

**DUFFUS  
& YOUNCE**  
Attorneys at Law

## Time Line of Water Contamination

at Camp Lejeune, North Carolina

Chronology

[USMCWater.com](http://USMCWater.com)

### 1980

**October-** Camp Lejeune began sampling its water for Trihalomethane or THMs. The Army conducted the water testing, discovering unidentified chlorinated hydrocarbons (examples are TCE and PCE). Unknown if any results were given to Camp Lejeune officials or if base officials knew of any contamination.

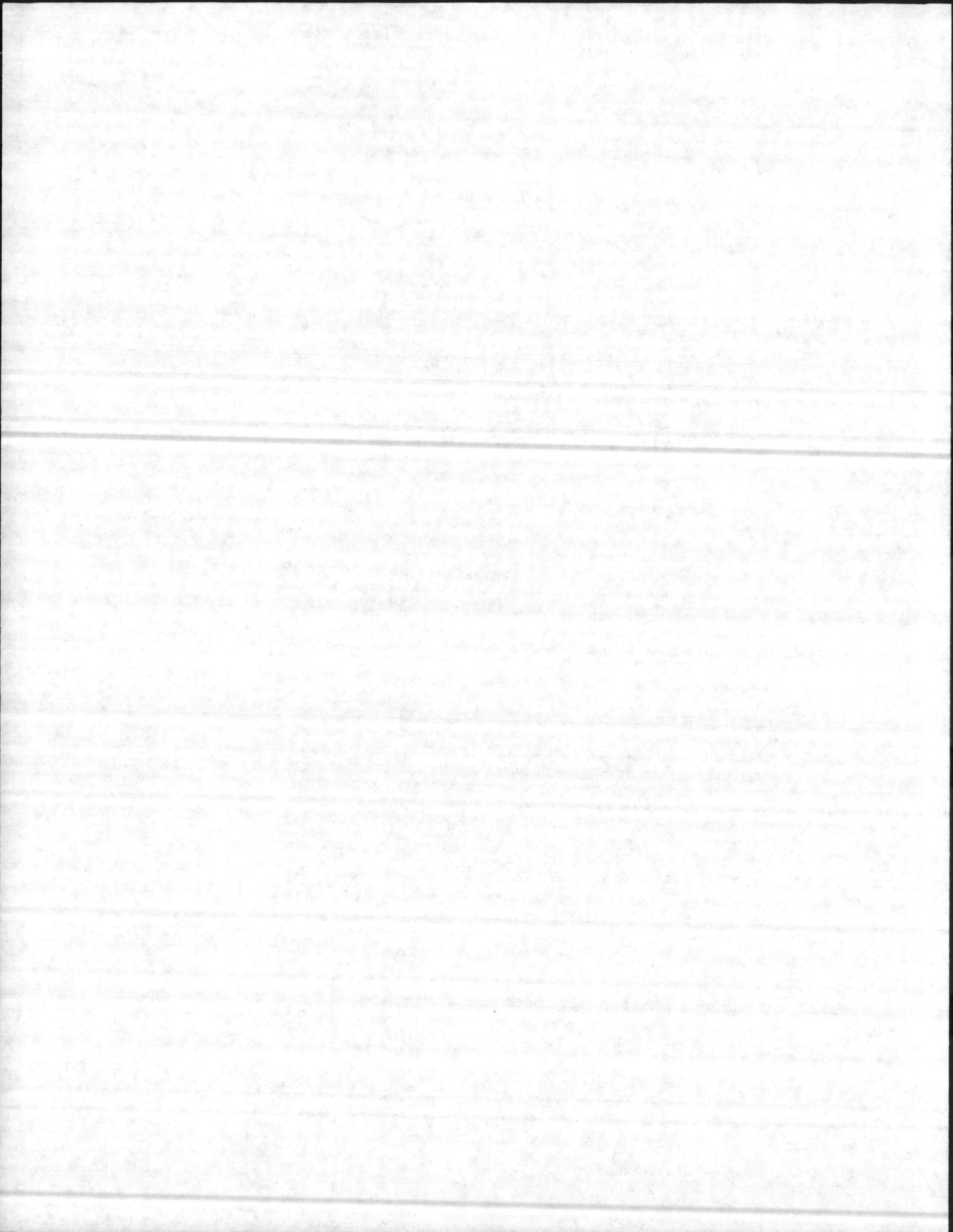
### 1982

**May-** Routine water testing identified TCE and PCE as contaminants in the drinking water distribution systems (Tarawa Terrace and Hadnot Point housing areas). The source cannot be detected, and subsequent testing and sampling of the water proved inconsistent and conflicting results. Base officials schedule ongoing Navy Assessment and Control of Installation Pollutants (NACIP) confirmation studies.

### 1984

**November-** NACIP survey reports that several wells serving base contain Volatile Organic Compounds or VOCs. Camp Lejeune officials shut down VOC contaminated wells.

**December-** In regard to health and safety on base, the Camp Lejeune military paper, *The Globe*, publishes an article regarding the water testing results, corrective actions and notification to its residents keeping them informed.



## 1985

**January-** All wells are tested for VOCs. Four additional wells are discovered and reported to have contamination (Tarawa Terrace and Hadnot Point housing areas). Upon reports, the wells are shut down.

**January-** Holcomb Boulevard water distribution system is contaminated accidentally by a fuel leak. Base officials route water from the Hadnot Point water treatment plant to Berkeley Manor, Watkins Village, Paradise Point, Hospital Point, Midway Park and Stone Street housing areas. Officials believed that all contaminated wells from Hadnot Point were shut down, however, two more wells at Hadnot Point were still contaminated. The system is up and running nine days later after repairs to the fuel line.

**February-** All contaminated wells at Camp Lejeune are shut down.

**April-** Tarawa Terrace residents were notified about the contamination of their water and informed to conserve water while the re-routed system provided them with adequate water after the closing of two additional Tarawa Terrace wells.

**May-** Contamination problem is issued in a Camp Lejeune press release explaining the steps being taken to restore to those effected. Two local newspapers publish stories releasing this information, *The Wilmington Star* and the *Jacksonville Daily News*.

**June-** The completion of Holcomb Boulevard water distribution auxiliary line to Tarawa Terrace. Monthly tests for VOCs.

## 1987

**March-** Tarawa Terrace water treatment plant is closed. All water to Tarawa Terrace is now provided by the newly expanded Holcomb Boulevard water treatment plant.

**May-** ABC Dry Cleaners has been identified as the possible source of ground water contamination by the North Carolina Department of Natural Resources and Community Development through the Superfund program. Assistance by the Marine corps in the remediation and cleanup is provided.

## 1988

**September-** The first North Carolina TCE and PCE monitoring requirements in ground water is established by the North Carolina Department of Natural Resources and Community Development.

## 1991

The first site visit to Camp Lejeune is conducted for public health assessment as a statutory duty. Marine Corps assists and provides information to Agency for Toxic Substances and Disease Registry (ATSDR).

## 1997



ATSDR publishes final Camp Lejeune public health assessment.

## 1998

ATSDR publishes final report about VOCs in drinking water and its adverse affects of pregnancy outcomes. Need for further study is indicated, because of the small sample size. The report indicated potential association between birth defects and adverse pregnancy outcomes and the water contamination at Camp Lejeune.

## 1999

**September-** ATSDR mails letters to previous residents of Camp Lejeune who met their criteria for a health assessment survey. The residents are identified through health and housing records, and the military cooperated with ATSDR to build a data base.

## 2000

**January-** Camp Lejeune held open house to discuss issues pertaining to the previous contamination of water on base.

**August-** Worldwide mailing to all Marines hoping to reach potential ATSDR survey participants. Articles are published in various military newspapers across the country providing information about the survey.

**September-** Press release from Camp Lejeune to military base newspapers soliciting participants for the ATSDR survey.

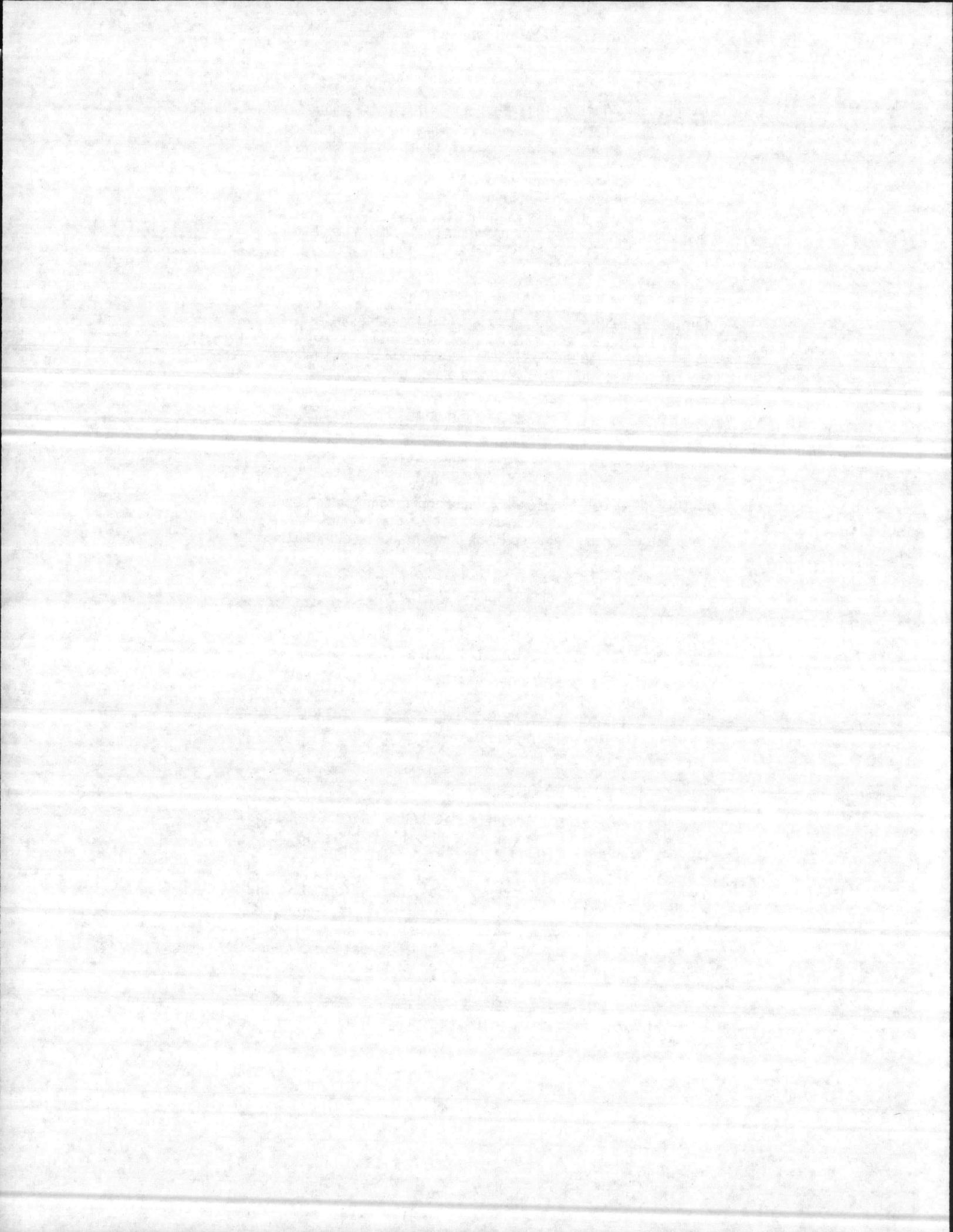
**October-** Efforts to reach former residents not producing sufficient numbers. Plans for a national media outreach campaign are moved to Marine Corps Headquarters in Washington, DC.

Free consultation  
**1-800-763-2098**

[Attorney Directory](#) | [Claims We Pursue](#) | [Contact Us](#) | [Duffus & Younce](#) |  
[Email Our Office](#) | [Feedback](#) | [Firm Profile](#) | [Newsletter](#) | [Office](#)  
[Information](#) | [Site Map](#) | [The Suit Process](#)

**This web site is designed to only provide general information and is not directed toward providing legal advice or establishing an attorney-client relationship.** Laws vary from state to state and are constantly changing. Proper legal advice requires an analysis of your specific factual circumstances. You should promptly contact an experienced attorney if you think you have a case.

**DUFFUS & YOUNCE © 2000**



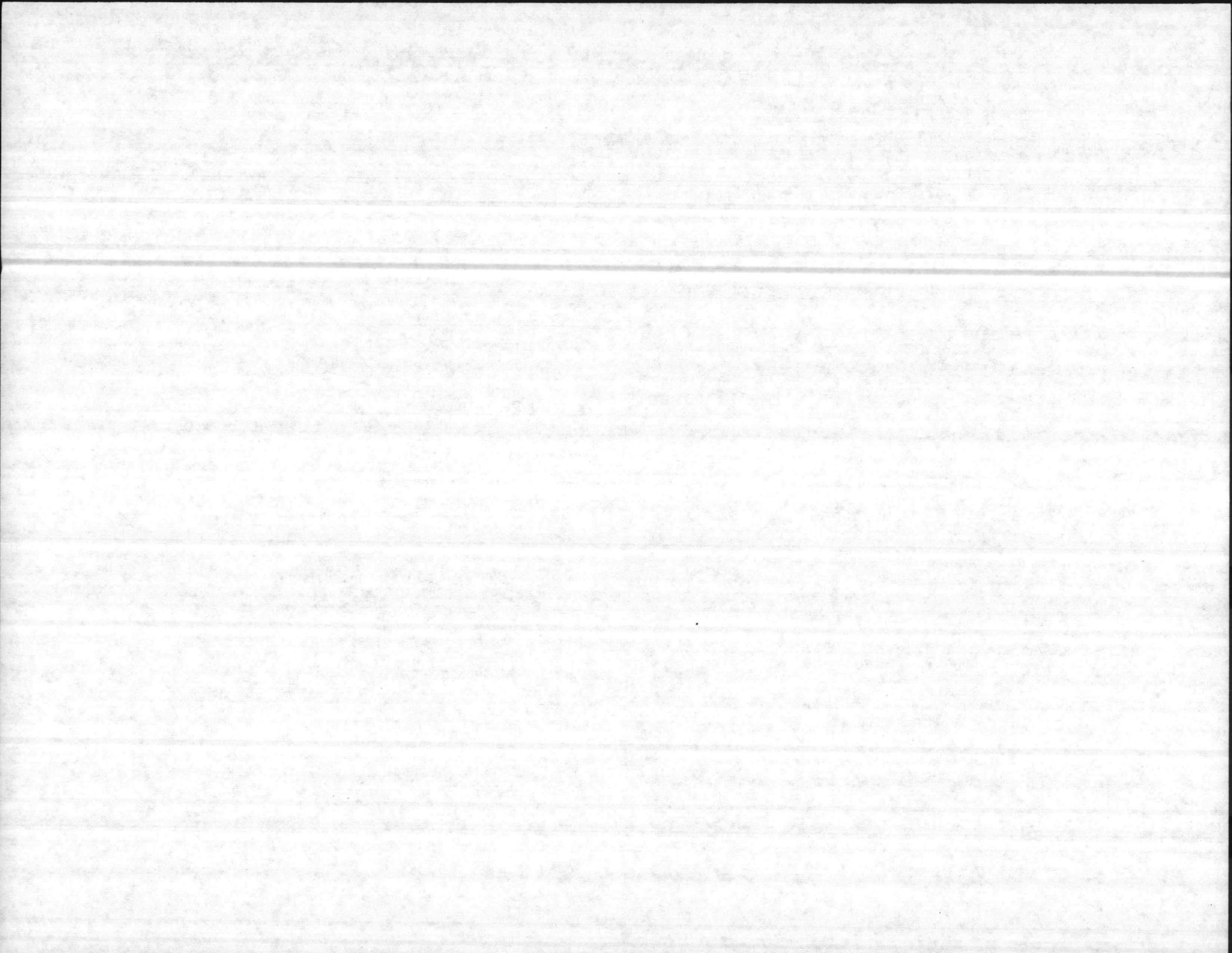
ATSDR Documentation

Chronological listing of all known existing documents related to potable water supply systems on MCB, Camp Lejeune from 1950 to present.  
Compiled July 2001

