07662  
(201) 845-0470  
DW: 1,2,3,4  
WW: 1,2,3,4

02124 SANI-PURE FOOD LABORATORIES  
178 Saddle River Road  
Saddle Brook, NJ 07662  
(201) 843-2525  
DW: 1  
WW: 1

BERGEN COUNTY (continued)

LAB NO.

02182 CORNING ENGINEERING AND ENVIRONMENTAL SERVICES/METPATH  
One Malcolm Avenue  
Teterboro, NJ 07609  
(201) 288-3600, ext. 5974  
DW: 2,3,5  
WW: 2,3,4,5

02197 METPATH, INC.  
One Malcolm Avenue  
Teterboro, NJ 07608  
(201) 288-3600  
DW: 1  
WW: 1

02224 BOROUGH OF EDGEWATER  
Edgewater S.T.P. Laboratory  
520 River Road  
Edgewater, NJ 07020  
(201) 943-9019  
WW: 1,2

02244 NORTHWEST BERGEN COUNTY UTILITIES AUTHORITY  
Dow Avenue  
Waldwick, NJ 07463  
(201) 447-2660  
WW: 1,2

02268 BERGEN COUNTY UTILITIES AUTHORITY  
Foot of Mehrhof Road  
P.O. Box 122  
Little Ferry, NJ 07643  
(201) 641-2552  
WW: 1,2,3

02279 URBAN FARMS SHOPPING CENTER, INC.  
808 High Mountain Road  
Franklin Lakes, NJ 08417  
(201) 891-3900, ext. 213  
WW: 2

02286 VILLAGE OF RIDGEWOOD  
131 North Maple Avenue  
Ridgewood, NJ 07450  
(201) 670-5577  
WW: 1,2

BERGEN COUNTY (continued)

LAB NO.

02292           BOROUGH OF WOOD-RIDGE  
Wastewater Treatment Plant  
85 Humbolt Street  
Wood-Ridge, NJ 07075  
(201) 939-4658  
WW: 2

02317           GENERAL TESTING CORP.  
85 Trinity Place  
Hackensack, NJ 07601  
(201) 488-5242, Nancy Potak  
DW: 1,2  
WW: 1,2

02404           WINSTON LABORATORIES, INC.  
P.O. Box 361  
Ridgefield Park, NJ 07660  
(201) 440-0022  
DW: 1  
WW: 1

02437           HACKENSACK MEADOWLANDS  
Development Commission  
Two DeKorte Park Plaza  
Lyndhurst, NJ 07071  
(201) 460-1700  
WW: 1,2,3

02510           TOWNSHIP OF MAHWAH SEWER DEPARTMENT  
142 North Railroad Avenue  
Mahwah, NJ 07430  
(201) 529-3344  
WW: 2

02544           STEPAN CO.  
100 West Hunter Avenue  
Maywood, NJ 07607  
(201) 845-3030  
WW: 2

BERGEN COUNTY (continued)

LAB NO.

02565	B & P ENVIRONMENTAL RESOURCES 128 Bauer Drive Oakland, NJ 07436 (201) 337-5544 DW: 2 WW: 2
02589	PSE&G Bergen Generating Station Victoria Terrace Ridgefield, NJ 07657 (201) 886-3000 WW: 2
02604	AMERICAN BIOLOGICAL CONTROL P.O. Box 505 65 Hudson Avenue Tenafly, NJ 07670 (201) 567-7424 DW: 1
02615	TELEDYNE ISOTOPES 50 Van Buren Avenue Westwood, NJ 07675 (201) 664-7070 DW: 6
02619	OAKLAND CARE CENTER 20 Breakneck Road Oakland, NJ 07436 (201) 337-3300 WW: 2
02627	BOROUGH OF OAKLAND Oakwood Knolls Municipal Plaza Oakland, NJ 07436 (201) 337-8103 WW: 2
02628	BOROUGH OF OAKLAND Chapel Hill Municipal Plaza Oakland, NJ 07436 (201) 337-8103 WW: 2

BERGEN COUNTY (continued)

LAB NO.

02642

OAKLAND BOARD OF EDUCATION  
Manito School  
315 Ramapo Valley Road  
Oakland, NJ 07436  
(201) 337-6106  
WW: 2

BURLINGTON COUNTY

LAB NO.

03055	EVESHAM M.U.A. Tri-Towne Plaza Box 467 Marlton, NJ 08053 (609) 983-0136 DW: 1,2 WW: 1,2
03061	MT. LAUREL TOWNSHIP M.U.A. 1201 South Church Street Mt. Laurel, NJ 08054 (609) 235-1502 DW: 1,2 WW: 1,2,3
03112	WILLINGBORO M.U.A. J.F. Kennedy Way Willingboro, NJ 08046 (609) 877-4962 DW: 1,2 WW: 1,2
03117	NORTHEASTERN ANALYTICAL CORP. 234 Route #70 Medford, NJ 08055 (609) 654-1441 DW: 1,2,3,4,5 WW: 1,2,3,4,5
03144	BURLINGTON COUNTY HEALTH DEPARTMENT Woodland Road Mt. Holly, NJ 08060 (609) 267-0631 DW: 1,2,3 WW: 1,2,3
03146	WALSON U.S. ARMY HOSPITAL Preventive Medicine Activity U.S. Army Medical Department Activity Fort Dix, NJ 08640-6630 (609) 562-4067 DW: 1,2 WW: 1,2

BURLINGTON COUNTY (continued)

LAB NO.

03151 LIPPINCOTT ENGINEERS ASSOCIATES  
Rancocas Environmental Labs, Inc.  
502 Burlington Avenue  
Delanco, NJ 08075  
(609) 461-8830  
DW: 1,2,3,4  
WW: 1,2,3,4

03156 USATC, Fort Dix, DEH  
Environmental Laboratory  
Fort Dix, NJ 08640-6630  
(609) 562-3050  
DW: 1,2  
WW: 1,2

03205 FLORENCE TOWNSHIP WATER & SEWER DEPARTMENT  
Municipal Complex, Broad Street  
Florence, NJ 08518  
(609) 499-2518  
DW: 1,2  
WW: 1,2

03293 MORRESTOWN TOWNSHIP, S.T.P.  
601 East Third Street  
Morrestown, NJ 08057  
(609) 3235-3520  
WW: 2

03306 BOROUGH OF MEDFORD LAKES  
Municipal Sewer Plant  
Administration Building  
Medford Lakes, NJ 08055  
(609) 654-9383  
WW: 2

03348 MOUNT HOLLY SEWERAGE AUTHORITY  
23 Washington Street  
Mount Holly, NJ 08060  
(609) 267-1110  
WW: 1,2

03351 SYBRON CHEMICAL DIVISION  
P.O. Box 66  
Birmingham, NJ 08011  
(609) 893-1100  
WW: 2

BURLINGTON COUNTY (continued)

LAB NO.

03354	MEDFORD TOWNSHIP SEWER DEPARTMENT 17 North Main Street Medford, NJ 08055 (609) 654-2608 WW: 1,2
03376	DELTRAN SEWER AUTHORITY Municipal Building, Chester Avenue Delran, NJ 08075 (609) 461-5111 WW: 2
03447	CINNAMINSON SEWERAGE AUTHORITY Cinnaminson Sewerage Plant 1621 Riverton Road Cinnaminson, NJ 08077 (609) 829-2271 WW: 2
03462	RIVERSIDE SEWERAGE AUTHORITY P.O. Box 188 Burlington, NJ 08075 (609) 461-0700 WW: 2
03502	HERCULES INCORPORATED Neck Road Burlington, NJ 08016 (609) 386-1300 WW: 2
03588	PSE&G Burlington Generating Station West Broad Street & Devlin Avenue Burlington, NJ 08016 (609) 835-2001 WW: 2
03620	BORDENTOWN YOUTH CORRECTIONAL INSTITUTE Bordentown Youth Center Ward Avenue Bordentown, NJ 08505 (609) 298-0500 WW: 2
03644	BETTER ENVIRONMENTAL PROTECTION LABS, INC. P.O. Box 28 Palmyra, NJ 08065 (609) 829-4392 DW: 1,2,3

BURLINGTON COUNTY (continued)

LAB NO.

03674

U.S. ARMY TRAINING CENTER & FORT DIX  
PEDRICKTOWN SUPPORT FACILITY  
DEH, Environmental/National Res. Division  
ATZD-EHN  
Fort Dix, NJ 08640-5501  
(609) 562-3565  
WW: 2

CAMDEN COUNTY

LAB NO.

04012 ANALYTIKEM  
P.O. Box 4201  
Cherry Hill, NJ 08034  
(609) 751-1122  
DW: 1,2,3,4  
WW: 1,2,3,4

04013 CAMPBELL SOUP COMPANY  
Campbell Place  
Camden, NJ 08101  
(609) 342-4800, ext. 2166  
DW: 2,3,4  
WW: 2,3,4

04037 N.J. WATER COMPANY  
Haddon District  
515 Grove Street  
Haddon Heights, NJ 08035  
(609) 547-1700  
DW: 1,2

04127 CITY OF CAMDEN WATER DEPARTMENT  
Morris-Delair Plant  
Zimmerman Avenue  
Camden, NJ 08110  
(609) 757-7364  
DW: 1,2

04134 CAMDEN COUNTY HEALTH DEPARTMENT  
1800 Pavillion, 2101 Ferry Avenue  
Camden, NJ 08104  
(609) 561-5770  
DW: 1,2,3  
WW: 1,2,3

04169 UNDERWOOD, FURMAN AND SNYDER TESTING LABS, INC.  
3 South Black Horse Pike  
Mount Ephraim, NJ 08059  
(609) 933-1818  
DW: 1,2,3  
WW: 1,2,3

04177 L.J. RUSCIANI ASSOC., INC.  
State Highway #73 & Chestnut Avenue  
Berlin, NJ 08009  
(609) 767-2323  
DW: 1,2  
WW: 1,2

CAMDEN COUNTY (continued)

LAB NO.