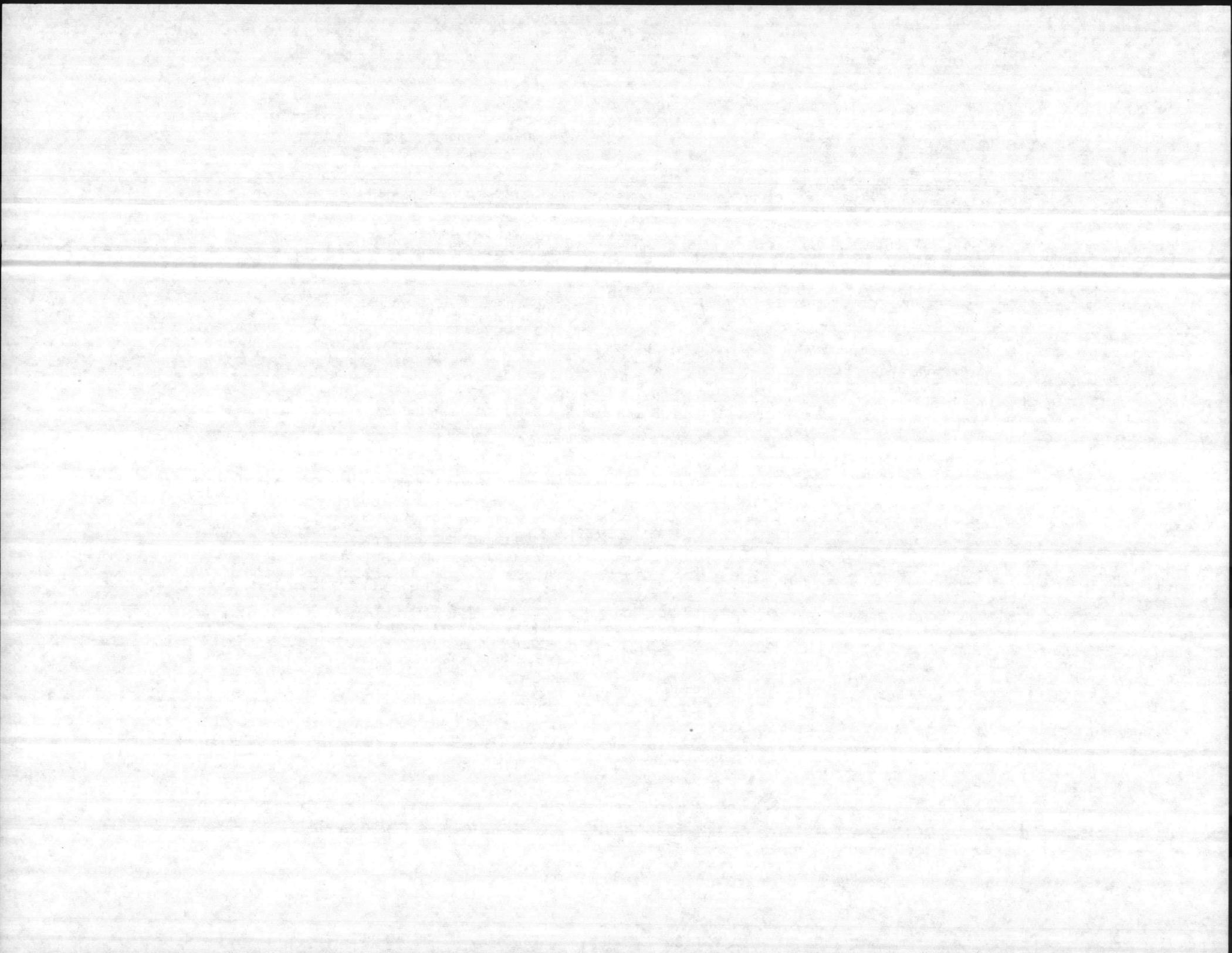
Thomas Burton

All Files maintained at Installation Restoration Branch, Environmental Management Division, Installation and Environment Department, MCB Camp

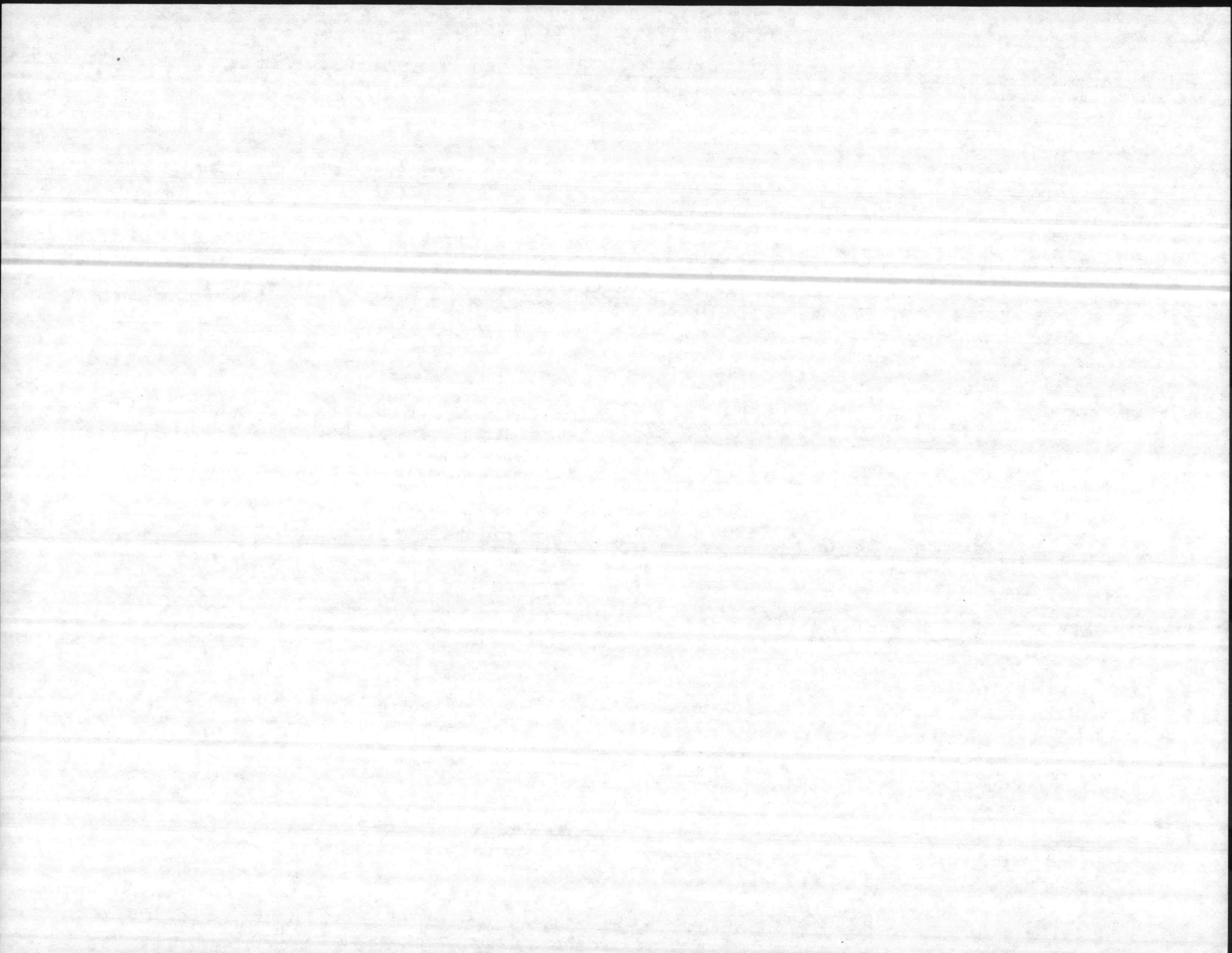
#	Date	Type (letter/memo/report/permit/regulation/etc)	Document		FOIA (Y or N)	Palmer (Y or N)
			Author (From/To)	Contents/Subject/Enclosures		
1	23-Oct-58	Preliminary Ground Water Report for Camp Lejeune, NC	Harry Legrand	Summarizes the geology and groundwater conditions at MCB, Camp Lejeune for purpose of installing permanent water supply wells	N	N
2	2-Apr-59	Interim Report of Groundwater Conditions	Harry Legrand	Summarizes the results of test drilling in relation to installing permanent water supply wells	N	N
3	1-May-59	Evaluation of Well-Water Supply	Harry Legrand	Summarizes the geology and groundwater conditions at MCB, Camp Lejeune for purpose of installing permanent water supply wells	N	N
4	23-Jun-71	NPDES Permit Application for Hadnot Point Water Plant	-	plant process and discharge description	Y	N
5	23-Jun-71	NPDES Permit Application for Montford Point Water Plant	-	plant process and discharge description	Y	N
6	23-Jun-71	NPDES Permit Application for Camp Geiger Water Plant	-	plant process and discharge description	Y	N



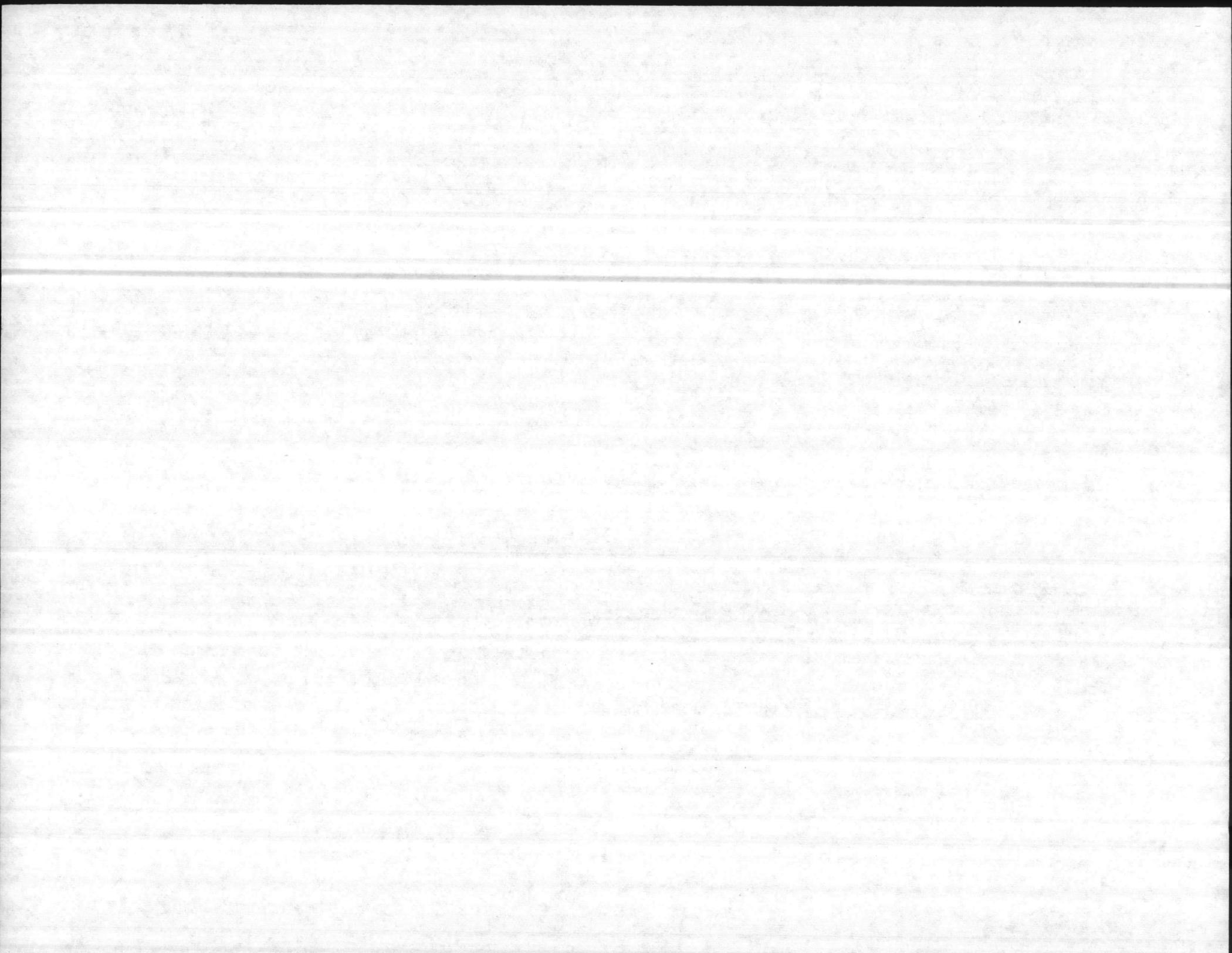
7	23-Jun-71	NPDES Permit Application for Onslow Beach Water Plant	-		plant process and discharge description	Y	N
8	23-Jun-71	NPDES Permit Application for Tarawa Terrace Water Plant	-		plant process and discharge description	Y	N
9	23-Jun-71	NPDES Permit Application for Courthouse Bay Water Plant	-		plant process and discharge description	Y	N
10	23-Jun-71	NPDES Permit Application for Holcomb Blvd. Water Plant	-		plant process and discharge description	Y	N
11	23-Jun-71	NPDES Permit Application for Rifle Range Water Plant	-		plant process and discharge description	Y	N
12	20-Feb-74	NAVFAC NOTICE 11330	Commander, NAVFACENGCOM		Chemicals and Caoatings for use in the operation and maintenance of water supply systems; Encl: 1- Specifications for Chemicals Commonly Used in Potable Water Treatment, 2- EPA "Report on Coagulant Aids for Water Treatment" July 1973	N	N
13	1-May-74	Marine Corps Bulletin 11330	Commandant of the Marine Corps		Chemicals and Caoatings for use in the operation and maintenance of water supply systems; Encl: NAVFAC Notice 11330	N	N
14	17-Aug-77	Contract	(MCB/Southern Testing & Research Lab		Contract for analysis of water samples as required by SDWA	Y	N
15	24-Oct-77	Report of Analysis	(Southern Testing & Research Lab/MCB)		Results of water treatment plant SDWA analysis	Y	N



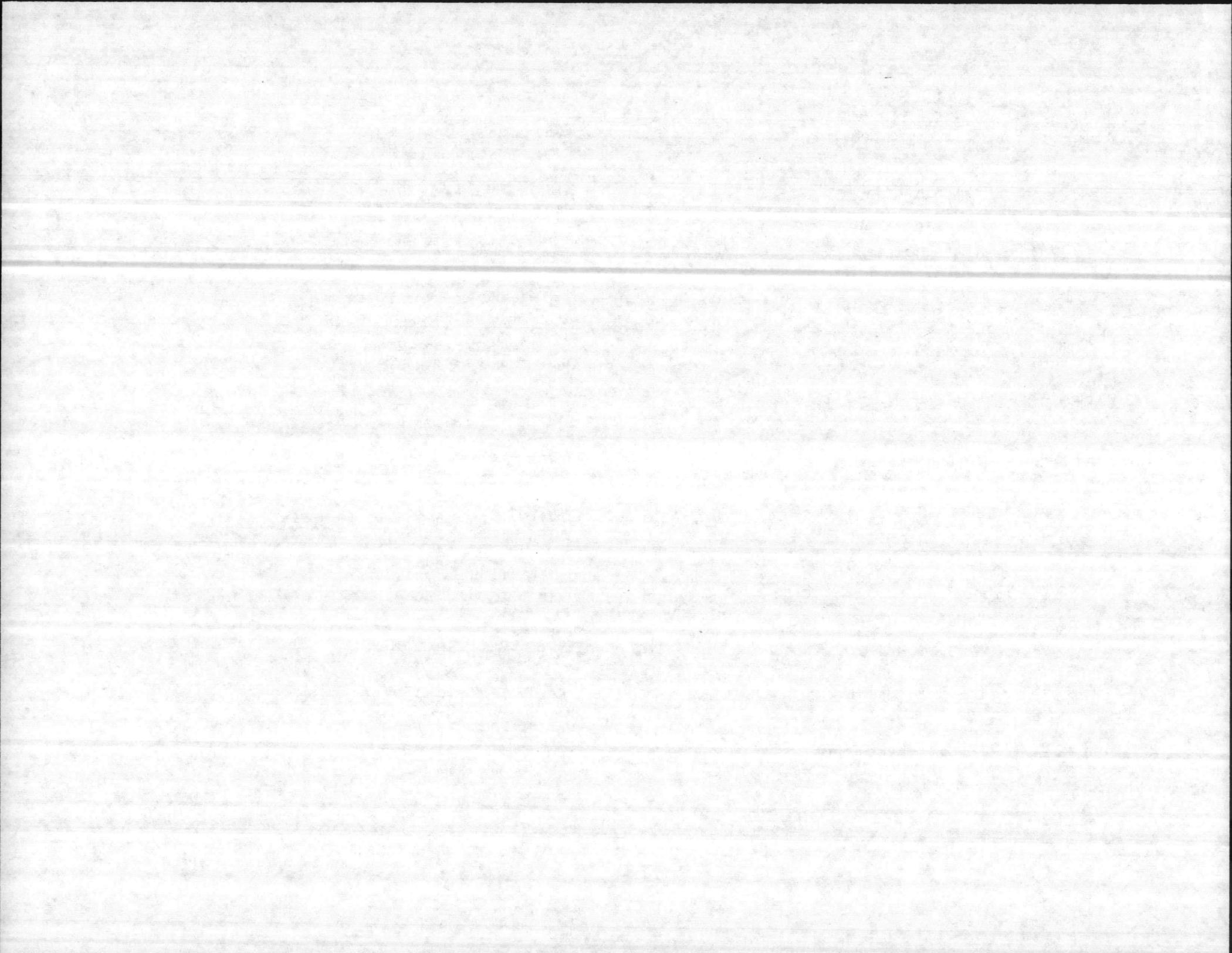
16	31-May-05	Memo	To: Mr. Wooten	Outlines effects of SDWA and NC Potable Water Laws on MCB, Camp Lejeune's Laboratory, System Operators, Etc.	Y	N
17	28-Mar-78	Memo	(Quality Control Laboratory/NC State Certification Board)	Request for Quality Control Laboratory Certification	Y	N
18	4-Oct-78	Memo	(Capt. Janega/SJA)	Proposed Notice of Violation of Bacteria Levels; Encl: 1-Proposed Notice from State EPA, 2-Redrafted Notice	Y	N
19	5-Oct-78	Memo	(SJA/BMO)	Violations of SDWA; Encl: Proposed Notice to Public	Y	N
20	10-Oct-78	Memo	(BMO/JPAO)	SDWA, Public Notification; Encl: 1- Public notification	Y	N
21	1-Apr-79	Study of Two Water Plants; Tarawa Terrace - Montford Point	Henry Von Oesen and Associates	Analysis of the status of the two plants and recommendations regarding eliminating problems	Y	N
22	1-Sep-79	Section .1600 - Water Quality Standards	General Statute	Implementation of SDWA Standards, set sampling/analysis and acceptable levels of several contaminants	N	N
23	18-Sep-79	Memo	(BMO/JPAO)	SDWA News Release Requirement; Encl: Proposed News Release	Y	N
24	20-Nov-79	Memo	(Commander LANTNAVFACENGCOM/CG MCBCL)	FY-80 Environmental Survey for MCB, Camp Lejeune; Encl: Sanitary/Environmental Survey for MCB, Camp Lejeune	N	N



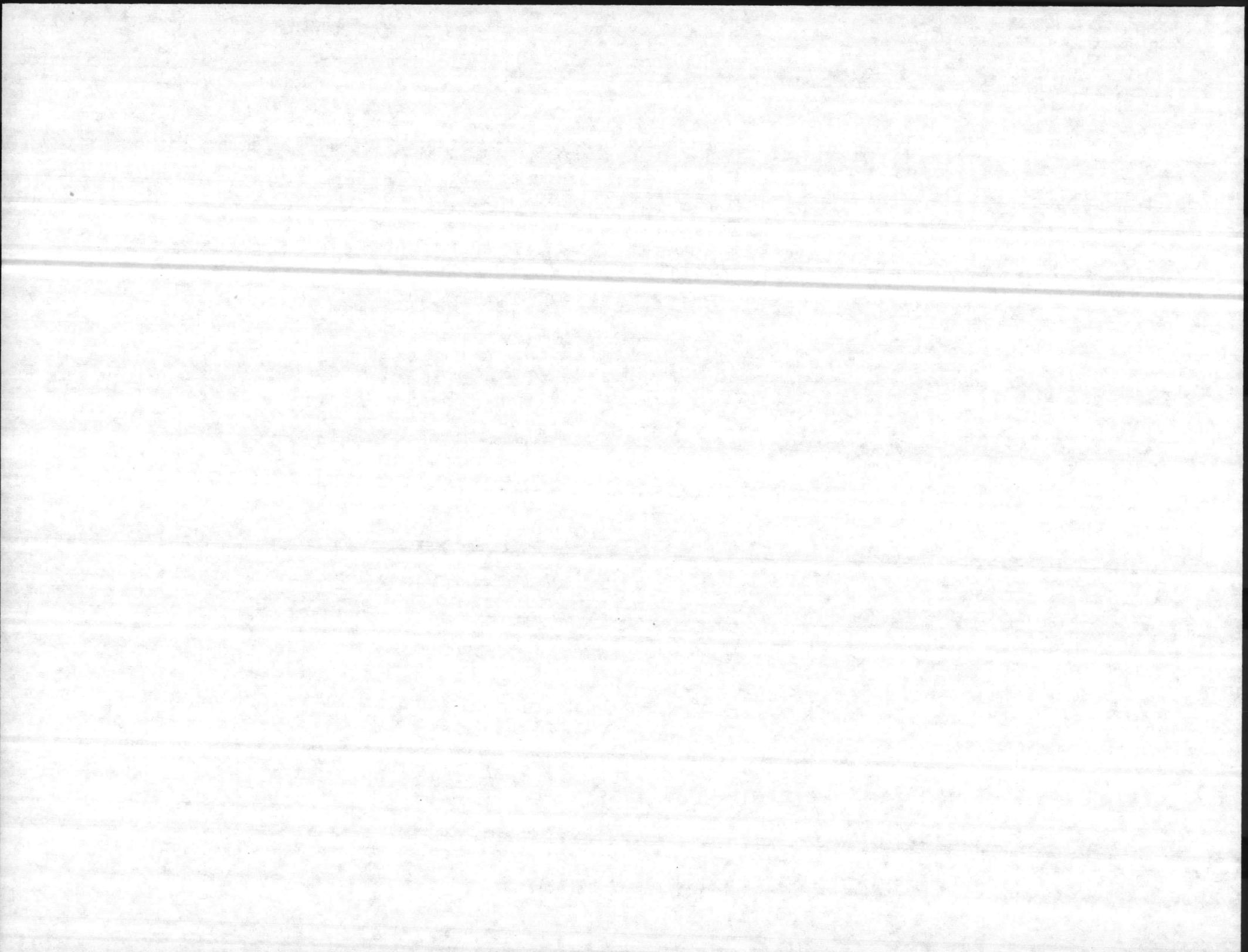
25	20-Nov-79	Environmental Engineering Survey FY-80 Update	Atlantic Division, Naval Facilities Engineering Division	Identifies and recommends corrective measures for environmental deficiencies	Y	Y
26	26-Nov-79	SNARL for Trichloroethylene	USEPA	Established Suggested No Adverse Response Level for TCE	N	N
27	28-Jan-80	Questions and Answers Concerning USEPA Regulation of Organic Contaminants in Drinking Water	James M. Symons	Clarification of USEPAs new Trihalomethane regulations	N	N
28	6-Feb-80	SNARL for Tetrachloroethylene	USEPA	Established Suggested No Adverse Response Level for PCE	N	N
29	9-Apr-80	Suggested Action Guidance - Tetrachloroethylene	USEPA	provides information to assist in instances where PCE is found in drinking water	N	N
30	18-Apr-80	Letter	(Phillip Singer, UNC Chapel Hill/Roger Fry, Water and Sewer Division NC)	Information from survey and experimental work on trihalomethanes in NC	N	N
31	18-Jul-80	Memo	From: Commander, LANTNAVFACENGCOM	Trihalomethanes in drinking water; provides sampling guidance and establishes regulated levels; Encl: 1- summary of trihalomethane regulations, 2- EPAs Q&A concerning organic contaminants in drinking water	N	N
32	25-Sep-80	Letter	(Col. Millice, MCBCL/Charles Wakild, NC Dept of Natural Resources and Community Development	Well Construction Permit TT-30	N	N



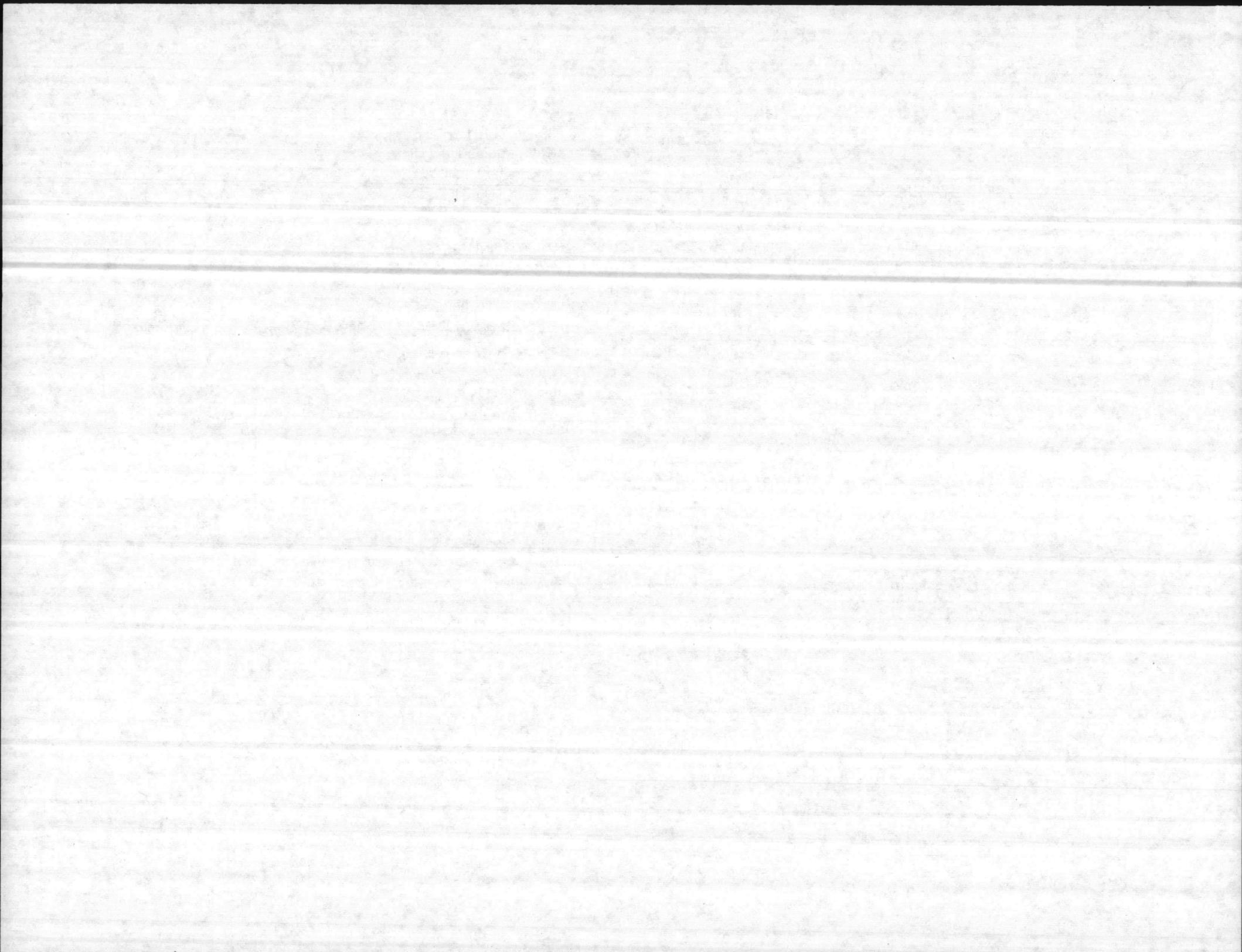
33	31-Oct-80	Analytic Results	Jennings Laboratories Inc	8 water samples for composite for priority pollutant scan	Y	Y
34	31-Oct-80	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 21-Oct-80)	Y	Y
35	31-Oct-80	TTHM Surveillance Report	William Neal	TTHM results for New River Air Station WTP (sampled 21-Oct-80)	Y	Y
36	22-Jan-81	TTHM Surveillance Report	William Neal	TTHM results for Air Station WTP (sampled 18-Dec-80)	Y	Y
37	22-Jan-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 18-Dec-80)	Y	Y
38	9-Feb-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 30-Jan-81)	Y	Y
39	9-Feb-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 29-Jan-81)	Y	Y
40	9-Mar-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 18-Feb-81)	Y	Y
41	9-Mar-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 26-Feb-81)	Y	Y
42	22-Apr-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 14-Apr-81)	Y	Y
43	7-May-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 22-Apr-81)	Y	Y
44	23-Jun-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 11-Jun-81)	Y	Y



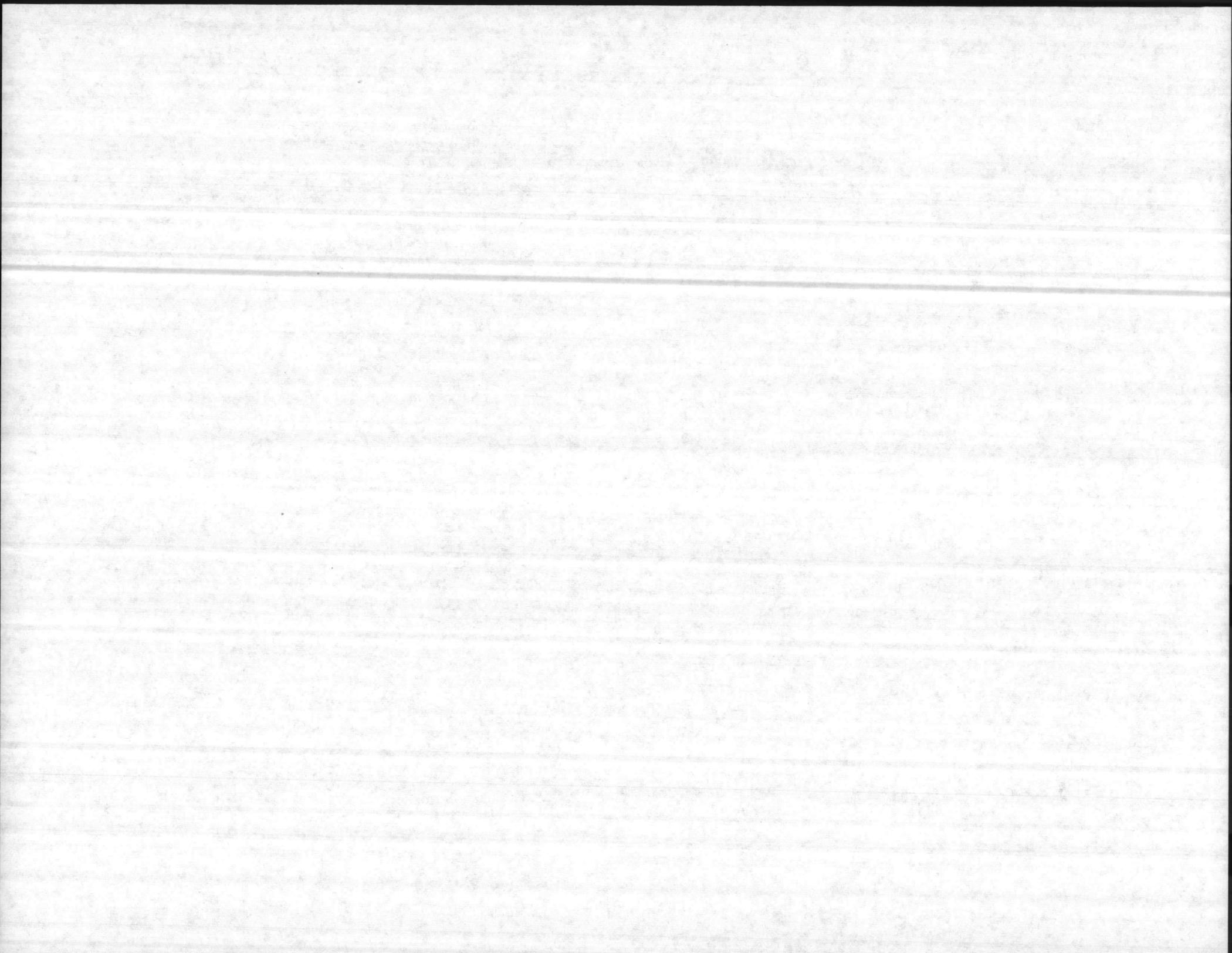
45	23-Jun-81	TTHM Surveillance Report	William Neal	TTHM results for Hadnot Point WTP (sampled 12-Jun-81)	Y	Y
46	26-Aug-81	Memo	(Commander, NAVFACENGCOM/CG MCBCL)	Monitoring Data for Trihalomethanes in drinking water; Encl: 1-Summary of TTHM Regulations, 2- TTHM Surveillance Report Form Hadnot Point, 3- TTHM Surveillance Report MCAS New River	Y	Y
47	27-Aug-81	Letter	(CG Cooper/Charles Rundgren, Division of Health Services)	Sampling of chemical landfill and Rifle Range Potable Water Supply	Y	Y
48	10-Sep-81	Memo	(BMO/AC/S Facilities)	memo with attachment regarding TTHM sampling	N	N
49	1-Dec-81	TTHM Data from US Army EHA @ Fort Mcpherson	-	Summary of TTHM sampling/analysis at MCASNR from Oct-80 to Dec-81	Y	Y
50	11-Jan-82	Memo	(BMO/AC/S Logistics)	NACIP Initial Assessment Study, request for relevant information; Encl: NEESA letter	Y	Y
51	14-Jan-82	Memo	(OIC/Distribution)	NACIP IAS, request for relevant information	Y	Y
52	15-Jan-82	Memo	(OIC/CG MCBCL)	NACIP IAS, scheduling command briefing	N	N



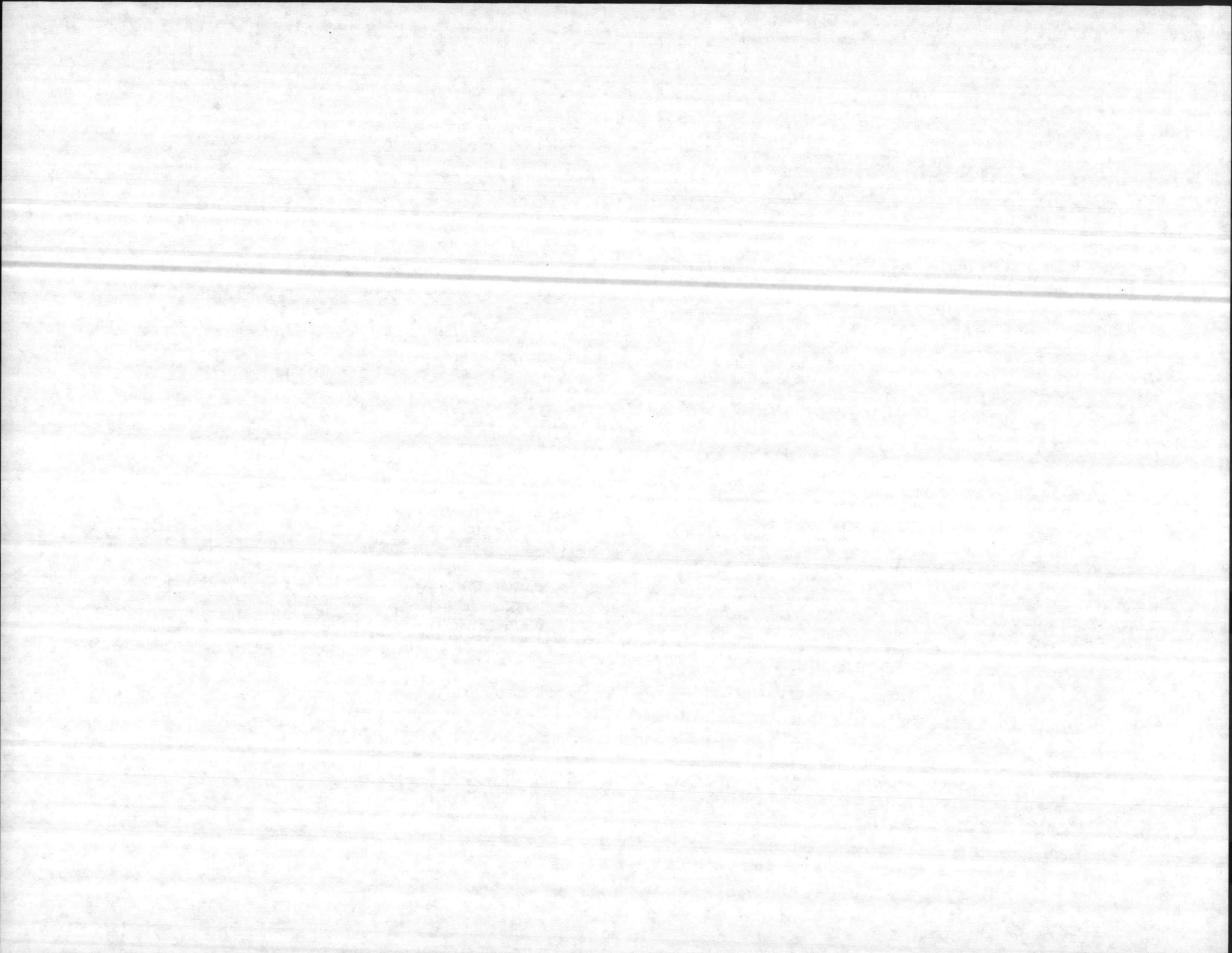
53	5-Feb-82	Memo	(Commander, LNATNAVFACENGCOM/Co mmander, NAVFACENGCOM	Monitoring Data for TTHM and request for guidance, initiating TTHM testing at all WTPs; Encl: 1-TTHM Data Base Summary (10-75,000), 2- TTHM Data Base Summary (<10,000 CONUS), 3- TTHM Data Base Summary (<10,000 Overseas), 4- Overview of Treatment Techniques for Removal of TTHM	Y	Y
54	11-Feb-82	Memo	(Ms. Betz/Mr. Sharpe)	TTHM Monitoring Status	Y	Y
55	12-Feb-82	Memo	(Ms. Betz/Mr. Sharpe)	TTHM Monitoring Status, Initiation of Rfle Range Sampling	Y	Y
56	12-Feb-82	Memo	(Commander, LNATNAVFACENGCOM/CG MCBCL)	Data analysis and status of MCBCL TTHM Monitoring Program; Encl: 1- MCBCL TTHM Data Base Summary, 2- Corrective Measures to prevent/reduce TTHM formation	Y	Y
57	23-Feb-82	Memo	(OIC/CG MCBCL)	NACIP IAS preparation for data gathering; Encl: IAS Team Member Assignments/Report Format	Y	N
58	25-Feb-82	Memo	(Commander, NAVFACENGCOM/Chief, Bereau of Medicine and Surgery)	TTHM in Drinking Water, compliance issues	Y	N
59	3-Mar-82	Memo	(Commander, LANTNAVFACENGCOM/ CG MCBCL)	TTHM in Drinking Water, Encl: Commander NAVFACENGCOM ltr of 25 Feb 82	Y	N