04215 THE AMSPEC CHEMICAL CORP.  
Foot of Water Street  
Gloucester City, NJ 08030  
(609) 456-3930  
WW: 2

04260 CHERRY HILL TOWNSHIP  
820 Mercer Street  
Cherry Hill, NJ 08034  
(609) 779-0006  
WW: 2

04377 LINDENWOLD M.U.A.  
2115 White Horse Pike  
Lindenwold, NJ 08021  
(609) 784-4400  
WW: 2

04387 CAMDEN COUNTY M.U.A.  
200 Jackson Street  
Camden, NJ 08103  
(609) 541-5200  
WW: 1,2,3

04464 GLOUCESTER TOWNSHIP M.U.A.  
P.O. Box 1339  
Blackwood, NJ 08012  
(609) 228-4221  
WW: 1,2

04479 P & P LABORATORY, INC.  
2025 Woodlynne Avenue  
Woodlynne, NJ 08107  
(609) 962-6611  
DW: 2,3,4,5  
WW: 2,3,4,5

04501 PENNSAUKEN SEWERAGE AUTHORITY  
6901 River Road  
Pennsauken, NJ 08110  
(609) 662-0686  
WW: 2

CAMDEN COUNTY (continued)

LAB NO.

04553	BORO OF BARRINGTON SEWER UTILITY Municipal Building Barrington, NJ 08007 (609) 547-0355 WW: 2
04574	ANCORA PSYCHIATRIC HOSPITAL Spring Garden Road Hammonton, NJ 08037 (609) 561-1700 DW: 2 WW: 2
04583	CLEMENTON SEWERAGE AUTHORITY 25 Gibbsboro Road Clementon, NJ 08021 (609) 784-0495 WW: 2
04624	HOYLE-PASSON LABORATORY, INC./P & P LABORATORY, INC. 211 White Horse Pike Audubon, NJ 08106 (609) 547-8421 DW: 1 WW: 1
04626	STRATFORD SEWERAGE AUTHORITY Union Avenue @ Boro Hall Stratford, NJ 08084 (609) 783-3351 WW: 2
04635	BELLMAWR SEWERAGE AUTHORITY P.O. Box 246 Bellmawr, NJ 08031 (609) 931-7269 WW: 2
04653	Environmental Testing & Technologies, Inc. 108 B Haddon Avenue Westmont, NJ 08108 (609) 858-4800 DW: 2,3,4 WW: 2,3,4
04668	MAGNOLIA SEWERAGE AUTHORITY 438 West Evesham Avenue Magnolia, NJ 08049 (609) 783-4580 WW: 2

CAPE MAY COUNTY

LAB NO.

05072 MAE MALLOY MEMORIAL LABORATORIES, INC.  
2301 New York Avenue  
North Wildwood, NJ 08260  
(609) 522-9000  
DW: 1,2  
WW: 1

05115 CAPE MAY COUNTY HEALTH DEPARTMENT  
Garden State Parkway  
Crest Haven Complex  
Cape May, NJ 08210  
(609) 465-7911  
DW: 1,2,3  
WW: 1,2,3

05206 THE TOWNSHIP OF LOWER M.U.A.  
2900 Bayshore Road  
Villas, NJ 08204  
(609) 886-7146  
WW: 1,2

05295 ATLANTIC CITY ELECTRIC COMPANY  
B.L. ENGLAND GENERATING STATION LAB  
P.O. Box 63  
Marmora, NJ 08223  
(609) 399-7976  
WW: 2

05315 CAPE MAY COUNTY M.U.A.  
Ocean City Reg. Waste Treatment Facility  
45th Street & West Avenue  
Ocean City, NJ 08226  
(609) 398-8992  
WW: 1,2

05616 BOROUGH OF WILDWOOD CREST  
6101 Packfic Avenue  
Wildwood Crest, NJ 08260  
(609) 522-1609  
WW: 2

05621 WOODBINE DEVELOPMENTAL CENTER  
Deltirsch Avenue  
Woodbine, NJ 08270  
(609) 861-2164  
WW: 2

CUMBERLAND COUNTY

LAB NO.

06200	CUMBERLAND COUNTY UTILITIES AUTHORITY 333 Water Street Bridgeton, NJ 08302 (609) 455-7120 WW: 1,2
06241	UNITED MOBILE HOMES, INC. Fairview Manor Mobile Home Park 2110 Mays Landing Road Millville, NJ 08332 (609) 327-4025 WW: 2
06294	MILLVILLE SEWER UTILITY City Hall Millville, NJ 08332 (609) 825-7000 WW: 1,2
06385	VINELAND CHEMICAL CO., INC. P.O. Box 745 Vineland, NJ 08360 (609) 691-3535 WW: 2,3
06431	SOUTH JERSEY WATER TESTING LAB. One Barrett Run Road P.O. Box 360 Bridgeton, NJ 08302 (609) 455-4204 DW: 1,2,3 WW: 2,3
06456	CUMBERLAND MALL ASSOC. 100 Cumberland Mall South Delsea Drive Vineland, NJ 08360 (609) 825-9507 WW: 2

ESSEX COUNTY

LAB NO.

07014 NEWARK WATER DEPARTMENT  
620 Ridge Road  
Cedar Grove, NJ 07009  
(201) 239-4493  
DW: 1,2,3,4,5  
WW: 1,2,3,5

07021 EAST ORANGE HEALTH DEPARTMENT  
143 New Street  
East Orange, NJ 07017  
(201) 266-5495  
DW: 1

07027 GIBRALTAR BIOLOGICAL LABORATORIES, INC.  
23 Just Road  
Fairfield, NJ 07006  
(201) 227-6882  
DW: 1  
WW: 1

07044 GARDEN STATE LABORATORIES, INC.  
399 Stuyvesant Avenue  
Irvington, NJ 07111  
(201) 373-8007  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

07059 ELSTON T. KILLAM ASSOC., INC.  
27 Bleeker Street  
Millburn, NJ 07041  
(201) 379-3400  
DW: 1,2,3,5  
WW: 1,2,3,4,5

07066 AQUA ASSOCIATES INC.  
P.O. Box 1251  
Fairfield, NJ 07006  
(201) 227-0422  
DW: 1,2,3,4  
WW: 1,2,3

07097 COMMONWEALTH WATER CO.  
2333 Canoe Brook Road  
Short Hills, NJ 07078  
(201) 376-8800  
DW: 1,2  
WW: 2

ESSEX COUNTY (continued)

LAB NO.

07130 INTERNATIONAL TESTING LABS, INC.  
580 Market Street  
Newark, NJ 07105  
(201) 589-4772  
DW: 2,3  
WW: 2,3

07180 PSE&G RESEARCH CORP.  
Research and Testing Laboratory  
200 Boyden Avenue  
Maplewood, NJ 07040  
(201) 761-1108  
DW: 2,3  
WW: 2,3

07190 TECHNION INC.  
Research and Testing Laboratories  
681 Main Street  
Belleville, NJ 07109  
(201) 759-0028  
DW: 2,3,5  
WW: 2,3,4,5

07202 ESSEX CHEMICAL CORP.  
Newark Laboratory  
330 Doremus Avenue  
Newark, NJ 07105  
(201) 589-5300  
WW: 2

07239 PUBLIC SERVICE ELECTRIC & GAS  
200 Boyden Avenue  
Maplewood, NJ 07040  
(201) 761-1981  
DW: 6

07250 PASSAIC VALLEY SEWERAGE COMMISSION  
600 Wilson Avenue  
Newark, NJ 07105  
(201) 344-1800  
WW: 1,2,3

07259 BOROUGH OF VERONA  
Verona Sewerage Treatment Plant  
600 Bloomfield Avenue  
Verona, NJ 07044  
(201) 239-3220  
WW: 1,2

ESSEX COUNTY (continued)

LAB NO.

07283 TOWNSHIP OF CEDAR GROVE  
340 Little Falls Road  
Cedar Grove, NJ 07009  
(201) 239-1412  
WW: 2

07312 HEUBACH INC.  
256 Vanderpool Street  
Newark, NJ 07114  
(201) 242-1800  
WW: 2

07321 HOFFMAN-LAROCHE, INC.  
340 Kingsland Street  
Nutley, NJ 07110  
(201) 235-2975  
DW: 2,3,5  
WW: 2,3,4,5

07338 TOWNSHIP OF LIVINGSTON  
81 Naylor Avenue  
Livingston, NJ 07039  
(201) 992-0840  
WW: 1,2

07412 HUMKO CHEMICAL DIVISION/WITCO CHEMICAL  
P.O. Box 818  
Newark, NJ 07101  
(201) 344-3216  
WW: 2

07509 PENICK CORPORATION  
158 Mt. Oliver Avenue  
Newark, NJ 07114  
(201) 621-2800  
WW: 1,2,3

07520 ATLANTIC INDUSTRIES  
10 Kingsland Road  
Nutley, NJ 07110  
(201) 235-1800  
WW: 2

07531 ANALAB INC.  
293 Wilson Avenue  
Newark, NJ 07105  
(201) 344-3136  
DW: 3,4,5  
WW: 2,3,4,5

ESSEX COUNTY (continued)

LAB NO.

07550 CALDWELL WASTEWATER TREATMENT  
One Provost Square  
Caldwell, NJ 07006  
(201) 575-0225  
WW: 2

07572 HAZARDOUS WASTE ENGINEERING  
Consultants, Inc.  
50 Passaic Avenue  
Fairfield, NJ 07006  
(201) 882-8377  
WW: 2,3,4

07584 COUNTY OF ESSEX DPW  
Essex Co. Hospital Sewer Plant  
Fairview Avenue  
Cedar Grove, NJ 07009  
(201) 228-8000, ext. 2383  
WW: 2

07607 PUBLIC SERVICE ELECTRIC & GAS  
Harrison Gas Plant  
4th Street  
Harrison, NJ 07029  
(201) 430-8538  
WW: 2

07673 W.A.T.E.R. WORKS LAB, INC.  
Manufacturer's Village  
364 Glenwood Avenue  
East Orange, NJ 07017  
(201) 678-3787  
DW: 1,2,3  
WW: 1,2,3

GLOUCESTER COUNTY

LAB NO.