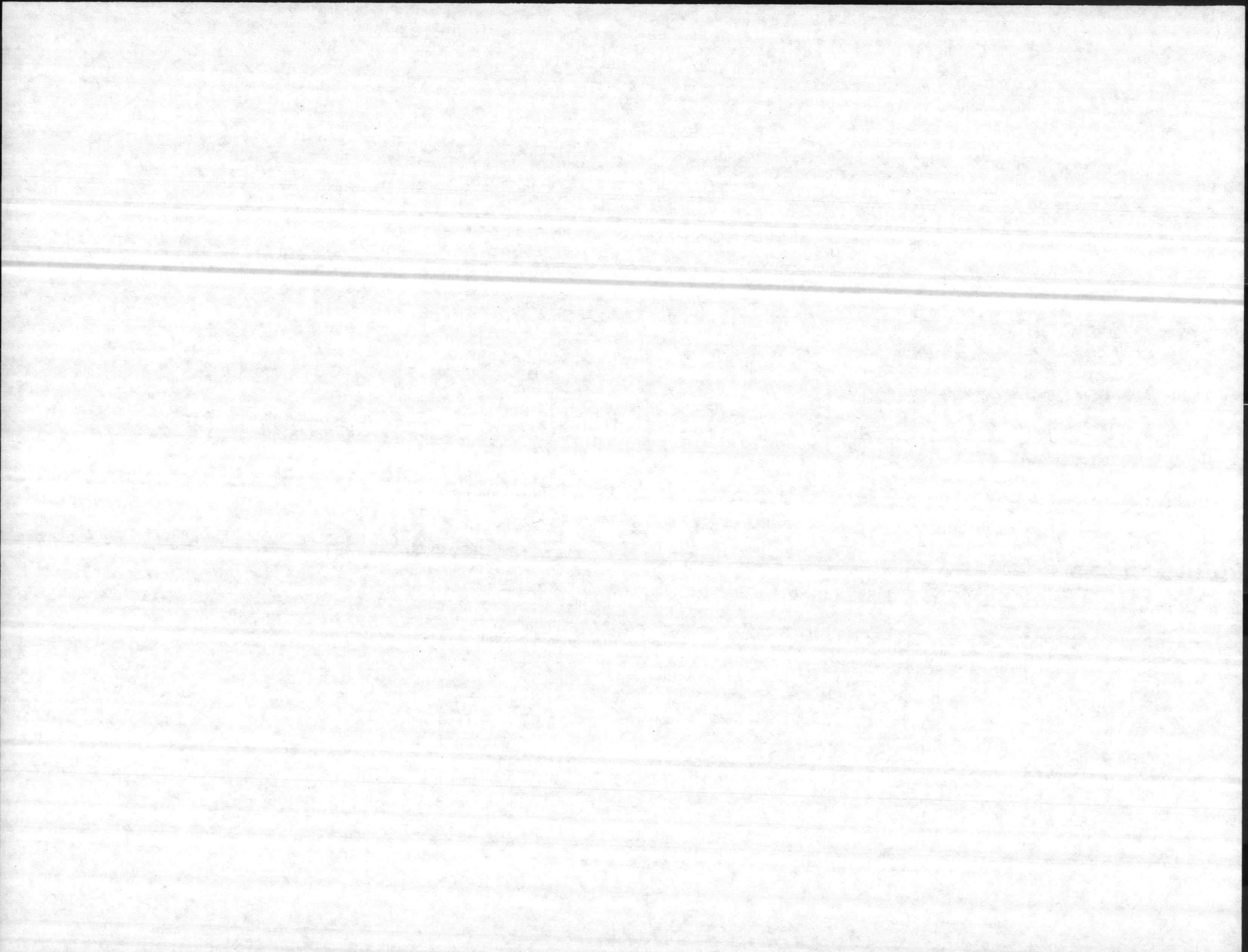
60	9-Mar-82	Memo	(Commander, LANTNAVFACENGCOM/Distribution)	THM in Drinking Water, implementation of MCL; Encl: - EPA Manual, Treatment Techniques for Controlling TTHMs	Y	N
61	9-Mar-82	Memo	(Ms Betz/Mr Sharpe)	Results of TTHM Sampling at Rifle Range	Y	Y
62	18-Mar-82	Analytic Results	-	Analysis of Rifle Range Chemical Dump and WTP Rifle Range Chemical Dump Sampling Description; Encl: 1- Figure of Water and Well depths, 2- Table of Sample Info, 3- Rainfall Readings	Y	Y
63	23-Mar-82	Memo for Record	Ms Betz	Results of TTHM Sampling at Rifle Range	Y	Y
64	25-Mar-82	Memo	(Ms Betz/Mr Sharpe)	duplicates collected 18-Mar-82	Y	Y
65	29-Mar-82	Analytic Results	Jennings Laboratories Inc	Samples collected 18-Mar-82 from RR-45	Y	Y
66	29-Mar-82	Analytic Results	Jennings Laboratories Inc	samples collected 18-Mar-82 from RR-47	Y	Y
67	29-Mar-82	Analytic Results	Jennings Laboratories Inc	samples collected 18-Mar-82 from RR-97	Y	Y
68	30-Mar-82	Analytic Results	Jennings Laboratories Inc	samples collected 18-Mar-82 from RR-85 #6	Y	Y
69	30-Mar-82	Analytic Results	Jennings Laboratories Inc	samples collected 18-Mar-82 from TW-15	Y	Y
70	30-Mar-82	Analytic Results	Jennings Laboratories Inc	samples collected 18-Mar-82 from TW-16	Y	Y
71	30-Mar-82	Analytic Results	Jennings Laboratories Inc	samples collected 18-Mar-82 from TW-17	Y	Y
72	30-Mar-82	Analytic Results	Jennings Laboratories Inc	TTHM results for Rifle Range WTP (sampled 18-Mar-82)	Y	Y
73	15-Apr-82	TTHM Surveillance Report	William Neal	Well Construction Permit for 2 wells	N	N
74	15-Apr-82	Letter	Charles Wakild/Col Millice, AC/S Facilities			



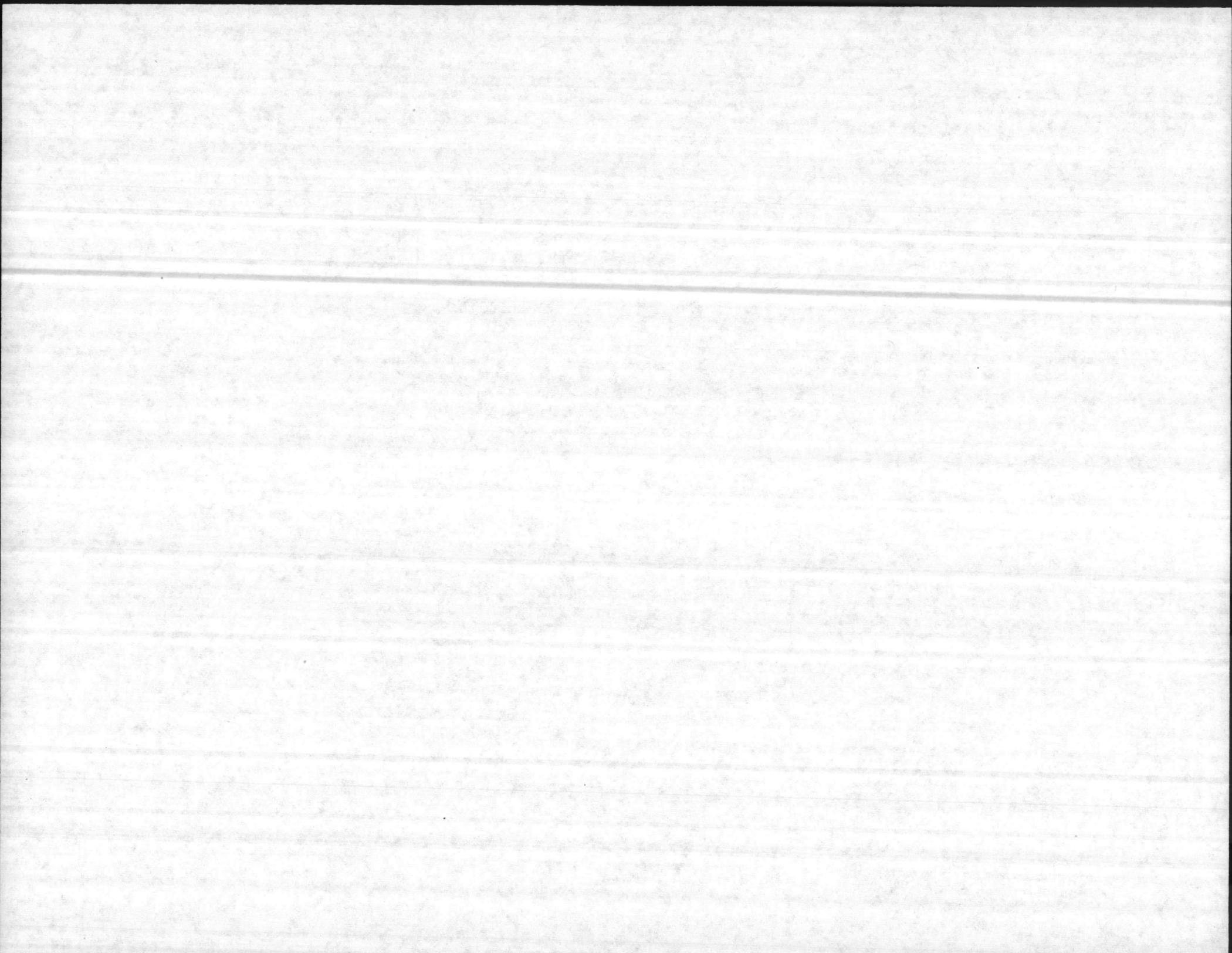
75	16-Apr-82	Analytic Results	Jennings Laboratories Inc	PCB Sampling and Analysis of 4 Rifle Range Wells (sampled 5-Apr-82)	Y	Y
76	19-Apr-82	TTHM Handwritten Sampling Log	Bob Lachapelle	Sampling locations and times for 19-21 April TTHM Sampling	Y	N
77	21-Apr-82	TTHM Sampling Log	Bob Lachapelle	Sampling locations and times for 19-21 April TTHM Sampling	Y	N
78	22-Apr-82	TTHM Sampling Log	Ms Betz	Sampling locations and times for 19-21 April TTHM Sampling	Y	N
79	26-Apr-82	Memo	Ms Betz	Summary of TTHM Sampling for April-81	Y	N
80	27-Apr-82	Memo	Ms Betz	Summary of TTHM Sampling for April-82	Y	N
81	6-May-82	Telephone Log	-	Grainger Labs indication that TCE had been found in TT and HP system	Y	Y
82	6-May-82	Analytic Results	Grainger Laboratories	Analytic Results of April 82 Sampling	Y	Y
83	17-May-82	TTHM Sampling Log	Ms Betz	Sampling log for 17-May-82 Event	Y	N
84	20-May-82	TTHM Sampling Log	Honeycutt	Sampling log for 19-20-May-82 sampling event	Y	N
85	21-May-82	TTHM Sampling Log	Honeycutt	Sampling log for 19-21-May-82 sampling event	Y	N
86	25-May-82	Memo	Ms Betz	Briefing on April's TTHM Analysis	Y	N
87	25-May-82	Memo	Ms Betz	TTHM Sampling for May 1982	Y	N
88	27-May-82	Analytic Results	Jennings Laboratories Inc	PCB Sampling and Analysis of 4 Rifle Range Wells (sampled 5-Apr-82)		
89	28-May-82	TTHM Sampling Log	Honeycutt	Sampling log for 28-May-82 sampling event	Y	N
90	1-Jun-82	Summary of TTHM Analysis	Ms Betz	Summary of TTHM Analysis	Y	Y



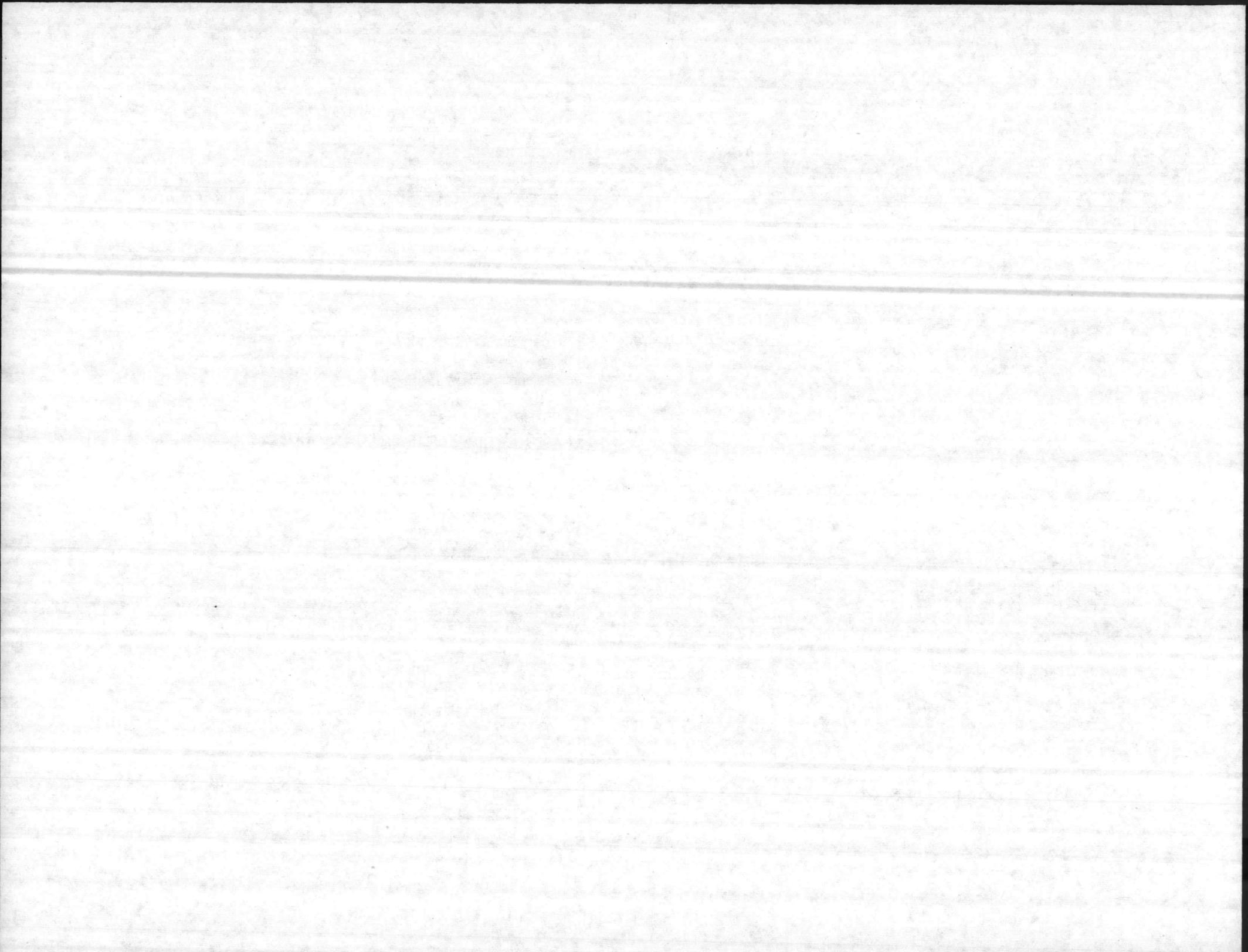
91	1-Jun-82	Memo	Ms Betz	TTHM Sampling for May 1982,	Y	N
92	1-Jun-82	Memo	Ms Betz/Mr Sharpe	LANTDIV letter dated 13-May-82, designates NC as lead in SDWA	Y	N
93	4-Jun-82	Letter	Grainger Laboratories/Ms Betz	Re-sampling May-82 TTHM Samples, provides guidance for best sampling procedures	Y	N
94	9-Jun-82	Analytic Results	Grainger Labs	Analytical Results of samples received 1-Jun-82	Y	Y
95	10-Jun-82	Memo	Ms Betz/Mr Sharpe	Camp Geiger Potable Water causing blockage in AC units	N	N
96	25-Jun-82	TTHM Sampling Log	Ms Betz	Sampling Log for 24-25-Jun-82 event	Y	N
97	25-Jun-82	Memo	CG MCBCL/Distribution	forwarding Encl: 1- Jacksonville Daily News Clipping 14-Jun-82, 2-Raleigh N&O News Clipping of 14-Jun-82	N	N
98	28-Jun-82	Memo	BMO/AC/S Facilities	Summary of TTHM Analysis	Y	Y
99	1-Jul-82	Memo	Ms Betz	TTHM Sampling Event Summary for June-82	Y	N
100	13-Jul-82	Analytic Results	Grainger Labs	Analytical Results of samples received 28-Jun-82	Y	Y
101	27-Jul-82	Memo	-	Summary of TTHM Sampling, Encl: 1-Grainger Labs Ltr of 13-Jul-82, 2- Summary of TTHM Analysis	Y	Y
102	27-Jul-82	Memo	Ms Betz/Mr Sharpe	Summary of TTHM and suggestions related to future sampling	Y	N
103	28-Jul-82	Memo	Honeycutt	TTHM Sampling Log and comments	Y	N
104	29-Jul-82	Memo	Honeycutt	TTHM Sampling Log and comments	Y	N



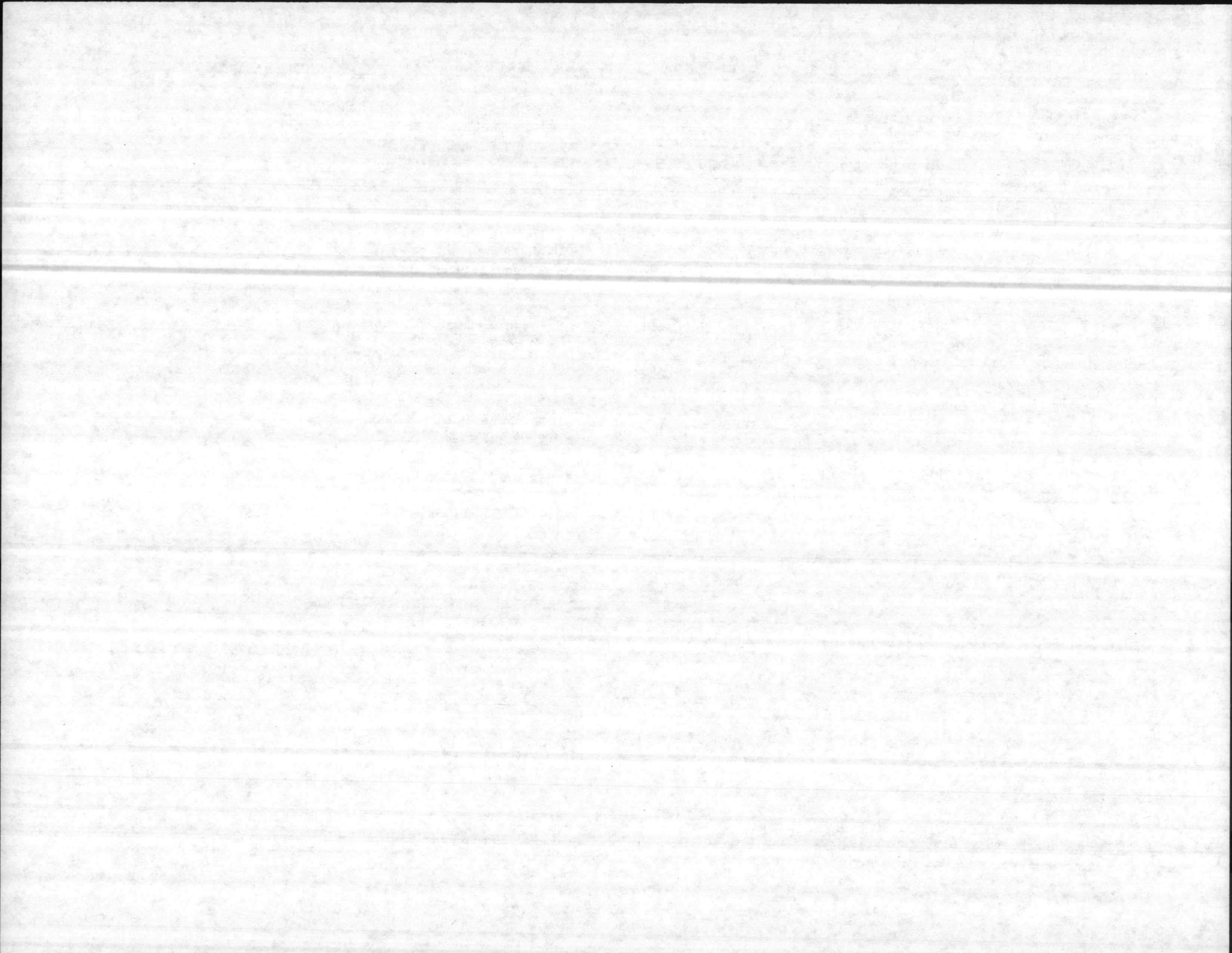
105	29-Jul-82	Telephone Log	-	Sampling and Results discussion	Y	N
106	30-Jul-82	Memo	Ms Betz	TTHM Sampling summary for Jul-82	Y	N
107	30-Jul-82	Memo	Ms Betz	TTHM Sampling summary for Jul-83	Y	N
108	30-Jul-82	Memo	Ms Betz/Mr Sharpe	TTHM sampling, summary of telephone log of 29-Jul-82	Y	N
109	10-Aug-82	Analytic Results	Grainger Labs	Analytical Results of Samples from TT 206, 207 and HP 208,209 (received 29-Jul-82)	Y	Y
110	11-Aug-82	Analytic Results	Grainger Labs	Analytical Results of Samples received 2-Aug-82)	Y	Y
111	12-Aug-82	Memo	(Commander, LANTNAVFACENGCOM/CG MCBCL)	Water System Monitoring Data, Encl: -Jennings Labs, Analysis 2518	Y	N
112	18-Aug-82	TTHM Sampling Log	Ms Betz	Sampling Log for 17-18-Aug-82 event	Y	N
113	18-Aug-82	Memo	Ms Betz	summarizes August sampling event, reduces sampling events to quarterly	Y	N
114	19-Aug-82	Memo	Ms Betz/Mr Sharpe	Grainger Labs ltr of 10-Aug-82, identifies interference as PCE; Encl: 1-sbuject letr, 2-SNARL for TCE, 3-SNARL for PCE, 4-Suggested Action Guidance PCE	Y	Y
115	19-Aug-82	Memo	(Commander, LANTNAVFACENGCOM/CG MCBCL)	PCBs in RR water supply, summary of RR results; Encl: 1- (4 Jennings Lab Analysis Reports, 2-Data tabulation	Y	Y
116	24-Aug-82	Analytic Results	-	Summary of 82 TTHM sampling	Y	Y



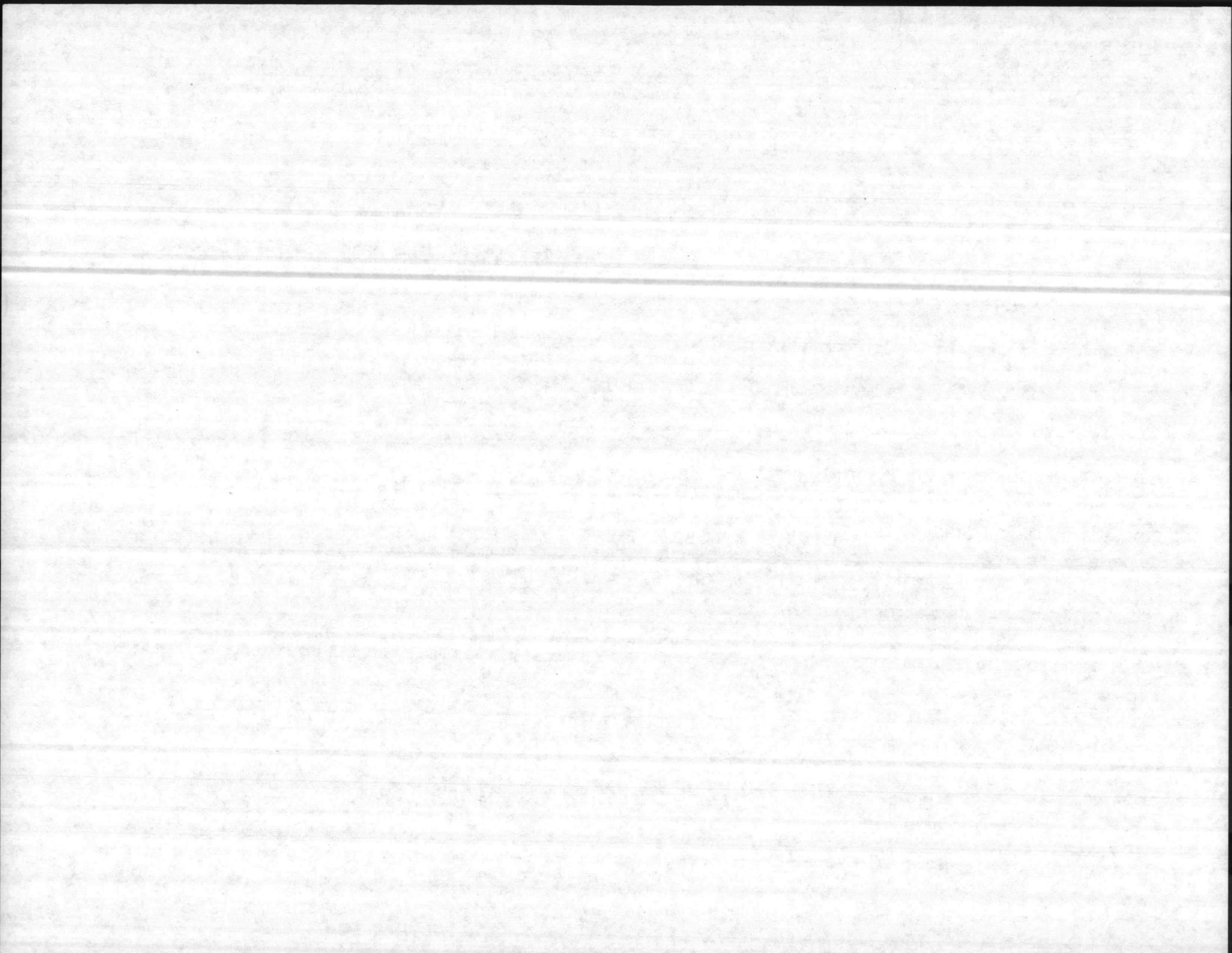
117	25-Aug-82	Memo	(Ms Betz/Mr Sharpe)	Funding FY83 Grainger Labs Contract, summarizes sampling plans and costs for water supply system in FY83	Y	N
118	31-Aug-82	Memo	(Ms Betz/Mr Sharpe)	LANTNAVFACENGCOM ltr of 12-Aug-82, summary of 80 sampling	Y	Y
119	1-Sep-82	Analytic Results	Grainger Labs	Analytical results of samples received 19-Aug-82	Y	Y
120	7-Sep-82	Memo	(Ms Betz/Mr Sharpe)	August TTHM Results; Encl: - Summary of TTHM for Jul-Aug 82	Y	Y
121	8-Sep-82	Well Permit Application	-	permit applications to replace wells (HP-614, HP-639, LCH-4006, HP-627, HP-621, HP-611, RR-227)	N	N
122	8-Sep-82	Memo	Ms Betz	Chemical Dump and RR Sampling/Analysis	Y	Y
123	8-Sep-82	Memo	(Ms Betz/Mr Sharpe)	LANTNAVFACENGCOM ltr of 19-Aug-82, lab validity	Y	Y
124	9-Sep-82	Memo	Ms Betz	RR Sampling 5-Apr-82	Y	Y
125	9-Sep-82	Memo	Ms Betz	RR Sampling on 19-Apr-82	Y	Y
126	10-Sep-82	Letter	(LtCol Calta/Mr Wakild)	Well permit applications	N	N
127	23-Sep-82	Memo	Ms Betz	TTHM Sampling for Sep-82, includes sampling logs	Y	N
128	23-Sep-82	Letter	(Mr Wakild/LtCol Calta)	Well Construction Permits for 7 new wells	N	N
129	23-Sep-82	Analytic Results	Grainger Labs	Analytical Results of samples received 7-Sep-82	Y	Y
130	1-Oct-82	Analytic Results	Grainger Labs	Analytical Results of samples received 24-Sep-82	Y	Y
131	11-Oct-82	Letter	(Mr Wakild/LtCol Calta)	Well Construction Permits for TT well	N	N
132	13-Oct-82	Analytic Results	Grainger Labs	Corrected Analytical Results of samples received 1-Oct-82	Y	Y



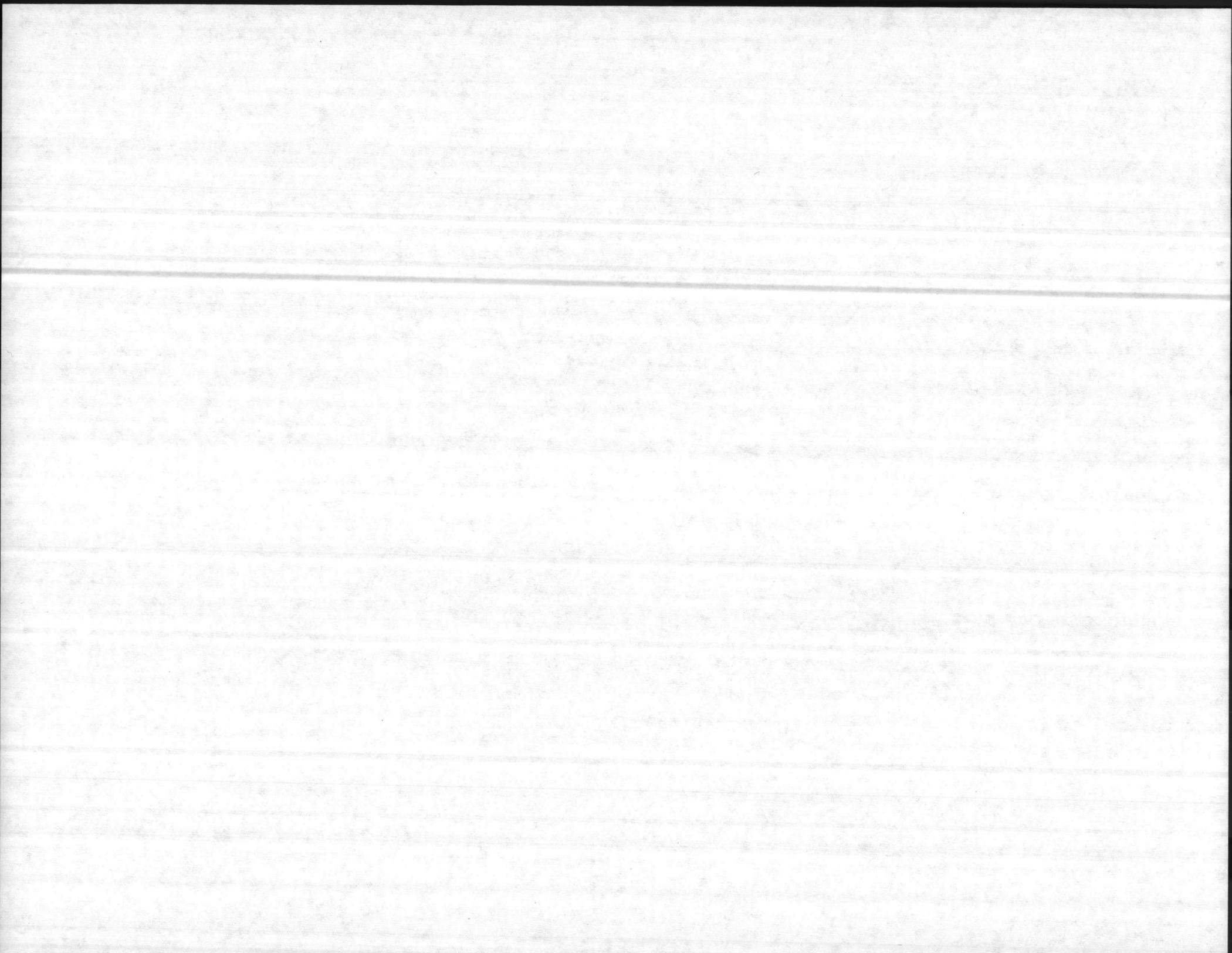
133	31-Oct-82	Analytic Results	Grainger Labs	Results of 8 samples	Y	Y
134	9-Nov-82	Memo	(Ms Betz/Mr Sharpe)	Inorganic Analysis of WTP	Y	Y
135	29-Nov-82	TTHM Sampling Log	Mr Lachapelle	Sampling Log for 19-Nov-82 event	Y	N
136	30-Nov-82	TTHM Summary	-	Summary of 82 TTHM Sampling	Y	Y
137	1-Dec-82	Memo	(Director/AC/S Facilities)	SDWA requirements; Encl: 1-AC/S Memo of 24-Nov-82, 2-Inorganic Analysis Report	Y	Y
138	9-Dec-82	Analytic Results	Grainger Labs	Analytical Results of samples received 2-Dec-82	Y	Y
139	9-Dec-82	Analytic Results	Grainger Labs	Corrected Analytical Results of samples received 2-Dec-82	Y	Y
140	21-Dec-82	Memo	(Ms Betz/Mr Sharpe)	TTHM analysis for Nov-82 and a summary of 82 TTHM sampling	Y	Y
141	29-Dec-82	TTHM Sampling Log	-	TTHM Sampling Log and comments	Y	N
142	4-Jan-83	Memo	-	handwritten memo	Y	N
143	14-Jan-83	Analytic Results	Grainger Labs	Analytical Results of samples received 3-Jan-83	Y	Y
144	25-Feb-83	Memo	Director, NREAD/AC/S Facilities	SDWA and NC Implementation; Encl: - summary of TTHM for January 83	Y	Y
145	1-Mar-83	Summary of TTHM Analysis	-	Summary of TTHM from Jan-82 to Mar-83	Y	Y
146	1-Apr-83	Report	Naval Energy and Environmental Support Activity	Initial Assessment Study of MCBCL, NC	Y	Y
147	30-Mar-83	Memo	(Utilities General Foreman/Directo Utilities)	Inadequate water supply at TT and Camp Johnson	Y	N