08077 MOBIL OIL CORP.  
Paulsboro Refinery - Chemical Laboratory  
Paulsboro, NJ 08066  
(609) 423-1030  
DW: 1,2,3  
WW: 1,2,3

08136 WESTVILLE REGIONAL LABORATORY  
Water and Wastewater Laboratory  
114 Crown Point Road  
Westville, NJ 08093  
(609) 467-7785  
DW: 1,2  
WW: 1,2

08153 NET MID-ATLANTIC, INC.  
P.O. Box 248  
1501 Grandview Avenue  
Thorofare, NJ 08086  
(609) 848-3939  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

08174 VAL ASSOCIATES  
748 Ridge Drive Road  
Mantua, NJ 08051  
(609) 468-3396  
WW: 3

08203 HERCULES, INC.  
North Market Street  
Gibbstown, NJ 08027  
(609) 432-1700  
WW: 2

08222 AIR PRODUCTS AND CHEMICALS, INC.  
P.O. Box 231  
Paulsboro, NJ 08066  
(609) 423-0464  
WW: 2

08227 ESSEX INDUSTRIAL CHEMICALS  
Paulsboro Plant Laboratory  
100 Thomas Lane  
Paulsboro, NJ 08066  
(609) 423-2050  
WW: 2

GLOUCESTER COUNTY (continued)

LAB NO.

08235	ROLLINS ENVIRONMENTAL SERVICES, INC. P.O. Box 221 Bridgeport, NJ 08014 (609) 467-3100 WW: 2,3,4
08275	MONSANTO POLYMER PRODUCTS Delaware River Plant Laboratory P.O. Box 221 Bridgeport, NJ 08014 (609) 467-3000 WW: 2
08336	SHIELDALLOY CORPORATION West Boulevard Newfield, NJ 08344 (609) 692-4200 WW: 2
08354	GLOUCESTER COUNTY UTILITIES AUTHORITY P.O. Box 340 Woodbury, NJ 08086 (609) 848-5151 WW: 1,2,3
08358	HUNTSMAN POLYPROPYLENE CORP. P.O. Box 700 Woodbury, NJ 08096 (609) 432-7900 WW: 2,3
08480	HUNGERFORD & TERRY INC. 226 Atlantic Avenue P.O. Box 45 Clayton, NJ 08312 (609) 881-3200 DW: 2 WW: 2
08488	PENNWALT CORPORATION P.O. Box 26 Thorofare, NJ 08086 (609) 853-8119 WW: 2

GLOUCESTER COUNTY (continued)

LAB NO.

08499            ENVIRO-TEST  
                 422 Delaware Avenue  
                 P.O. Box 46  
                 National Park, NJ 08063  
                 (609) 845-3508  
                 DW: 1  
                 WW: 1

08523            CHEMICAL SAMPLES & ANALYTICAL SERVICES  
                 Analytical Services Co.  
                 1301 Metropolitan Avenue  
                 Thorofare, NJ 08086  
                 (609) 848-7227  
                 DW: 2,3  
                 WW: 2,3

08555            WASTEX INDUSTRIES INC.  
                 Pureland Industrial Complex  
                 510 Heron Drive, Suite 107  
                 Bridgeport, NJ 08014  
                 (609) 467-0380  
                 DW: 2,3,5  
                 WW: 2,3,4,5

08562            LOGAN TOWNSHIP M.U.A.  
                 P.O. Box 71  
                 Bridgeport, NJ 08014  
                 (609) 467-1650  
                 WW: 2

08638            BOROUGH OF SWEDESBORO STP  
                 56 Kings Highway  
                 Swedesboro, NJ 08085  
                 (609) 467-1540  
                 WW: 2

08675            GREENWICH TOWNSHIP  
                 Washington & Walnut Streets  
                 Gibbstown, NJ 08027  
                 (609) 423-1038  
                 DW: 2  
                 WW: 2

HUDSON COUNTY

LAB NO.

09045 HUDSON COUNTY BOARD OF CHOSEN FREEHOLDERS  
Hudson County Bacteriological Laboratory  
100 Clifton Avenue, Third Floor  
Jersey City, NJ 07304  
(201) 432-1000, ext. 210  
DW: 1

09152 UNITED STATES TESTING CO., INC.  
Biological Services Division  
1415 Park Avenue  
Hoboken, NJ 07030  
(201) 792-2400  
DW: 1  
WW: 1,6

09243 TOWNSHIP OF NORTH BERGEN  
Woodcliff Treatment Plant  
4300 Kennedy Boulevard  
North Bergen, NJ 07047  
(201) 854-8514  
WW: 2

09287 EXXON COMPANY, U.S.A.  
Bayonne Plant Laboratory Department-EUSA  
Foot of East 22nd Street  
Bayonne, NJ 07002  
(201) 858-7040  
WW: 2

09310 BADISCHE CORP.  
50 Central Avenue  
Kearny, NJ 07032  
(201) 578-2300  
WW: 2,3

09318 JERSEY CITY SEWERAGE AUTHORITY  
Route #440 & Culver Avenue  
Jersey City, NJ 07305  
(201) 432-1150  
WW: 1,2

09370 UNITED STATES TESTING CO., INC.  
Chemical Services Division  
1415 Park Avenue  
Hoboken, NJ 07030  
(201) 792-2400  
DW: 2,3  
WW: 2,3

HUDSON COUNTY (continued)

LAB NO.

09383 NORTH BERGEN CENTRAL SEWAGE TREATMENT PLANT  
43rd Street & West Side Avenue, Town Hall  
North Bergen, NJ 07047  
(201) 865-7292  
WW: 2

09397 S & W WASTE, INC.  
115 Jacobus Avenue  
South Kearny, NJ 07032  
(201) 344-4004  
WW: 2,3,4

09399 PRIORITY ONE LABORATORY  
75 Jacobus Avenue  
South Kearny, NJ 07032  
(201) 589-0277  
DW: 2,3,4,5  
WW: 2,3,4,5

09416 MILITARY OCEAN TERMINAL  
Facilities Engineer Division  
Building #101  
Bayonne, NJ 07002  
(201) 823-7727  
DW: 2  
WW: 2

09452 SECAUCUS M.U.A.  
1100 Koelle Boulevard  
Secaucus, NJ 07094  
(201) 330-2086  
WW: 1,2

09492 SEARS, ROEBUCK & CO.  
2701 Route #3  
North Bergen, NJ 07074  
(201) 330-2700  
WW: 2

09498 BAYONNE STP  
Foot of Oak Street  
Bayonne, NJ 07002  
(201) 858-6169  
WW: 2

HUDSON COUNTY (continued)

LAB NO.

09536	CITY OF HOBOKEN Sewage Treatment Plant 1600 Adams Street Hoboken, NJ 07030 (201) 420-2382 WW: 2
09552	CLIPPER EXPRESS CO. 390 New County Road Jersey City, NJ 07307 (201) 435-0400 WW: 2
09586	PSE&G Kearny Generating Station Hackensack Avenue Kearny, NJ 07032 (201) 430-8880 WW: 2
09591	PSE&G Hudson Generating Station Duffield & Van Kevren Avenues Jersey City, NJ 07036 (201) 330-6650 WW: 2

HUNTERDON COUNTY

LAB NO.

10196 RECON SYSTEMS, INC.  
P.O. Box 460  
Three Bridges, NJ 08887  
(201) 782-5900  
DW: 1,2,3,5  
WW: 1,2,3,5

10217 MAGNESIUM ELEKTRON, INC.  
R.D. #2, Box 251  
Flemington, NJ 08822  
(201) 782-5800  
WW: 2,3

10231 JERSEY CENTRAL POWER AND LIGHT  
Gilbert Generating Station  
River Road  
Holland Twp., NJ 08848  
(201) 995-4111  
WW: 2

10309 AQUA SURVEY, INC.  
P.O. Box 46  
Rosemont, NJ 08556  
(609) 397-0666  
WW: 6

10350 TOWN OF CLINTON WASTEWATER TREATMENT PLANT  
P.O. Box 5194  
43 Leigh Street  
Clinton, NJ 08809  
(201) 735-8616  
WW: 1,2

10366 N.J. BUREAU OF FRESHWATER  
Fisheries Laboratory  
P.O. Box 394  
Lebanon, NJ 08833  
(201) 236-2118  
WW: 2

10429 READINGTON-LEBANON SEWERAGE AUTHORITY  
P.O. Box 136  
Whitehouse, NJ 08888  
(201) 534-6171  
WW: 1,2

HUNTERDON COUNTY (continued)

LAB NO.

10440	RARITAN TOWNSHIP M.U.A. P.O. Box 387 Flemington, NJ 08822 (201) 782-7453 WW: 1,2
10441	RIEGEL DIVISION - JAMES RIVER CORPORATION Hughesville Mill Waste Treatment Laboratory Route #619 Milford, NJ 08848 (201) 995-2411 WW: 2
10442	RIEGEL DIVISION - JAMES RIVER CORPORATION Milford Mill Waste Treatment Laboratory Route #619 Milford, NJ 08848 (201) 995-2411 WW: 2
10444	LAMBERTVILLE SEWERAGE AUTHORITY Lambert Lane Extended Lambertville, NJ 08530 (609) 397-1385 WW: 2
10605	MERCK & COMPANY P.O. Box 450 Hillsborough Road Three Bridges, NJ 08887 (201) 369-3018 WW: 2

MERCER COUNTY

LAB NO.

11106 LECO LABORATORY  
3123 Klockner Road  
Trenton, NJ 08690  
(609) 588-0011  
DW: 1,2  
WW: 1,2

11118 PRINCETON TESTING LABORATORY, INC.  
P.O. Box 3108  
Princeton, NJ 08540  
(609) 452-9050  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5,6

11133 TRENTON WATER WORKS  
P.O. Box 528  
Trenton, NJ 08604  
(609) 989-3208  
DW: 1,2,3,4  
WW: 1,2,3

11147 PERRITT LABORATORIES, INC.  
P.O. Box 147  
Hightstown, NJ 08520  
(609) 443-4848  
DW: 1,2  
WW: 1,2

11148 N.J. DEPARTMENT OF HEALTH  
Public Health & Environmental Lab  
CN 360  
Trenton, NJ 08625  
(609) 292-5605  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

11149 NJDEP  
DEQ Analytical Services  
380 Scotch Road  
Trenton, NJ 08628  
(609) 292-1463  
DW: 2,3,4,5,6  
WW: 2,3,4,5

MERCER COUNTY (continued)

LAB NO.

11198	CHYUN ASSOCIATES Research Park 429 Wall Street Princeton, NJ 08540 (609) 924-5151 DW: 1,2,3,4,5 WW: 1,2,3,4,5
11212	SDS BIOTECH CORPORATION P.O. Box 813 Princeton, NJ 08540 (609) 799-0760 WW: 2
11214	TRENTON SEWER UTILITY Lamberton Road Trenton, NJ 08611 (609) 989-3093 WW: 1,2,3
11219	PRINCETON SEWER OPERATING COMMITTEE P.O. Box 390 Princeton, NJ 08540 (609) 924-1860 WW: 2
11242	STONY BROOK REGIONAL SEWERAGE AUTHORITY River Road P.O. Box 365 Princeton, NJ 08540 (609) 924-8881 WW: 1,2,3
11252	N.J. DEPARTMENT OF TRANSPORTATION Bureau of Materials 999 Parkway Avenue Trenton, NJ 08625 (609) 530-2321 DW: 1,2,3 WW: 1,2,3
11298	WEST WINDSOR TOWNSHIP Jefferson Parts STP P.O. Box 38 Princeton Junction, NJ 08550 (609) 799-2705 WW: 2

MERCER COUNTY (continued)

LAB NO.

11308 FMC CORP.  
P.O. Box 8  
Princeton, NJ 08540  
(609) 452-2300  
WW: 2

11401 MOBIL OIL CORP.  
Technical Service Lab.  
P.O. Box 1027  
Princeton, NJ 08540  
(609) 737-3000  
WW: 2,3,4

11415 EAST WINDSOR M.U.A.  
7 Wiltshire Drive  
East Windsor, NJ 08520  
(609) 443-6003  
DW: 1,2,3  
WW: 1,2,3

11474 TOWNSHIP OF HAMILTON  
Independence Avenue  
Hamilton, NJ 08610  
(609) 890-3536  
WW: 1,2

11514 EWING-LAWRENCE SEWERAGE AUTHORITY  
600 Whitehead Road  
Lawrenceville, NJ 08648  
(609) 587-4061  
WW: 1,2,3

11516 MOBIL OIL CORP.  
Env. & Health Science Lab  
P.O. Box 1029  
Princeton, NJ 08540  
(609) 737-5500  
WW: 6

11570 SOMERS DESIGN CO., INC.  
11 Manor Ridge Drive  
Princeton Junction, NJ 08550  
(609) 799-0808  
WW: 2

11590 PSE&G  
Mercer Generating Station  
Lamberton Road  
Trenton, NJ 08611  
(609) 599-7061  
WW: 2

MIDDLESEX COUNTY

LAB NO.

12064 IT CORPORATION  
165 Fieldcrest Avenue  
CN 7809  
Edison, NJ 08818  
(201) 225-2000  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5,6

12065 NEW BRUNSWICK WATER DEPARTMENT  
City Hall  
New Brunswick, NJ 08901  
(201) 745-5060  
DW: 1,2

12113 MIDDLESEX WATER CO.  
P.O. Box 1500  
Iselin, NJ 08830  
(201) 634-1500  
DW: 1,2,3  
WW: 2

12114 MIDDLESEX COUNTY HEALTH DEPARTMENT  
2 George Frederick Plaza  
Woodbridge, NJ 07095  
(201) 634-4500  
DW: 1  
WW: 1

12128 NEW JERSEY LABORATORIES  
222-226 Easton Avenue  
New Brunswick, NJ 08903  
(201) 249-0148  
DW: 1,2,3  
WW: 1,2,3

12129 ACCUTEST LABORATORIES  
578 Livingston Avenue  
North Brunswick, NJ 08902  
(201) 249-0100  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

12150 DEPARTMENT OF ENVIRONMENTAL SCIENCE  
Cook College-Rutgers University  
P.O. Box 231  
New Brunswick, NJ 08903  
(201) 932-9081  
DW: 1,2,3  
WW: 1,2,3,6

MIDDLESEX COUNTY (continued)

LAB NO.

12216 MIDDLESEX COUNTY UTILITIES  
Box B-1  
Sayreville, NJ 08872  
(201) 721-3800  
WW: 1,2,3

12225 CARTER-WALLACE, INC.  
P.O. Box 1  
Cranbury, NJ 08512  
(609) 655-6506  
WW: 1

12229 JERSEY CENTRAL POWER & LIGHT CO.  
Werner Generating Station Lab  
P.O. Box 127  
South Amboy, NJ 08879  
(201) 721-0800  
WW: 2

12230 JERSEY CENTRAL POWER & LIGHT CO.  
Sayreville Generating Station  
River Road  
Sayreville, NJ 08872  
(201) 257-0133  
WW: 2

12253 FMC CORPORATION  
500 Roosevelt Avenue  
Carteret, NJ 07008  
(201) 541-4171  
WW: 2

12254 ESSEX CHEMICAL CORPORATION  
Essex Central Analytical Laboratory  
1 Crossman Road, South  
Sayreville, NJ 08872  
(201) 727-2100  
WW: 2,3

12257 ENVIRONMENTAL TESTING & CERTIFICATION CORP.  
284 Raritan Center Parkway  
Edison, NJ 08837  
(201) 225-5600  
DW: 2,3,4,5  
WW: 2,3,4,5

MIDDLESEX COUNTY (continued)

LAB NO.

12262	HYDRO-TECH 77 Paterson Street New Brunswick, NJ 07083 (201) 964-4473 WW: 2
12271	HERCULES, INC. Minnisink Avenue Parlin, NJ 08859 (201) 254-1234 WW: 2
12305	COLUMBIAN CHEMICAL CO. Stouts Lane Monmouth Junction, NJ 08852 (201) 329-4641 WW: 2
12332	FIRMENICH, INC. Plainsboro Road Plainsboro, NJ 08536 (609) 452-1000 WW: 2
12340	AMERADA HESS CORP. 1 Hess Plaza Woodbridge, NJ 07095 (201) 636-3000 WW: 2,3
12390	CLAYTON ENVIRONMENTAL CONSULTANTS, INC. 160 Fieldcrest Avenue, Raritan Center Edison, NJ 08837 (201) 225-6040 DW: 2,3 WW: 2,3
12427	INTECH BIOLABS, INC. 158 Tices Lane East Brunswick, NJ 08816 (201) 257-1050 DW: 1,2,3,4,5 WW: 1,2,3,4,5

MIDDLESEX COUNTY (continued)

LAB NO.

12471 PRINCETON PLASMA PHYSICS LABORATORY  
Product & Operational Safety  
P.O. Box 451  
Princeton, NJ 08544  
(609) 683-2529  
DW: 6

12486 ACCREDITED LABS, INC.  
Foot of Pershing Avenue  
P.O. Box 369  
Carteret, NJ 07008-369  
(201) 541-2025  
DW: 2,3,4,5  
WW: 2,3,4,5

12533 SPECTRUM LABORATORIES, INC.  
524 Pelham Avenue  
Piscataway, NJ 08854  
(201) 752-1400  
DW: 2,3,4  
WW: 2,3,4

12543 ENVIROTECH RESEARCH, INC.  
Envirotech Research  
1095 Amboy Avenue  
Edison, NJ 08837  
(201) 225-2225  
DW: 2,3,4,5  
WW: 2,3,4,5

12558 MONROE TOWNSHIP M.U.A.  
Box 104A  
Cranbury, NJ 08512  
(609) 655-1050  
DW: 1,2  
WW: 1,2

12567 MADISON INDUSTRIES, INC.  
Old Waterworks Road  
P.O. Box 175  
Old Bridge, NJ 08857  
(201) 727-2225  
WW: 2,3

MIDDLESEX COUNTY (continued)

LAB NO.

12585

PSE&G  
Sewaren Generating Station  
Cliff Road  
Sewaren, NJ 07077  
(201) 750-2001  
WW: 2

12660

AA Labs, Inc.  
Post Office Box 749  
The Office Center at Princeton Meadows  
Plainsboro, NJ 08536  
(609) 799-8787  
DW: 1,2,3,4  
WW: 1,2,3,4

MONMOUTH COUNTY

LAB NO.

13052            AQUATIC SERVICES, INC.  
                 P.O. Box 301  
                 Manasquan, NJ 08736  
                 (201) 223-0100  
                 DW: 1  
                 WW: 1

13098            MONMOUTH CONSOLIDATED WATER CO.  
                 661 Shrewsbury Avenue  
                 Shrewsbury, NJ 07701  
                 (201) 842-6900  
                 DW: 1,2  
                 WW: 1,2

13209            THE TOWNSHIP OF OCEAN SEWERAGE AUTHORITY  
                 224 Roosevelt Avenue  
                 Oakhurst, NJ 07755  
                 (201) 531-2213  
                 WW: 1,2

13237            NORTHEAST MONMOUTH COUNTY REGIONAL SEWERAGE AUTHORITY  
                 1 Highland Avenue  
                 Monmouth Beach, NJ 07750  
                 (201) 229-8578  
                 WW: 1,2

13270            LONG BRANCH SEWERAGE AUTHORITY  
                 P.O. Box 700  
                 Long Branch, NJ 07740  
                 (201) 222-0711  
                 WW: 1,2

13277            BAYSHORE REGIONAL SEWERAGE AUTHORITY  
                 100 Oak Street  
                 Union Beach, NJ 07735  
                 (201) 739-1025  
                 WW: 1,2

13417            MONMOUTH COUNTY DEPARTMENT OF HEALTH  
                 Route #9 & Campbell Court  
                 Freehold, NJ 07728  
                 (201) 431-7456  
                 DW: 1,2,3  
                 WW: 1,2,3

13421            WESTERN MONMOUTH UTILITIES AUTHORITY  
                 P.O. Box 398  
                 Englishtown, NJ 07726  
                 (201) 446-9300  
                 WW: 1,2

MONMOUTH COUNTY (continued)

LAB NO.