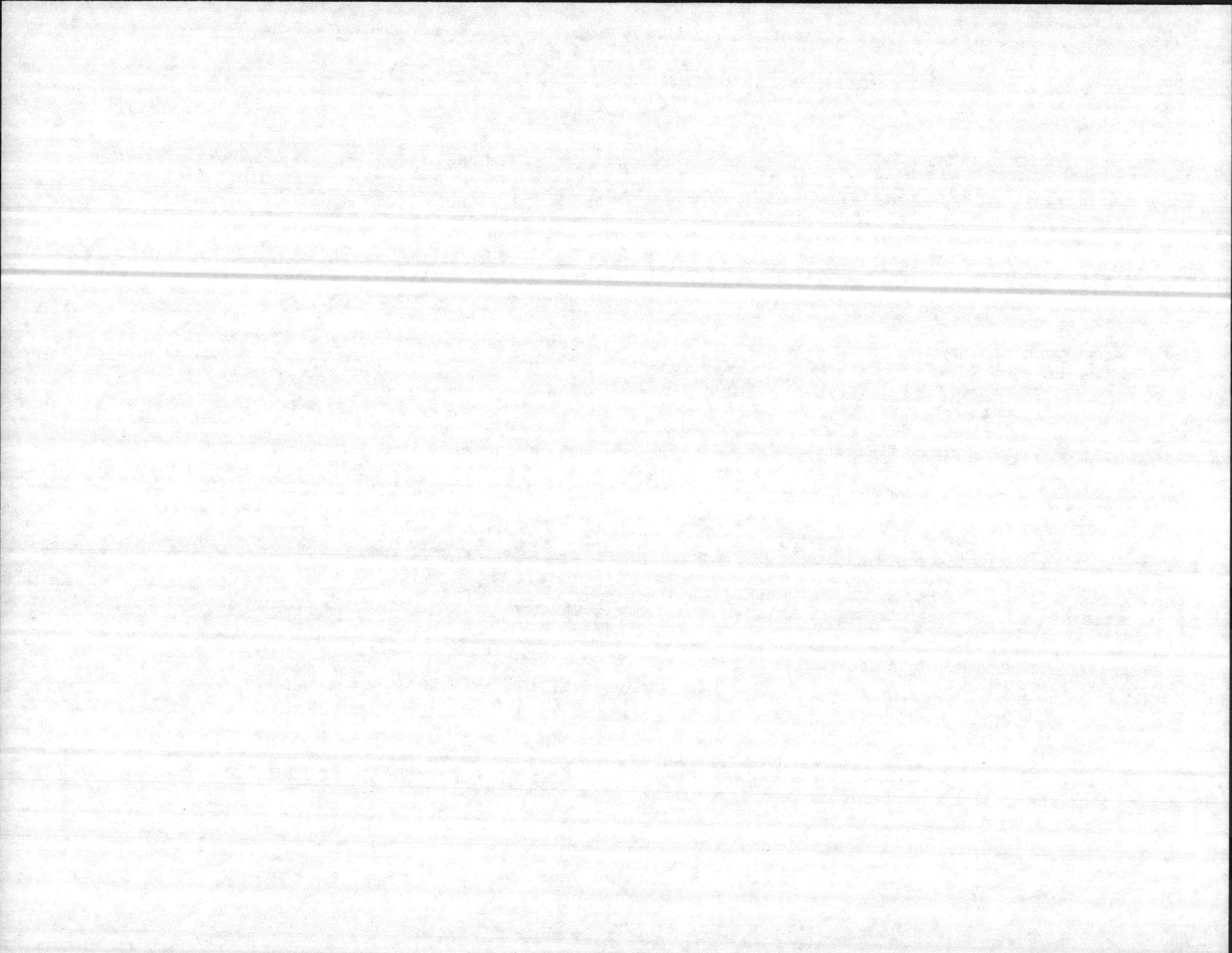
148	11-May-83	Memo	(Commander LANTNAVFACENGCOM/CG MCBCL)	IAS study distribution and public relations; Encl: - statements for media inquiry	Y	N
149	25-May-83	Letter	(Mr Hedeman/LtCol Daley)	provides EPA guidance on TCE contamination	Y	N
150	3-Jun-83	Letter	(Col Marshall/Mr Rundgren)	Results of inorganic and corrosivity analysis; Encl: 1- Inorganic Chemical Analysis, 2- Corrosivity Results, 3- Construction Materials	Y	Y
151	3-Jun-83	Letter	(Col Marshall/Mr Rundgren)	TTHM results for the past year; Encl: -TTHM Analysis Results	Y	Y
152	21-Jun-83	Letter	(Mr Elmore/Col Marshall)	TTHM, inorganic, sodium, and corrosivity analytical results	Y	Y
153	23-Jun-83	Letter	(Col Marshall/Mr Wakild)	permit applications to replace wells (BB-43, HP-601, M-168)	N	N
154	25-Aug-83	TTHM Sampling Log	Ms Betz	TTHM Sampling Log and comments	Y	N
155	16-Sep-83	Analytic Results	Grainger Labs	Analytical Results of samples received 29-Aug-83	Y	Y
156	30-Sep-83	TTHM Summary	-	Summary of quarterly and annual averages	Y	Y
157	14-Oct-83	EPA Notice of Intent	EPA	Notice of intent to propose regulations on inorganic/organic/bacteria etc	N	N
158	12-Dec-83	Letter	(Col Lilley/Mr Rundgren)	TTHM Summaries; Encl: 1- TTHM Analysis & averages, 2- TTHM Analysis HP, 3-TTHM Analysis MCAS	Y	Y
159	20-Jan-84	Letter	(Mr Rundgren/Col Lilley)	Reduction of TTHM Monitoring Frequency	Y	N



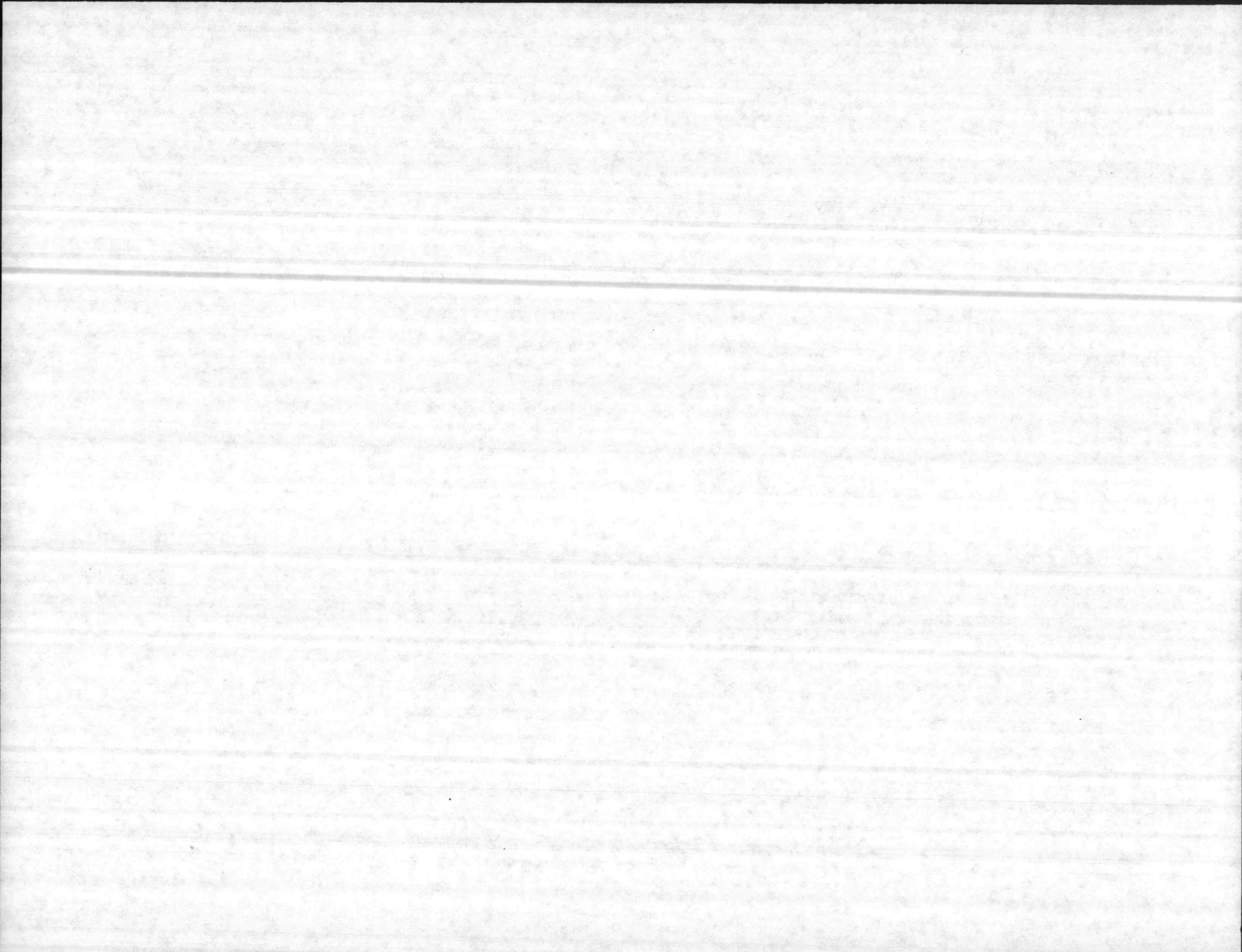
160	1-Mar-84	Specifications	DON	Specifications for Rotary Drilled Water Well	N	N
161	18-Apr-84	Letter	(Col Marshall/Mr Wakild)	Well Permit construction applications to repace wells (HP-626, HP-612)	N	N
162	30-Apr-84	Letter	(Mr Wooten/Mr Rundgren)	water system monitoring data; Encl: 1-Inorganic Chemical Results, 2-Corrosivity Results, 3-Constructio Materials, 4-Ltr dated 21-Jun-83, 5-General info, 6-grainger lab sheets	Y	Y
163	1-May-84	Data	-	Total Dailey Flow of WTP???	N	N
164	2-May-84	Letter	(Mr Wakild/Col Marshall)	Well Construction Permits for HP-612 and HP-626	N	N
165	12-Jun-84	Regulation	EPA	Federal Register Vol 49. No. 114	N	N
166	1-Jun-84	Data	-	Total Dailey Flow of TT WTP	N	N
167	1-Jul-84	Data	-	Total Dailey Flow of TT WTP	N	N
168	1-Sep-84	Regulation	NC	NCAC Title 15, Section .0100, .0200, .0300	N	N
169	1-Sep-84	Data	-	Total Dailey Flow of TT WTP	N	N
170	26-Sep-84	Analytic Results	Honeycutt	Chloride Analysis of MCAS NR WTP	Y	Y
171	6-Dec-84	Telephone Log	-	Monitoring of HP WTP	Y	Y
172	11-Dec-84	Memo	(Mr Bell/Mr Rundgren)	Camp Lejeune Water Supply	Y	Y
173	14-Dec-84	Letter	(Mr Elston/Mr Shiver)	Well Construction Permit Application	N	N
174	14-Dec-84	Analytic Results	-	Summary of December Analysis at HP WTP	Y	Y



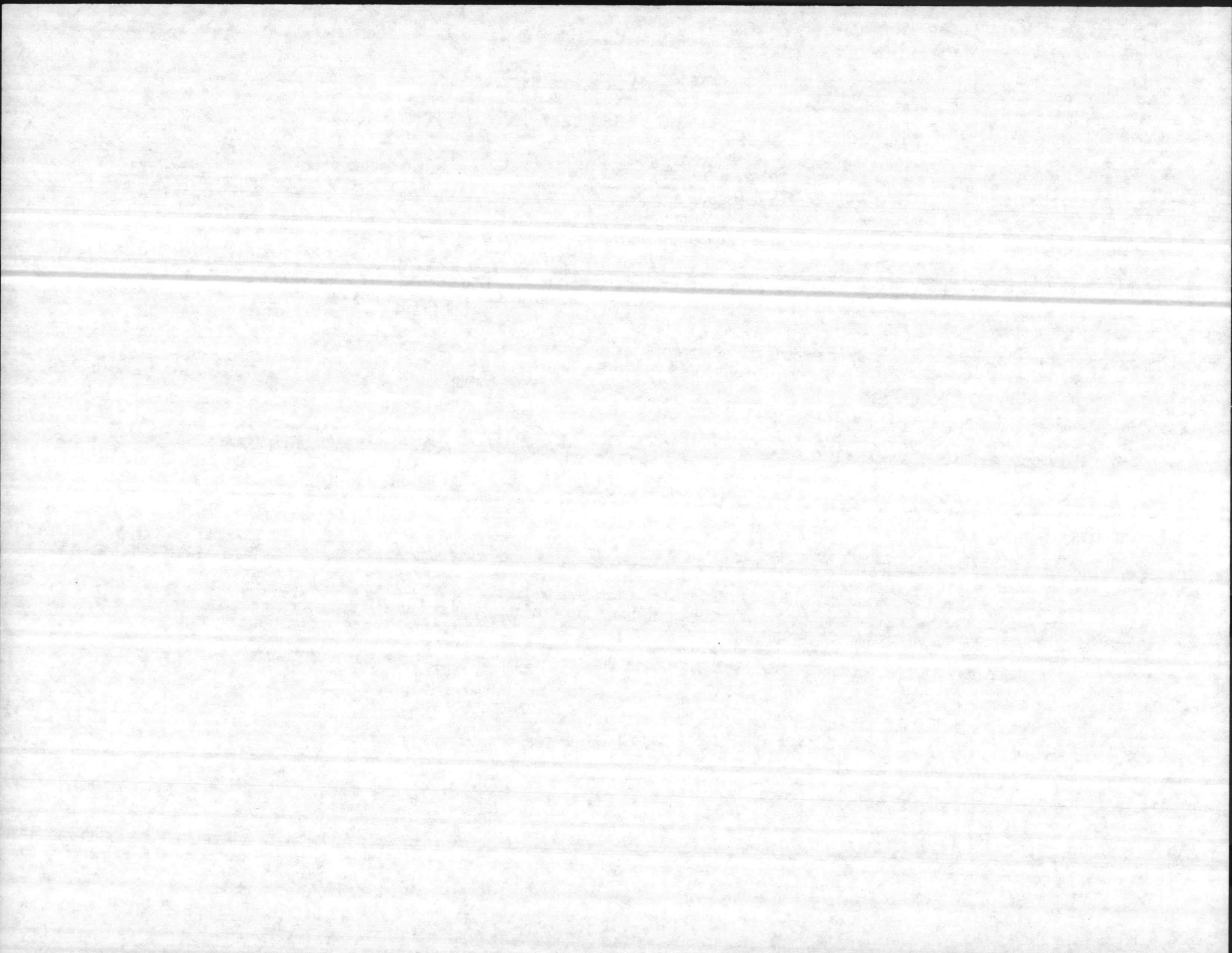
175	28-Dec-84	Data	-	Total Monthly Flows and graphs for TT and HP WTP for 84	N	N
176	1-Jan-85	Paper	-	VOC in water supply, water shortage	Y	N
177	1-Jan-85	Q&A Relative to wells	To: Bob Alexander	HP WTP Contamination	Y	Y
178	1-Jan-85	Memo	-	Scope of Work for NACIP IAS Round Two Sampling	Y	N
179	4-Jan-85	Memo	-	VOA Problem/Response	Y	N
180	4-Jan-85	Analytic Results	James R Reed & Assoc.	Analytical Results of samples received 14-Dec-84	Y	Y
181	4-Jan-85	Regulation	-	Federal Register, Vol 50, No 3	N	N
182	8-Jan-85	Memo	(Commander, LANTNAVFACENGCOM/ CG MCBCL)	Testing of water wells; Encl: - Reports 4, 7, 8, 10, and 12 by JTC Env. Consultants	Y	Y
183	8-Jan-85	Memo	To: Bob Alexander	Scope of ESE sampling of water wells	Y	N
184	11-Jan-85	Regulation	-	Federal Register, 40CFR Parts 35 and 130	N	N
185	1-Feb-85	Data	-	Total Daily Flow Record	N	N
186	5-Feb-85	Data	-	Total Daily Flow/Reservoir Levels/Water Well Info	Y	N
187	22-Feb-85	Analytic Results	NC Dept of Human Resources	Analytical Results of samples received 21-Feb-85	Y	Y
188	31-Feb-85	Memo	(CGMCBCL/LANTNAVFACENGCOM)	NACIP Study -VOC issues	Y	N
189	1-Mar-85	Data	-	Total Daily Flows for March-85	N	N
190	1-Mar-85	Action Brief	-	Alternatives to supplying water to TT	Y	N
191	5-Mar-85	Action Brief	-	TT Water Supply System	Y	N
192	5-Mar-85	Memo	(BMO/AC/S Facilities)	Well Permit Application for 12 new wells; Encl: 1-well permit forms, 2-diagram of wells	N	N