13424 CFM INCORPORATED  
UISCE Environmental Lab., II  
P.O. Box 42  
Belmar, NJ 07719  
(201) 884-2111  
DW: 1,2  
WW: 1,2

13438 PACH PREVENTIVE MEDICINE & ENVIRONMENTAL HEALTH LABORATORY  
U.S. Army MEDDAC - Attn: HSXS - PVM  
Fort Monmouth, NJ 07703  
(201) 532-2667  
DW: 1,2  
WW: 1

13461 SERV-AIR ENVIRONMENTAL LABORATORY  
P.O. Box 21, Building 1209  
Fort Monmouth, NJ 07703  
(201) 532-1101  
DW: 1  
WW: 1

13463 MONMOUTH COUNTY BAYSHORE OUTFALL AUTHORITY  
P.O. Box 184  
Belford, NJ 07718  
(201) 495-2100  
WW: 1,2

13467 ABERDEEN TOWNSHIP M.U.A.  
30 Noble Place  
Aberdeen Township, NJ 07747  
(201) 566-7200  
WW: 2

13468 TOWNSHIP OF MIDDLETOWN SEWERAGE AUTHORITY  
P.O. Box 205, Center Avenue  
Belford, NJ 07718  
(201) 495-1008  
WW: 1,2

13679 EAST COAST WATER REFINING CO., INC.  
The Water Store Lab  
3425 Highway #33  
Neptune, NJ 07753  
(201) 922-0400  
DW: 1,2

MORRIS COUNTY

LAB NO.

14004                   ROBERT H. CUMMINGS  
29 Woodland Drive  
Boonton, NJ 07005  
(201) 334-1591  
DW: 1

14005                   JERSEY CITY WATER TREATMENT FACILITIES  
P.O. Box 103  
Lake Hiawatha, NJ 07034  
(201) 334-0403  
DW: 1,2,3  
WW: 1,2,3

14020                   DUNCAN LABORATORY  
2 Baker Avenue  
Dover, NJ 07801  
(201) 366-0901  
DW: 1,2

14049                   MADISON PUBLIC HEALTH LABORATORY  
22 Central Avenue  
Madison, NJ 07940  
(201) 377-5836  
DW: 1,2,3  
WW: 1,2,3

14076                   TOWNSHIP OF PARSIPPANY-TROY HILLS WATER DEPARTMENT  
1001 Parsippamy Boulevard  
Parsippamy, NJ 07054  
(201) 263-7098  
DW: 1

14082                   EDWARD R. GRICH, INC.  
12 Industrial Road  
Pequannock, NJ 07440  
(201) 694-5677  
DW: 1,2  
WW: 1,2

14116                   INDUSTRIAL CORPOSITION MGT., INC.  
1152 Route #10  
Randolph, NJ 07869  
(201) 584-0330  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

MORRIS COUNTY (continued)

LAB NO.

14119	CASE CONSULTING LABORATORIES, INC. 622 Route #10 Whippany, NJ 07981 (201) 428-9666 WW: 2
14187	SHIMEL & SOR TESTING LABS, INC. 98 Sand Park Road Cedar Grove, NJ 07009 (201) 239-6001 DW: 2,3 WW: 2,3
14208	MADISON-CHATHAM JOINT MEETING North Passaic Avenue Box 341 Chatham, NJ 07928 (201) 635-4616 WW: 1,2
14248	HERCULES, INC. Howard Boulevard Kenvil, NJ 07847 (201) 584-5321 DW: 2 WW: 2
14251	FRITZCHE DODGE & OLCOTT, INC. Merry Lane East Hanover, NJ 07936 (201) 386-9800 WW: 2
14273	PEQUANNOCK, LINCOLN PARK & FAIRFIELD SEWERAGE AUTHORITY P.O. Box 188 Lincoln Park, NJ 07035 (201) 696-4494 WW: 1,2
14330	WASHINGTON TOWNSHIP M.U.A. P.O. Box 226 Long Valley, NJ 07853 (201) 876-4500 WW: 2

MORRIS COUNTY (continued)

LAB NO.

14344 HANOVER SEWERAGE AUTHORITY  
P.O. Box 250  
Whippany, NJ 07981  
(201) 887-4532  
WW: 1,2

14349 MOUNT OLIVE TOWNSHIP  
Route #46  
Budd Lake, NJ 07828  
(201) 691-0900  
WW: 1,2

14363 MUSCONETCONG SEWERAGE AUTHORITY  
P.O. Box 416  
Stanhope, NJ 07874  
(201) 347-1525  
WW: 1,2

14367 CFM ENVIRONMENTAL SERVICES  
9 Whippany Road  
Whippany, NJ 07981  
(201) 884-2111  
DW: 1,2,3,4,5  
WW: 1,2,3,5,6

14369 TOWNSHIP OF ROXBURY  
Ajax Terrace WPCP  
72 Eyland Avenue  
Succasunna, NJ 07876  
(201) 584-5360  
WW: 2

14375 TOWNSHIP OF CHATHAM  
Tanglewood Lane  
Chatham, NJ 07928  
(201) 635-8789  
WW: 1,2

14379 FLORHAM PARK SEWERAGE AUTHORITY  
P.O. Box 131  
Florham Park, NJ 07932  
(201) 377-7050  
WW: 1,2

MORRIS COUNTY (continued)

LAB NO.

14380 TOWNSHIP OF MORRIS  
P.O. Box 90, 50 Woodland Avenue  
Convent Station, NJ 07961  
(201) 326-7363  
WW: 1,2

14384 ROCKAWAY VALLEY REGIONAL SEWERAGE AUTHORITY  
R.D. #1  
Boonton, NJ 07005  
(201) 263-1555  
WW: 1,2

14453 MOUNT OLIVE COMPLEX  
40 Wolfe Road  
Budd Lake, NJ 07828  
(201) 691-2239  
WW: 2

14489 MENDHAM BOROUGH SEWERAGE  
6 West Main Street  
Mendham, NJ 07945  
(201) 543-7030  
WW: 2

14530 YWC, INC.  
York Labs, Division of YWC  
628 Route #10  
Whippany, NJ 07981  
(201) 428-8181  
DW: 2,3,5  
WW: 2,3,5

14561 JEFFERSON TOWNSHIP M.U.A.  
Municipal Building  
Weldon Road  
Lake Hopatcong, NJ 07849  
(201) 697-1500  
WW: 2

14580 ENVIRONMENTAL CONSULTING RESEARCH ANALYTICAL LABS  
273 Franklin Road  
Randolph, NJ 07869  
(201) 361-4252  
DW: 2,3,5  
WW: 2,3,5

MORRIS COUNTY (continued)

LAB NO.

14602 MORRISTOWN WASTEWATER TREATMENT  
110 South Street  
Morristown, NJ 07960  
(201) 538-4539  
WW: 2

14611 PREVENTIVE MEDICINE SERVICE  
ARDEC  
USA Health Clinic  
HSCS-HC-P Building 118  
Picatinny Arsenal, NJ 07806-5000  
(201) 724-2301  
DW: 1

14622 VERITECH, DIVISION OF PMC, INC.  
47 Carey Avenue  
Butler, NJ 07405  
(201) 492-8744  
DW: 2,3,4  
WW: 2,3

OCEAN COUNTY

LAB NO.

15006 BRICK TOWNSHIP M.U.A.  
1551 Route #88 West  
Brick Township, NJ 08723  
(201) 458-7000, ext. 45  
DW: 1,2  
WW: 1,2

15083 J.R. HENDERSON LABS, INC.  
123 Seaman Avenue  
Beachwood, NJ 08722  
(201) 341-1211  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

15104 LAKE ASSOCIATES LABORATORY  
405 Route #9  
Tuckerton, NJ 08087  
(609) 296-6057  
DW: 1,2,3

15105 OCEAN COUNTY BOARD OF HEALTH  
CN 2191  
Toms River, NJ 08753  
(201) 341-9700  
DW: 1,2,3,5  
WW: 1,2,3,4,5

15126 ENVIRONMENTAL TESTING LABORATORIES, INC.  
P.O. Box 137  
Lanoka Harbor, NJ 08734  
(609) 693-3100  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

15141 OCEAN COUNTY MEDICAL LAB  
525 Route #70, Box T  
Brick, NJ 08723  
(201) 920-1772  
DW: 1

15265 CIBA-GEIGY CORPORATION  
Environmental Analytical Labs  
Route #37, Building 743  
Toms River, NJ 08753  
(201) 349-5200  
WW: 2,3,6

OCEAN COUNTY (continued)

LAB NO.

15304 GPU NUCLEAR CORP.  
Oyster Creek Station Laboratory  
P.O. Box 388  
Forked River, NJ 08731  
(609) 693-6000  
WW: 2

15337 OCEAN COUNTY UTILITIES AUTHORITY  
Central Water Pollution Control Facility  
501 Hickory Lane  
Bayville, NJ 08721  
(201) 269-4500  
WW: 1,2,3

15526 ENVIRONMENTAL PROFILE LAB  
Route #37, Business Park  
Unit 13  
Toms River, NJ 08753  
(201) 244-6278  
DW: 2,3,4,5  
WW: 2,3,4,5

15548 EMS LABORATORIES, INC.  
721 West Kennedy Boulevard  
Lakewood, NJ 08701  
(201) 370-1360  
DW: 1,2,3,4,5  
WW: 1,2,3,5

PASSAIC COUNTY

LAB NO.

16040	BOROUGH OF HAWTHORNE WATER DEPARTMENT 445 Lafayette Avenue Hawthorne, NJ 07506 (201) 427-2378 DW: 1
16047	PASSAIC VALLEY WATER COMMISSION P.O. Box 198 Little Falls, NJ 07425 (201) 256-1566 DW: 1,2,3,4,5 WW: 1,2,3,4,5
16067	IDYLEASE CLINICAL LABORATORIES 124 Union Valley Road Newfoundland, NJ 07435 (201) 697-3311 DW: 1,2
16107	NORTH JERSEY DISTRICT WATER SUPPLY COMMISSION One F.A. Orechio Drive Wanaque, NJ 07465 (201) 835-3600 DW: 1,2,3 WW: 2,3
16108	TOWNSHIP OF WAYNE WATER AND SEWER DEPARTMENT 201 Dey Road Wayne, NJ 07470 (201) 694-1800, ext. 277 DW: 1,2 WW: 1,2
16163	POMPTON LAKES BOROUGH M.U.A. 200 Lincoln Avenue Pompton Lakes, NJ 07442 (201) 839-3044 DW: 1 WW: 1,2
16261	GAF CORPORATION 1361 Alps Road Wayne, NJ 07470 (201) 628-3000 WW: 2

PASSAIC COUNTY (continued)

LOG NO.

16454           ITT AVIONICS  
Material Evaluation Laboratory  
100 Kingsland Road  
Clifton, NJ 07016  
(201) 284-2170  
WW: 2

16458           D, L ASSOCIATES, INC.  
126 Hugo Avenue  
West Paterson, NJ 07424  
(201) 345-0170  
DW: 1,2  
WW: 1,2

16481           CITY OF PATERSON PUBLIC HEALTH LABORATORY  
176 Broadway  
Paterson, NJ 07505  
(201) 881-3972  
DW: 1  
WW: 1

16515           MILES LABORATORIES, INC.  
Biotech Products Division  
P.O. Box 181  
193 Arlington Avenue  
Clifton, NJ 07015  
(201) 772-4800  
WW: 2

16541           MOBAY CORPORATION  
550 Belmont Avenue  
Haledon, NJ 07508  
(201) 942-3232  
WW: 2

16546           SUPRATECH LABS, INC.  
34 Grandview Drive  
Wayne, NJ 07470  
(201) 595-2449  
DW: 2,4,5  
WW: 2,4,5

PASSAIC COUNTY (continued)

LOG NO.

16606 ENVIRONMENTAL PRO-TECH SERVICES, INC.  
P.O. Box 599  
West Milford, NJ 07480  
(201) 726-2666  
DW: 1,2,3  
WW: 1,2,3

16612 E.I. DUPONT DENEMOURS & CO., INC.  
Pompton Lakes Works Lab  
Cannonball Road  
Pompton Lakes, NJ 07442  
(201) 835-1300  
WW: 2

16649 WANAQUE VALLEY REGIONAL SEWERAGE AUTHORITY  
101 Highland Avenue  
P.O. Box 421  
Wanaque, NJ 07465  
WW: 2

SALEM COUNTY

LOG NO.

17080 PENNSVILLE WATER DEPARTMENT  
Industrial Park Road  
Pennsville, NJ 08070  
(609) 678-6360  
DW: 1,2

17094 CITY OF SALEM WATER TREATMENT PLANT  
520 Grieves Parkway  
Salem, NJ 08079  
(609) 935-0350  
DW: 1,2  
WW: 1,2

17223 B.F. GOODRICH CO.  
Waste Treatment Plant  
P.O. Box 400  
Pedricktown, NJ 08067  
(609) 299-5400  
WW: 2

17256 PENNS GROVE SEWERAGE AUTHORITY  
Mill Street & Beach Avenue  
Penns Grove, NJ 08069  
(609) 299-3103  
WW: 2

17266 E.I. DUPONT DENEMOURS & CO., INC.  
Jackson Laboratory  
Chemicals & Pigment Department, Chambers Works  
Deepwater, NJ 08023  
(609) 299-5000  
WW: 3

17291 E.I. DUPONT DENEMOURS & CO., INC.  
Quality Control Laboratory  
Chemicals & Pigment Department, Chambers Works  
Deepwater, NJ 08023  
(609) 540-2993  
WW: 2,3

17296 ATLANTIC CITY ELECTRIC CO.  
DEEPWATER GENERATING STATION  
373 North Broadway  
Pennsville, NJ 08070  
(609) 299-4725  
WW: 2

SALEM COUNTY (continued)

LOG NO.

17327	PUBLIC SERVICE ELECTRIC & GAS CO. Salem Generating Station P.O. Box E Hancocks Bridge, NJ 08038 (609) 935-6000 WW: 2
17451	PUBLIC SERVICE ELECTRIC & GAS CO. Hope Creek Generating Station P.O. Box A Hancocks Bridge, NJ 08038 (609) 339-3072 DW: 2 WW: 2
17465	PENNSVILLE SEWERAGE AUTHORITY 90 North Broadway Pennsville, NJ 08070 (609) 678-7570 WW: 2
17571	CARNEYS POINT SEWERAGE AUTHORITY 303 Harding Highway Carneys Point, NJ 08069 (609) 299-5233 WW: 2

SOMERSET COUNTY

LAB NO.

18024 ELIZABETHTOWN WATER CO. LAB  
P.O. Box 102  
Bound Brook, NJ 08805  
(201) 354-4444, ext. 81  
DW: 1,2,3,4,5  
WW: 2,3,5

18071 TOWNLEY RESEARCH & CONSULTING INC.  
1750 West Front Street  
Plainfield, NJ 07063  
(201) 757-1137  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

18086 INTERNATIONAL HYDRONICS CORP.  
P.O. Box 243  
Rocky Hill, NJ 08553  
(609) 921-9216  
DW: 1,2,3,5  
WW: 1,2,3,4,5

18143 SOMERSET CO. CLINICAL LAB  
27 East High Street  
Somerville, NJ 08876  
(201) 725-3271  
DW: 1

18193 C.A.L. TECHNOLOGIES, INC.  
19 Ross Street  
Somerville, NJ 08876  
(201) 725-6927  
DW: 4  
WW: 4

18207 AMERICAN CYANAMID CO.  
P.O. Box 390  
Bound Brook, NJ 08805  
(201) 560-2000  
WW: 2

18220 JOHNSON & JOHNSON BABY PRODUCTS CO.  
Grandview Road  
Skillman, NJ 08558  
(201) 874-2138  
WW: 2

SOMERSET COUNTY (continued)

LAB NO.

18238	THE SOMERSET RARITAN VALLEY SEWERAGE AUTHORITY P.O. Box 6400 Bridgewater, NJ 08807 (201) 469-0593 WW: 1,2
18347	TOWNSHIP OF MONTGOMERY Route 206 Belle Mead, NJ 08502 (609) 921-2354 WW: 1,2
18382	AMERICAN HOECHST CORPORATION 50 Meister Avenue Somerville, NJ 08876 (201) 231-3316 WW: 2,3
18389	TOWNSHIP OF BERNARDS SEWERAGE AUTHORITY Box 247 Martinsville Road Liberty Corner, NJ 07938 (201) 647-4488 WW: 1,2
18391	BOROUGH OF PEAPACK-GLADSTONE P&G Sewage Plant Brook Street Peapack, NJ 07977 (201) 234-2435 DW: 2 WW: 2
18407	TOWNSHIP OF WARREN SEWERAGE AUTHORITY 46 Mt. Boulevard Warren, NJ 07060 (201) 752-8000 WW: 2
18414	ENVIRONMENTAL DISPOSAL CORP. P.O. Box 509 Pluckemin, NJ 07978 (201) 234-0677 WW: 1,2
18430	VALLEY ROAD SEWERAGE CO. 314 Winsor Street Bound Brook, NJ 08805 (201) 469-6054 WW: 2

SOMERSET COUNTY (continued)

LAB NO.

18478 TRACE TECHNOLOGIES, INC.  
10 Radel Avenue  
Bridgewater, NJ 08807  
(201) 685-2100  
DW: 5  
WW: 2,3,4,5

18551 EXXON BIOMEDICAL SCIENCE, INC.  
P.O. Box 235  
East Millstone, NJ 08873  
(201) 873-6171  
WW: 6

18614 V.A. Medical Center Wastewater  
Treatment Plant  
Chief of Operations  
Lyons, N.J. 07980  
(201) 647-0180, Ext 4582  
WW: 2

18630 ENVIRONMENTAL COMPLIANCE MONITORING CORP.  
P.O. Box 427  
Neshanic Station, NJ 08853  
(609) 466-2161  
DW: 2  
WW: 2

18639 BOROUGH OF BERNARDSVILLE  
P.O. Box 158  
Bernardsville, NJ 07924  
(201) 766-3000  
WW: 2

SUSSEX COUNTY

LAB NO.

19068	SUSSEX COUNTY HEALTH DEPARTMENT RD #3, Box 140-A Newton, NJ 07860 (201) 948-4545 DW: 1,2 WW: 1,2
19103	DURHAM LAB RD #2 Sleepy Hollow Road Sussex, NJ 07461 (201) 875-5370 DW: 1,2 WW: 1
19140	JERSEY ANALYTICAL SERVICE, INC 3 Maple Avenue Andover, NJ 07821 (201) 786-6191 DW: 1 WW: 1
19398	LIMESTONE PRODUCTS P.O. Box 217 Sparta, NJ 07871 (201) 383-2000 WW: 2
19428	TOWN OF NEWTON SEWERAGE TREATMENT PLANT 39 Trinity Street Newton, NJ 07860 (201) 383-2090 WW: 2
19466	SUSSEX COUNTY M.U.A. Upper Wall Kill Valley WPC P.O. Box 216 Hamburg, NJ 07419 (201) 827-8880 WW: 1,2
19659	MARY PAUL LABORATORIES, INC. 70 Sparta Avenue Sparta, NJ 07871 (201) 729-2318 DW: 1 WW: 1

UNION COUNTY

LAB NO.