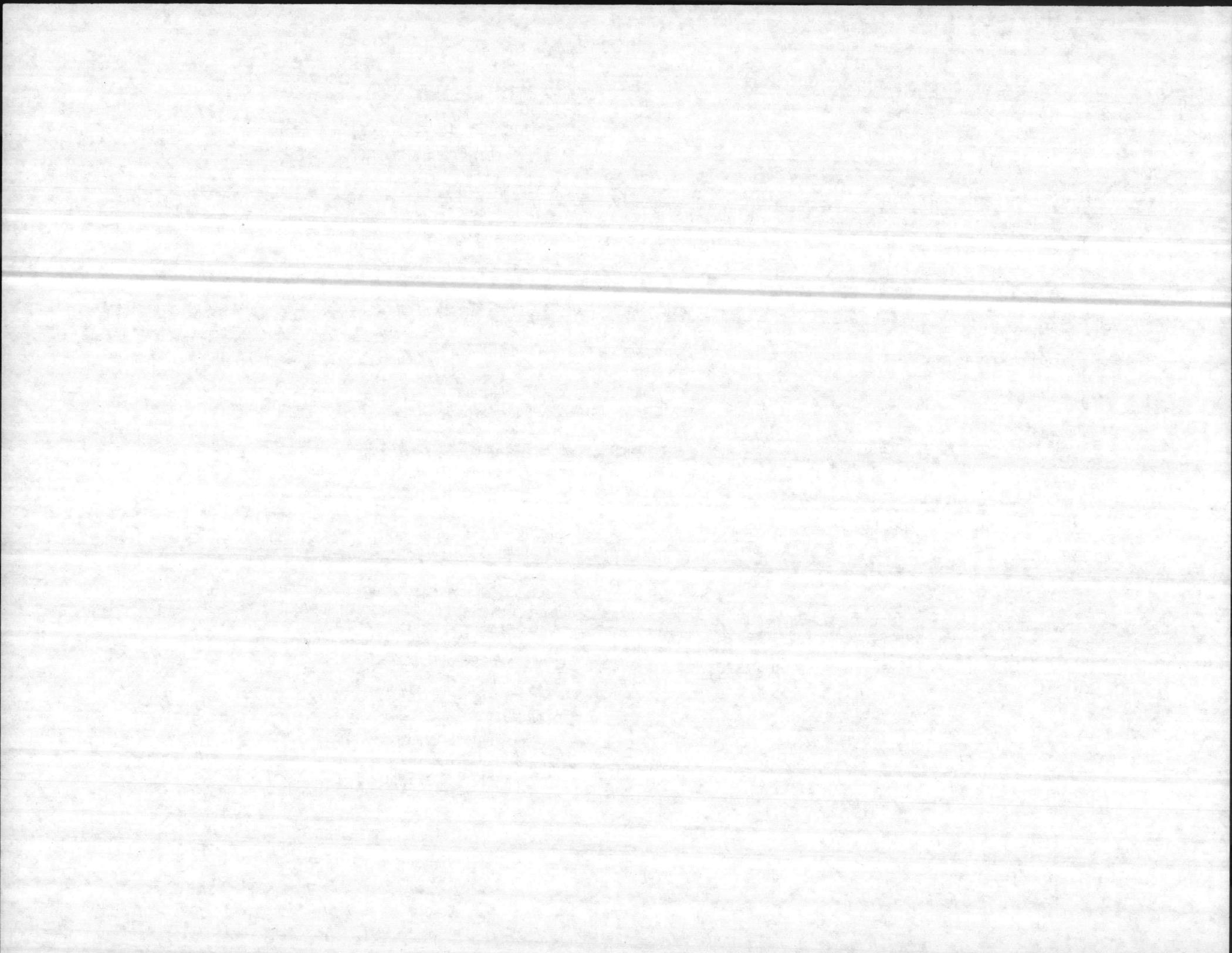
193	11-Mar-85	Memo	(Director NREAD,AC/S Facilities)	Standards for VOCs	N	N
194	12-Mar-85	Memo	(WTP Foreman/Director Utilities Branch)	TCE Testing at TT Well	Y	N
195	14-Mar-85	Analytic Results	MCBCL Laboratory	Analytical Results of 14-Mar- 85	Y	Y
196	19-Mar-85	Summary of TT Water Quality Data	-	Analytic Results	Y	Y
197	27-Mar-85	Letter	(Mr Bailey/Mr Bowen)	Confirmation Study, Evaluation of Data	Y	N
198	31-Mar-85	Memo	-	Contact list for operating new TT Well	Y	N
199	18-Apr-85	Letter	(Mr Wakild/Mr Elston)	Well Construction Permitsfor fourteen wells	N	N
200	30-Apr-85	Notice	-	Notice of water shortage and VOCs to TT Residents	Y	N
201	30-Apr-85	Memo	-	Directions for operating the TT water system	Y	N
202	30-Apr-85	Memo	-	Directions for operating the TT water system	Y	Y
203	30-Apr-85	Memo	-	NACIP Study -VOC issues	Y	N
204	30-Apr-85	Data	-	Total Daily Flow Record	N	N
205	13-May-85	Letter	(Mr Hill, NC/CG MCBCL)	Well Site Proposals	Y	N
206	15-May-85	Notice of Violation	(NC/CG MCBCL)	NOV for VOC Contamination	Y	N
207	16-May-85	Summary of TTHM Analysis	-	Sumamry of TTHM from Dec- 83 to May-85	Y	Y
208	22-May-85	Analytic Results	-	organic analysis on unknown sample	Y	Y
209	24-May-85	Memo	(CG MCBCL/Commander, LANTNAVFACENGCOM)	NACIP Study - Comments, Suspected Site; Encl: 1- Review Comments, 2-MCAS Suspected Site	Y	N
210	28-May-85	Letter	(Mr Lloyd, USGS/Mr Nelson, NREAD)	MCAS, Cherry Point Sampling	N	N
211	29-May-85	Analytic Results	MCBCL Laboratory	Sample results from G-182	Y	Y



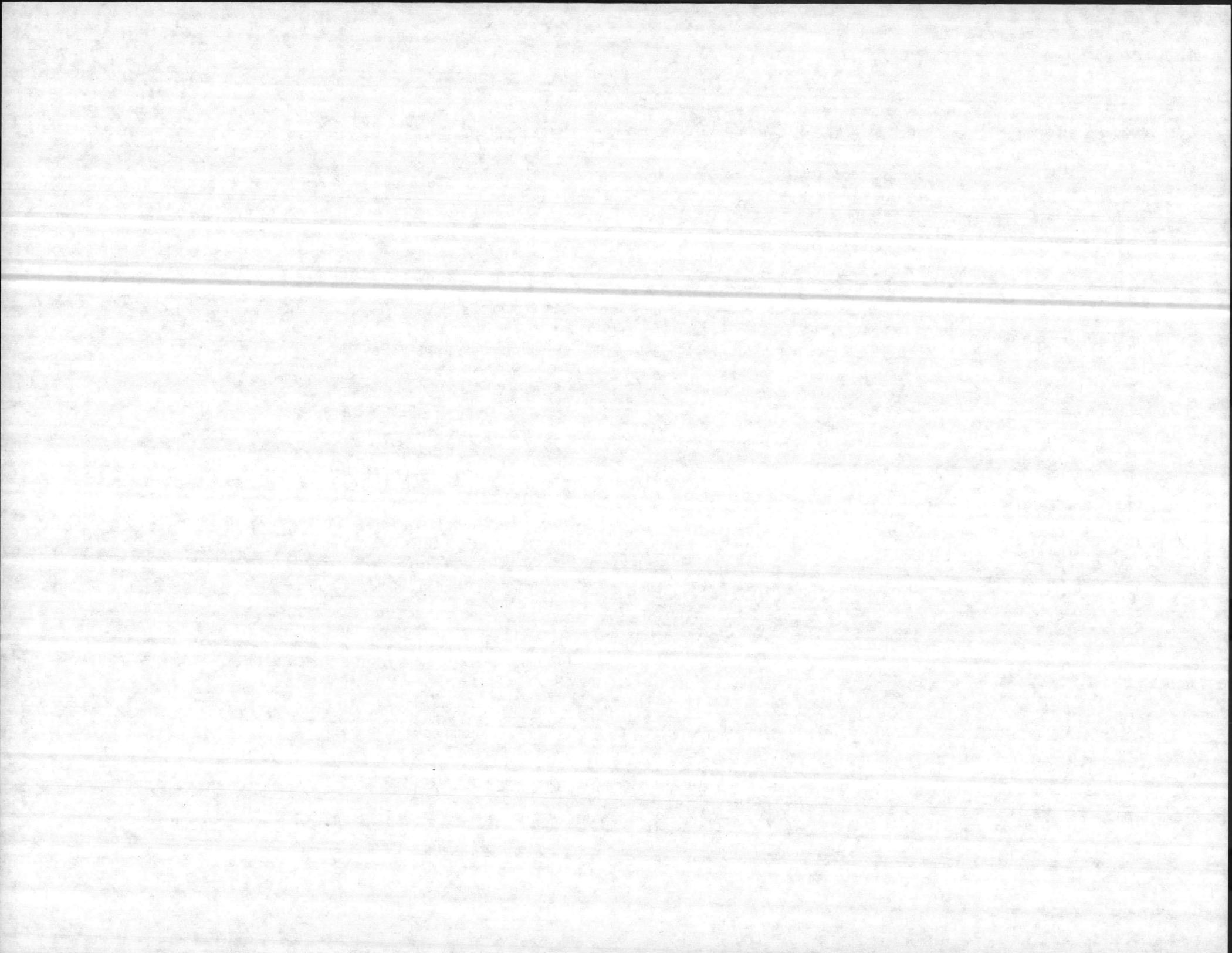
212	29-May-85	Analytic Results	-	Results of sampling at unknown time	Y	Y
213	31-May-85	Memo	(CG MCBCL/Commander, LANTNAVFACENGCOM)	Inspection of POL Tanks, testing criteria	Y	N
214	31-May-85	Memo	(CG MCBCL/Commander, LANTNAVFACENGCOM)	Analysis of Camp Lejeune Water Supply	Y	N
215	31-May-85	Memo	(CG MCBCL/Commander, LANTNAVFACENGCOM)	NACIP Study of Water Supply	N	N
216	31-May-85	Memo	-	Sampling for VOCs in water supply	Y	N
217	3-Jun-85	Analytic Results	MCBCL Laboratory	analytics of samples taken 9-Mar-85	Y	Y
218	21-Jun-85	Letter	(Mr Shiver, NC/Col Tiebout, AC/S Facilities)	Analytic Results for 3 TT Wells	Y	Y
219	21-Jun-85	Memo	Gold Johnson	Analytic Results/Violation	Y	Y
220	26-Jun-85	Memo	-	25-Jun-85 Meeting log & well info	Y	N
221	1-Jul-85	Analytic Results	-	VOC Analysis 1 and 8-Jul-85	Y	Y
222	1-Jul-85	Memo	-	28-Jul-85 Meeting log, TTH and Well data	Y	N
223	2-Jul-85	Analytic Results	-	TTHM and VOC Analysis Results	Y	Y
224	9-Jul-85	Summary of TTHM Analysis	-	TTHM and VOC Summary from May-83 to July-85	Y	Y
225	14-Jul-85	Letter	(Mr. Sharpe, MCBCL/Mr Rundgren, NC)	TTHM Analysis; Encl: 1-TTHM for HP, 2-TTHM for MCAS	Y	Y
226	17-Jul-85	Analytic Results	JTC Environmental Consu	Analytical Results of samples received 17-Jul-85	Y	Y
227	17-Jul-85	Memo	(Director, NREAD/BMO)	Chloride Analysis; Encl: -	Y	Y
228	18-Jul-85	Memo	(BMO/AC/S Facilities)	Chloride analysis of Camp Lejeune Wells	N	N
229	18-Jul-85	Memo	(Director, Utilities/Utility Foreman)	Golf Course Watering Use of Wells with high chlorides	Y	N



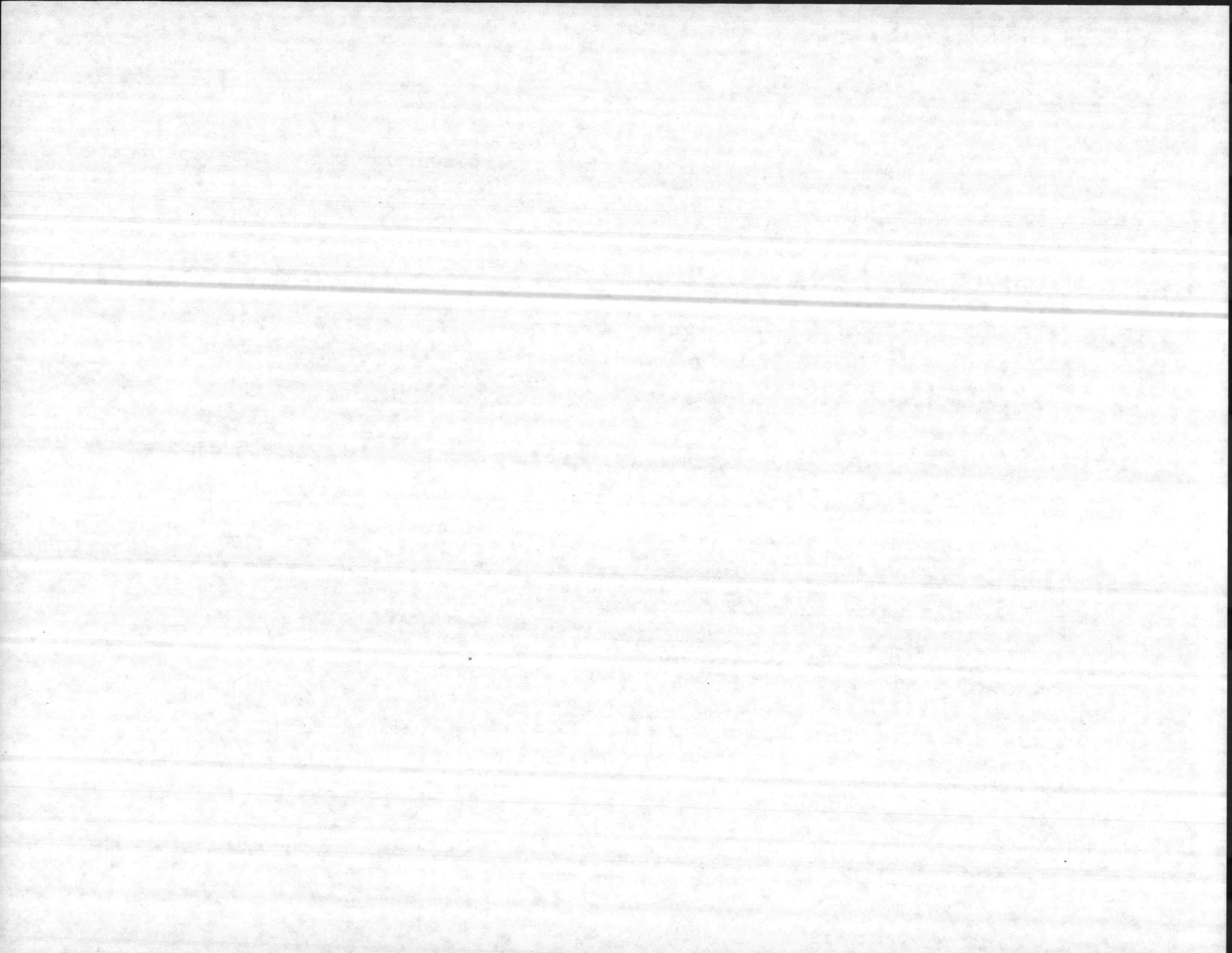
230	18-Jul-85	Memo	-	16-Jul-85 Meeting log, TTHM in MCAS/Geiger System; Encl: 1-TTHM Potential Testing Results, 2-TTHM Analytic Results, 3-Effect of Salt Water Intrusion on TTHM formation	Y	Y
231	19-Jul-85	Letter	(Col Tiebout/Mr Wakild, NC)	Notice of Violation; Encl: 1-Plan of Action, 2-NACIP Info, 3-Milestone Chart	Y	N
232	22-Jul-85	Routing Slip	-	Groundwater Data, questionable analysis results	Y	Y
233	29-Jul-85	Telephone Log	Mr Goodwin	Analytical Results from MCAS/Geiger	Y	Y
234	29-Jul-85	Analytic Results	JTC Environmental Consu	Analytical Results from samples received 15-Jul-85	Y	Y
235	31-Jul-85	Data	-	Total Daily Flow Record	N	N
236	5-Aug-85	Memo	(AC/S Facilities/Public Works Officer)	Replace Water Well 615; Encl: -NC Division of Health Services 29-Jul-85 ltr	Y	N
237	6-Aug-85	Memo	-	TTHM in MCAS Water System	Y	N
238	8-Oct-85	Memo	(Mr Wakild/Mr Nelson)	Groundwater Quality Problems	Y	N
239	25-Oct-85	Scope of Work	-	NACIP Round Two Sampling/Characterization	Y	Y
240	25-Oct-85	Letter	(Mr Nelson, NC/Mr Fitzpatrick, MCBCL)	Rick Shiver assessment	Y	N
241	31-Oct-85	Memo	(BMO/AC/S Facilities)	Well Permits	N	N
242	5-Nov-85	Letter	(Col Tiebout/Mr Wakild, NC)	Well Construction Permit Applications	N	N
243	6-Nov-85	Memo	-	NC Data on TT Water Wells	Y	Y
244	13-Nov-85	Base Order	-	Encroachment Control	N	N
245	27-Nov-85	Memo	(AC/S Facilities/ROICC)	Well Construction Permits, HP. 615; Encl: -NCDEM 21-Nov-85 ltr	N	Y