20003 MOLININI-GOLLOB, INC.  
Gollob Analytical Service  
47 Industrial Road  
Berkeley Heights, NJ 07922  
(201) 464-3331  
DW: 2,4  
WW: 2,3,4

20088 CITY OF RAHWAY WATER DEPT.  
1045 Westfield Avenue  
Rahway, NJ 07065  
(201) 388-0086  
DW: 1,2,3,4

20210 RAHWAY VALLEY SEWERAGE AUTHORITY  
P.O. Box 277-E  
Rahway, NJ 07065  
(201) 388-0868  
WW: 1,2,3

20213 JOINT MEETING OF ESSEX & UNION CO.  
500 South First Street  
Elizabeth, NJ 07202  
(201) 353-1313  
WW: 1,2,3

20221 ALLIED CORPORATION  
100 North Avenue East  
Elizabeth, NJ 07201  
(201) 354-3215  
WW: 2,3

20232 LINDEN-ROSELLE SEWERAGE AUTHORITY  
P.O. Box 4118  
Linden, NJ 07036  
(201) 862-7100  
WW: 1,2,3

20280 REHEIS CHEMICAL CO.  
Division of Armour Pharmaceutical Co.  
235 Synder Avenue  
Berkeley Heights, NJ 07922  
(201) 464-1500  
WW: 2,3

UNION COUNTY (continued)

LAB NO.

20307            EXXON CO., USA  
                 Bayway Refinery Laboratory  
                 P.O. Box 222  
                 Linden, NJ 07036  
                 (201) 474-7588  
                 WW: 2,3

20357            PUBLIC SERVICE ELECTRIC & GAS CO.  
                 Linden SNG Plant  
                 South Wood Avenue  
                 Linden, NJ 07036  
                 (201) 474-8780  
                 WW: 2,3

20374            MERCK & CO., INC.  
                 Chemical Testing - Quality Control  
                 P.O. Box 2000  
                 Rahway, NJ 07065  
                 (201) 574-5157  
                 WW: 2,3

20393            BERKLEY HEIGHTS TOWNSHIP WPC PLANT  
                 29 Park Avenue  
                 Berkeley Heights, NJ 07922  
                 (201) 464-2700 ext. 48  
                 WW: 1,2

20449            BOROUGH OF NEW PROVIDENCE  
                 360 Elkwood Avenue  
                 New Providence, NJ 07974  
                 (201) 665-1077  
                 WW: 1,2

20459            E.I. DUPONT DENEMOURS & CO.  
                 Grasselli Plant  
                 Linden, NJ 07036  
                 (201) 862-1500  
                 WW: 2

20470            CAMIN CARGO CONTROL, INC.  
                 Water Laboratory  
                 820 East Elizabeth Avenue  
                 Linden, NJ 07036  
                 (201) 925-2233  
                 WW: 2,3

UNION COUNTY (continued)

LAB NO.

20477 ANALYTICAL TESTING LABORATORIES  
840 Colfax Avenue  
Kenilworth, NJ 07033  
(201) 241-5040  
WW: 2,3

20508 AT&T BELL LABORATORIES  
600 Mountain Avenue  
RM. 4-276  
Murray Hill, NJ 07974  
(201) 582-5033  
DW: 2,3  
WW: 2,3

20511 AMERICAN CYANAMID CO.  
Warners Plant  
P.O. Box 31  
Linden, NJ 07036  
(201) 862-6000  
WW: 2

20525 SANDICHEM LABORATORIES  
546 Green Lane  
Union, NJ 07083  
(201) 289-8771  
DW: 2  
WW: 2

20542 MAGRUDER COLOR CO., INC.  
1029 Newark Avenue  
Elizabeth, NJ 07201  
(201) 242-1300  
WW: 2

20587 PSE&G  
Linden Generating Station  
Grasselli Area  
Linden, NJ 07036  
(201) 474-8701  
WW: 2

WARREN COUNTY

LAB NO.

21033	HACKETTSTOWN M.U.A. HMUA Water & Wastewater Lab P.O. Box 450 Hackettstown, NJ 07840 (201) 852-3622 DW: 1,2 WW: 1,2
21035	MEDICAL LABORATORY OF NORTHWEST NEW JERSEY, INC. P.O. Box 428 Hackettstown, NJ 07840 (201) 852-3023 DW: 1,2 WW: 1,2
21285	J.T. BAKER CHEMICAL CO. 600 North Broad Street Phillipsburg, NJ 08865 (201) 859-2151 DW: 2,3 WW: 2,3,6
21320	HOFFMAN-LAROCHE, INC. P.O. Box 238 Belvidere, NJ 07823 (201) 475-5300 DW: 1,2,4,5 WW: 1,2,4,5
21335	OXFORD TEXTILE, INC. P.O. Box 98 One Wall Street Oxford, NJ 07863 (201) 452-2121 WW: 2
21378	BOROUGH OF WASHINGTON 100 Belvidere Avenue Washington, NJ 07882 (201) 689-0623 WW: 2
21448	THE SOUTHLAND CORPORATION Alphano Road Great Meadows, NJ 07838 (201) 637-4101 WW: 2

OUT OF STATE

LAB NO.

44494 IT CORPORATION  
IT Analytical Services  
17605 Fabrica Way  
(719) 523-9200  
DW: 2,3,4  
WW: 2,3,4

44575 WESTON ANALYTICS  
7720 Lorraine Avenue  
Suite 105  
Stockton, CA 95210  
(209) 957-3405  
DW: 2,3,4  
WW: 2,3,4

44629 ACUREX CORPORATION  
485 Clyde Avenue  
P.O. Box 7044  
Mountain View, CA 94039  
(415) 961-5700  
DW: 2,3  
WW: 2,3

45556 Rocky Mountain  
Analytical Labs  
4955 Yarrow Street  
Arvada, CO 80002  
(303) 421-6611  
DW: 2,3,4  
WW: 2,3,4

46410 YORK LABORATORIES  
200 Monroe Turnpike  
Monroe, CT 06468  
(203) 325-1371  
DW: 3,4,5  
WW: 5

48512 E.I. DUPONT & DENEMOURS & CO.  
Haskell Laboratory  
P.O. Box 50, Elkton Road  
(302) 366-5264  
WW: 6

48554 STANDARD CHLORINE OF DELAWARE  
P.O. Box 319  
Gournor Lea Road  
Delaware City, DE 19706  
(302) 834-4536  
WW: 1,2,3

OUT OF STATE (continued)

LAB NO.

49500	ENVIROPACT OF JACKSONVILLE, INC. 1627 East 8th Street Jacksonville, FL 32206 (904) 354-6755 DW: 2,3,4,5 WW: 2,3,4
49529	ENVIRONMENTAL SCIENCE & ENGINEERING P.O. Box ESE Gainesville, FL 32602-3053 (904) 332-3318 DW: 2,3,4 WW: 2,3,4
54457	AMERICAN WATER WORKS SERVICE CO. Belleville Laboratory 1115 South Illinois Street Belleville, IL 62221 (618) 235-3600 DW: 2,3,4,5
54669	Roy F. Weston, Inc. Gulf Coast Labs, Inc. 2417 Bond University Park, IL 60466 DW: 2,3,4 WW: 2,3,4
59342	CLEAN HARBORS ANALYTICAL SERVICES, INC. 213 Burlington Road Bedford, MA 01730 (617) 275-9000 DW: 2,3,4 WW: 2,3,4
59422	CAMBRIDGE ANALYTICAL ASSOCS., INC. 1106 Commonwealth Avenue Boston, MA 02215 (617) 923-9376 DW: 2,3,4 WW: 2,3,4
59445	ERCO/DIVISION OF ENSECO, INC. 205 Alewife Brook Parkway Cambridge, MA 02138 (617) 661-3111 DW: 2,3,4,5 WW: 2,3,4,5

OUT OF STATE (continued)

LAB NO.

59521           ERT  
33 Industrial Way  
Wilmington, MA 01887  
(617) 369-8910  
DW: 3,4  
WW: 3,4

59522           BATELLE NEW ENGLAND  
Marine Research Lab  
P.O. Drawer AH  
Duxbury, MA 02332  
(617) 934-0571  
DW: 3,4  
WW: 2,3

60194           U.S. ARMY ENVIRONMENTAL HYGIENE AGENCY  
Aberdeen Proving Ground, Md. 21010-5422  
(301) 671-3639  
DW: 2,3,4

60418           EA ENGINEERING, SCIENCE & TECHNOLOGY  
15 Loveton Circle  
Sparks, Md. 21152  
(301) 771-4950  
DW: 2,3,4,5  
WW: 2,3,4,5,6

60423           HITTMAN EBASCO ASSOC., INC.  
9151 Rumsey Road  
Columbia, MD. 21045  
(301) 730-8525  
DW: 2,3,4  
WW: 2,3,4

60493           BIOSPHERICS, INC.  
4928 Wyaconda Road  
Rockville, Md. 20852  
(301) 770-7700  
DW: 2,3,4  
WW: 2,3,4

64560           METATRACE, INC.  
13715 Rider Trail North  
Earth City, Mo. 63045  
(314) 298-8566  
DW: 2,3,4,5  
WW: 2,3,5

OUT OF STATE (continued)

LAB NO.

67373           COMPUCHEM LABORATORIES, INC.  
3308 Chapel Hill/Nelson Highway  
Research Triangle Park, NC 27709  
(919) 549-8263  
DW: 2,3,4,5  
WW: 2,3,4,5

70396           WATERTEST CORP.  
P.O. Box 6360  
Manchester, NH 03108  
(603) 623-7400  
DW: 1,2,3  
WW: 1,2,3

70519           RESOURCE ANALYSTS, INC.  
P.O. Box 4778  
1 Lafayette Road  
Hampton, NH 03842  
(603) 926-7777  
DW: 2,3,4  
WW: 2,3,4

70609           G.T. ENVIRONMENTAL LABS, INC.  
Meadowbrook Industrial Park  
Milford, NH 03055  
(603) 672-4835  
DW: 2,3,4  
WW: 2,3,4

73158           H2M  
575 Broad Hollow Road  
Melville, NY 11747  
(516) 694-3040  
DW: 1,2 3,4,5  
WW: 1,2,3,4,5

73159           NEW YORK TESTING LABORATORIES, INC.  
75 Urban Avenue  
Westbury, NY 11590  
(516) 334-7770  
DW: 1  
WW: 1,6

73168           FRIEND LABORATORY, INC.  
446 Broad Street  
Box 311  
Waverly, NY 14892-1445  
(607) 565-2893  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

OUT OF STATE (continued)

LAB NO.

73171 MALCOLM PIRNIE INC.  
2 Corporate Park Drive  
White Plains, NY 10602  
(914) 694-2100  
DW: 2,3  
WW: 2,3

73178 CHEMTECH CONSULTING GROUP, INC.  
360 West 11th Street  
New York, NY 10014  
(212) 255-2100  
DW: 2,3  
WW: 1,2,3

73240 INTERSTATE SANITATION COMMISSION  
353 W. 48th Street, 4th Fl.  
New York City, NY 10036  
(212) 582-0380  
WW: 1,2,3,4

73331 GENERAL TESTING CORP.  
710 Exchange Street  
Rochester, NY 14608  
(716) 454-3760  
DW: 2,3,4,5  
WW: 2,3,4,5

73356 ECOTEST LABS, INC.  
377 Sheffield Avenue  
North Babylon, NY 11703  
(516) 422-5777  
DW: 1,2,3,4  
WW: 1,2,3,4

73361 OBG LABORATORIES, INC.  
1304 Buckley Road  
Syracuse, NY 13221  
(315) 451-4700  
DW: 1,2,3,4  
WW: 1,2,3,4,6

73408 COSPER ENVIRONMENTAL SERVICES, INC.  
Northport Environmental Research Center  
Eaton's Neck Road  
Northport, NY 11768  
(516) 754-4455  
WW: 6

OUT OF STATE (continued)

LAB NO.

73455            RECRA ENVIRONMENTAL, INC.  
                 111 Wales Avenue  
                 Tonawanda, NY 14150  
                 (716) 692-7620  
                 DW: 2,3,4  
                 WW: 2,3,4

73460            NANCO ENVIRONMENTAL SERVICES, INC.  
                 RD #6, Robinson Lane  
                 Wappingers, Falls, NY 12590  
                 (914) 221-2485  
                 DW: 2,3,4  
                 WW: 2,3,4

73469            NYTEST ENVIRONMENTAL, INC.  
                 75 Urban Avenue  
                 Westbury, NY 11590  
                 (516) 334-7770  
                 DW: 2,3,4,5  
                 WW: 2,3,4,5

73484            AKZO CHEMICALS, INC.  
                 Eastern Research Center  
                 Livingstone Avenue  
                 Dobbs Ferry, NY 10522  
                 (914) 693-1200  
                 DW: 2,3,4,5  
                 WW: 2,3,4,5

73507            ENVIROTEST LABORATORIES  
                 315 Fullerton Avenue  
                 Newburgh, NY 12550  
                 (914) 562-0890  
                 DW: 1,2,3,4,5  
                 WW: 1,2,3,4,5

73581            C.T. MALE ASSOCIATES  
                 50 Century Hill Drive  
                 P.O. Box 727  
                 Latham, NY 12110  
                 (518) 785-0976  
                 DW: 2,3,4  
                 WW: 2,3,4

74487            WADSWORTH TESTING LABS, INC.  
                 1600 Fourth Street SE  
                 Canton, Ohio 44707  
                 (216) 454-5809  
                 DW: 3,4  
                 WW: 3,4

OUT OF STATE (continued)

LAB NO.

74603 ETC-FINDLAY  
16406 US 224 East  
Findlay, Ohio 45839  
(419) 424-4925  
DW: 2,3,4  
WW: 2,3,4

77166 Q.C. INC.  
P.O. Box 514  
Southampton, PA 18966  
(215) 355-3900  
DW: 1,4,5  
WW: 1,4,5,6

77175 BCM EASTERN, INC.  
521 West Germantown Pike  
Norristown, PA 19401  
(215) 825-0447  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

77192 ROY F. WESTON, INC.  
1 Weston Way  
West Chester, PA 19380  
(215) 692-3030  
DW: 1,2,3,4,5  
WW: 1,2,3,4,5

77269 LANCY LABORATORIES  
525 West New Castle Street  
Zelenople, PA 16063  
(412) 452-9360  
DW: 5  
WW: 2,3,5

77319 GPU NUCLEAR CORP.  
Box 1018  
Reading, PA 19603  
(215) 371-5453  
WW: 2,3

77343 STEARNS CATALYTIC, INC.  
Environmental Systems Division Lab.  
10th Street  
P.O. Box 434  
Marcus Hook, PA 19061  
(215) 485-5377  
DW: 2,3,4  
WW: 2,3,4

OUT OF STATE (continued)

LAB NO.

77360 APPLIED GEOTECHNICAL AND ENVIRONMENTAL SERVICES CORP.  
1151 South Trooper Road  
Norristown, PA 19403  
(215) 666-7404  
DW: 1,2,3,4  
WW: 1,2,3,4

77368 NUS CORPORATION  
Laboratory Services Division  
5350 Campbells Run Road  
Pittsburgh, PA 15205  
(412) 788-1080  
DW: 2,3,4,6  
WW: 2,3,4

77371 WASTEX INDUSTRIES, INC.  
28 East Hanover Street  
Pottstown, PA 19464  
(215) 327-0880  
DW: 1,2,3,4  
WW: 1,2,3,4

77400 ACADEMY OF NATURAL SCIENCES  
Division of Environmental Research  
19th and the Parkway  
Philadelphia, PA 19103  
(215) 299-1000  
WW: 2,3,4,6

77434 RADIATION MANAGEMENT CORP.  
Bricks Lock Road, RD 1  
Pottstown, PA 19464  
(215) 326-9662  
DW: 1,2,3,4  
WW: 1,2,3,4,5,6

77443 LANCASTER LABORATORIES, INC.  
2425 New Holland Pike  
Lancaster, PA 17601  
(717) 656-3201  
DW: 2,3,4,5  
WW: 2,3,4,5

77490 LEHIGH VALLEY ANALYTICS, INC.  
60 West Broad Street  
Bethlehem, PA 18018  
(215) 866-4434  
DW: 2,3,4  
WW: 2,3,4

OUT OF STATE (continued)

LAB NO.

77505 COOPERATIVE VENTURES, INC.  
P.O. Box 796  
3500 Greenway Street  
Easton, PA 18042  
(215) 258-2911  
DW: 1,2,3  
WW: 1,2,3

77524 WRIGHT LAB SERVICES  
3240 Schoolhouse Road  
Middletown, PA 17057  
(717) 944-5541  
DW: 2,3,4,5  
WW: 2,3,4

77535 TALBOT LABORATORIES, INC.  
600 Upland Avenue  
Upland, PA 19015  
(215) 499-7474  
DW: 1,2,3  
WW: 1,2,3

77564 I.T. CORPORATION  
5103 Old William Penn Highway  
Export, PA 15682  
(412) 731-8806  
DW: 2,3,4  
WW: 2,3,4

77569 A&S ENVIRONMENTAL TESTING  
P.O. Box 130  
Temple, PA 19560  
(215) 926-6602  
DW: 2,3,4  
WW: 2,3,4

77600 KEYSTONE ENVIRONMENTAL RESOURCES  
Spectrix-Monroeville Lab  
440 College Park Drive  
Monroeville, PA 15146  
(412) 733-9500  
DW: 2,3,4  
WW: 2,3,4

OUT OF STATE (continued)

LAB NO.

77613

FREE-COL DIVISION  
Freeport Brick Co.  
P.O. Box 557  
Cotton Road  
Meadville, PA 16335  
(814) 724-6242  
DW: 2,3,4  
WW: 2,3,4

77636

ALLENTOWN TESTING LABS, INC.  
P.O. Box 627  
Bethlehem, PA 18016-0627  
(215) 865-2674  
DW: 1

77648

QC INC.-HATBORO DIVISION  
1205 Industrial Highway  
Southampton, PA 18966  
(215) 355-3900  
DW: 2,3  
WW: 2,3

81446

MEMPHIS ENVIRONMENTAL CENTER  
Environmental Analytical Lab  
2603 Corporate Avenue, Suite 100  
Memphis, TN 38132  
(901) 345-1788  
DW: 2,3,4  
WW: 2,3,4

81473

AWARE INC.  
227 French Landing Drive  
Nashville, TN 37228  
(615) 255-2288  
DW: 2,3,4  
WW: 2,3,4

82183

USAF OCCUPATIONAL & ENVIRONMENTAL HEALTH LABORATORY  
Building 140  
Brooks Air Force Base  
San Antonio, Texas 78235  
(512) 536-3626  
DW: 2,3,4  
WW: 2,3

82313 SPECTRIX CORP.  
3911 Fondren, Suite 100  
Houston, Texas 77063  
(713) 266-6800  
DW: 2,3,4  
WW: 2,3,4

84419 VERSAR INC.  
6850 Versar Center  
Springfield, VA 22151  
(703) 750-3000  
DW: 2,3,4  
WW: 2,3,4

77613 FREE-COL DIVISION  
Freeport Brick Co.  
P.O. Box 557  
Cotton Road  
Meadville, PA 16335  
(814) 724-6242  
DW: 2,3,4  
WW: 2,3,4