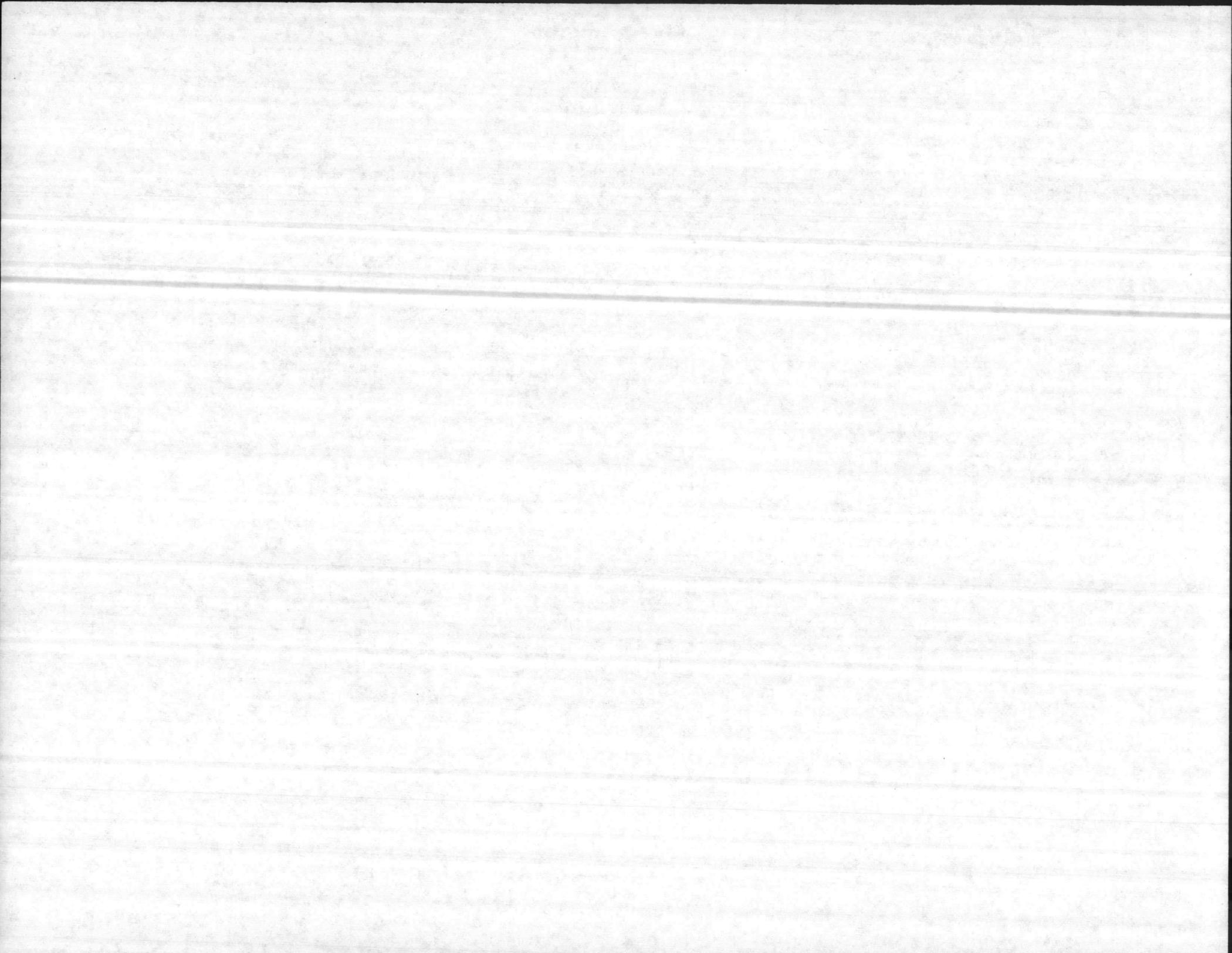
246	1-Dec-85	Analytic Results	-	Courthouse Bay STP Sampling	Y	Y
247	1-Dec-85	Analytic Results	-	Onslow Beach STP Sampling	Y	Y
248	1-Dec-85	Analytic Results	-	Courthouse Bay STP Sampling	Y	Y
249	1-Dec-85	Analytic Results	-	Storm Drain Sampling	Y	Y
250	30-Dec-85	Analytic Results	-	TT and HP 85 sampling data	Y	Y
251	Dec-85/Jan-86	Analytic Results	-	Bacteriological Sampling (Dec-85 to Jan-86)	Y	Y
252	Dec-85/Jan-86	Analytic Results	-	Chemical Analysis of WTPs from Dec-85 to Jan-86	Y	Y
253	Dec-85/Jan-86	Analytic Results	-	Mixcellaneous Analytical Results from Dec-85-Jan-86	Y	Y
254	24-Jan-86	Memo	(Director NREAD/BMO)	Analysis of Drinking water systems; Encl: 1-Chemical Analysis Results HP and 2- TT	Y	Y
255	7-Feb-86	Letter	(Mr Wooten/Mr McFadyen, NC)	WTP health and chemical analysis forms; Encl: 1-Dept of health forms, 2-Chemical Analysis Forms	Y	Y
256	7-Feb-86	Memo	(CG MCBCL/CO Naval Hospital)	Water quality and health consideration; Encl: 1-Weekly chemical analysis, 2-weekly bacteriological analysis, 3-PMU Inspection Samples, 4-Analysis of Complaints, 5-WTP Maintenance Schedule	Y	N
257	6-Mar-86	Letter	(Col Tiebout/Mr Linton, EPA)	1986 Environmental Compliance Profile	Y	N
258	11-Mar-86	Memo	(CG MCBCL/Commander, LANTNAVFACENGCOM)	Groundwater Quality Data	Y	N



259	19-Mar-86	Memo	(AC/S Facilities/AC/S Comptroller)	USGS Groundwater Supply Study; Encl: 1-Project Proposal, 2-Cost Account Info	Y	N
260	8-Apr-86	Memo	-	Raw Water Wells, Date Secured	Y	N
261	16-Apr-86	Letter	(Mr Hill, NC/CG MCBCL)	WTP Evaluation Water Quality Data; Encl: 1- Evaluation of First Round	Y	N
262	25-Apr-86	Letter	(Mr Bailey, MCBCL/Mr Linton, EPA)	Data, 2-JTC Lab Reports, 3- NC Lab Reports, 4-Milestone Chart, 5-TT Water System Comparison	Y	N
263	22-Jul-86	Letter	(Mr Bailey, MCBCL/Mr Holdaway, EPA)	NACIP Confirmation Study, Encl: 1-Scope of Work for Round Two	Y	N
264	30-Jul-86	Memo	(Director NREAD/AC/S Facilities)	Monitoring for WTP systems	Y	N
265	14-Aug-86	Letter	(Col Dalzell, MCBCL/Mr Lloyd, USGS)	Coordination of NACIP and USGS Study	Y	N
266	24-Sep-86	Memo	CG MCBCL	Additional NACIP Study Work; Encl: -Executive Summary	Y	N
267	25-Sep-86	Memo	(Commander, LANTNAVFACENGCOM/CG MCBCL)	Comments on USGS Proposal	Y	N
268	3-Dec-86	Memo	(CG MCBCL/Commander, LANTNAVFACENGCOM)	Review of NACIP with NC	Y	N
269	4-Dec-86	Letter	(Mr Wooten, MCBCL/Mr Edwards, NC)	Laboratory Certification	Y	N
270	23-Dec-86	Letter	(Mr Sharpe/Mr Edwards, NC)	Laboratory Certification	Y	N
271	9-Jan-87	Analytic Results	-	Analytical Results of Samples received 6-Jan-87	Y	N



272	28-Jan-87	Letter	(Mr Wooten, NREAD/Mr Venrick, NC)	Analysis of TTHM from Hadnot Point, Holcomb Blvd, MCAS; Encl: 1-TTHM for HP, 2-TTHM for MCAS, 3-TTHM for HB	Y	N
273	1-Feb-87	Analytic Results	-	Summary of Contaminated Well Sampling/Analysis, 84-87	Y	Y
274	25-Mar-87	Analytic Results	-	Analytical Results of Samples received 19-Mar-87	Y	N
275	3-Apr-87	Letter	(Mr Wooten, NREAD/Mr Venrick, NC)	Analysis of TTHM from Hadnot Point, Holcomb Blvd, MCAS; Encl: 1-TTHM for HP, 2-TTHM for MCAS, 3-TTHM for HB	Y	N
276	31-Apr-87	Information	EPA	Lead in Drinking Water	N	N
277	27-May-87	Report	Cheryl McMorris, NC, CERCLA Unit	ABC One Hour Cleaners Site Inspection Report	Y	N
278	15-Jun-87	Analytic Results	-	Analytical Results for TTHM received 12-Jun-87	Y	N
279	16-Jun-87	Memo	(Commander, LANTNAVFACENGCOM/CG MCBCL)	Groundwater Supply; Encl: - NAVFAC Guide Specification (Rotary Drilled Well)	N	N
280	20-Jun-87	Memo	(AC/S Facilities/Public Works Officer)	Groundwater Supply; Encl: - NAVFAC Guide Specification (Rotary Drilled Well)	N	N
281	23-Jun-87	Letter	(Mr Wooten, NREAD/Mr Venrick, NC)	Analysis of TTHM from Hadnot Point, Holcomb Blvd, MCAS; Encl: 1-TTHM for HP, 2-TTHM for MCAS, 3-TTHM for HB	Y	N



282	8-Jul-87	Regulation	EPA	National Primary Drinking Water Regulations, SOC, Monitoring for unregulated compounds	N	N
283	18-Aug-87	Memo	(Director, operations/Director, Utilities)	TTHM Reduction Study	Y	N
284	1-Sep-87	Analytic Results	-	Summary of VOC/Chloride/Flouride for HP and HB	Y	Y
285	1-Sep-87	Analytic Results	-	Sumamry of Clear Mainside Wells (84-87)	Y	Y
286	15-Sep-87	Analytic Results	Industrial & Environmental Analysis Inc	Analytical Results of Samples received 2-Sep-87	Y	N
287	5-Oct-87	Letter	(Mr Wooten, NREAD/Mr Venrick, NC)	TTHM Analysis for Sep 87	Y	N
288	28-Oct-87	Regulation	EPA	Federal Register Vol 52, No 208	N	N
289	17-Nov-87	Letter	(Mr Ou, NC/Col Dalzell, MCBCL)	Comments on Well 615	Y	N
290	30-Nov-87	Memo	(ROICC/AC/S Facilities)	Response to NC ltr of 17-Nov-87	Y	N
291	4-Dec-87	Memo	(Director, NREAD/BMO)	Sampling for VOCs in water supply	Y	N
292	22-Dec-87	Regulation	-	CERCLA Act	N	N
293	27-Jan-88	Letter	(Mr Stamey, NC/Deputy AC/S Facilities)	Holcomb Blvd WTP Expansion	Y	N
294	8-Feb-88	Letter	(Col Tokarz, SJA/Mr Crosby, NC)	IR Program, ABC Cleaners	Y	N
295	19-Feb-88	Regulation	EPA	Federal Register, Vol 53, No 33	N	N
296	24-Feb-88	Memo	(SJA MCBCL/AC/S Facilities)	National Primary Drinking Water Standards; Encl: -Fed Reg. 5142 of 19 Feb-88	Y	N
297	24-Feb-88	Memo	-	Testing Methods	Y	N
298	29-Feb-88	Letter	(Mr Venrick, NC/MCBCL)	Lead in Drinking Water	Y	N





DEPARTMENT OF THE NAVY  
ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
NORFOLK, VIRGINIA 23511

TELEPHONE NO.  
(804) 444-9566  
IN REPLY REFER TO:  
114:JGW:mbe  
6280

12 AUG 1982

From: Commander, Atlantic Division, Naval Facilities Engineering Command  
To: Commanding General, Marine Corps Base, Camp Lejeune

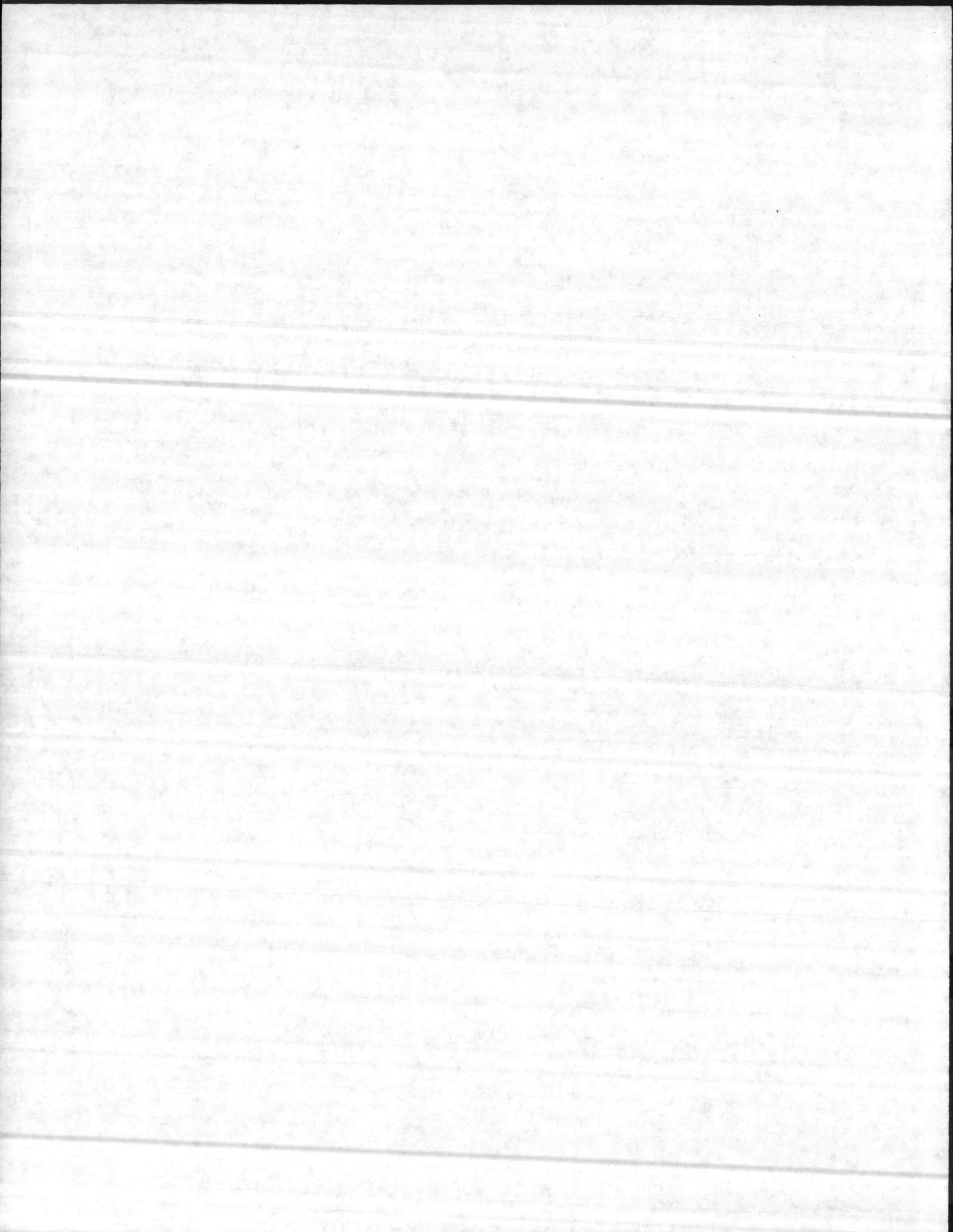
Subj: Water System Monitoring Data

Ref: (a) Discussions MCB CAMP LEJEUNE (Mr. D. Sharpe)/LANTNAVFACENGCOM  
(Mr. W. Carter) of 16-18 June 1982

Encl: (1) Jemmings Laboratories, Inc., Analysis No. 2518

1. As requested during reference (a), enclosure (1) is forwarded.

*J. R. Bailey*  
J. R. BAILEY, P.E.  
By direction



JENNINGS LABORATORIES, INC.  
 ANALYTICAL AND CONSULTING CHEMISTS  
 1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

CERTIFIED LABORATORY for  
 Water Analysis - Microbiological,  
 Inorganic and Organic

ASBESTOS ANALYSIS. - NIOSH 582

Official Referee Chemists for:  
 AMERICAN OIL CHEMISTS SOCIETY  
 NATIONAL SOYBEAN  
 PROCESSORS ASSOCIATION

Laboratory Certified by VA. STATE WATER  
 CONTROL BOARD for Analysis of  
 Effluents for NPDES PERMITS  
 CERTIFIED OFFICIAL U.S.D.A. LABORATORY  
 FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

Mr. Dave Goodwin  
 Building N-23 Atlantic Division  
 Naval Facilities Engineering Command  
 Norfolk, Virginia 23511

DATE: October 31, 1980

DESCRIPTION OF WATER SAMPLES (8) FOR COMPOSITE FOR PRIORITY POLLUTANT SCAN  
 Listed below

Samples picked up October 1, 1980

ANALYZED BY:

EIGHT (8) SAMPLES OF WATER TO BE COMPOSITED AS PER INSTRUCTIONS:

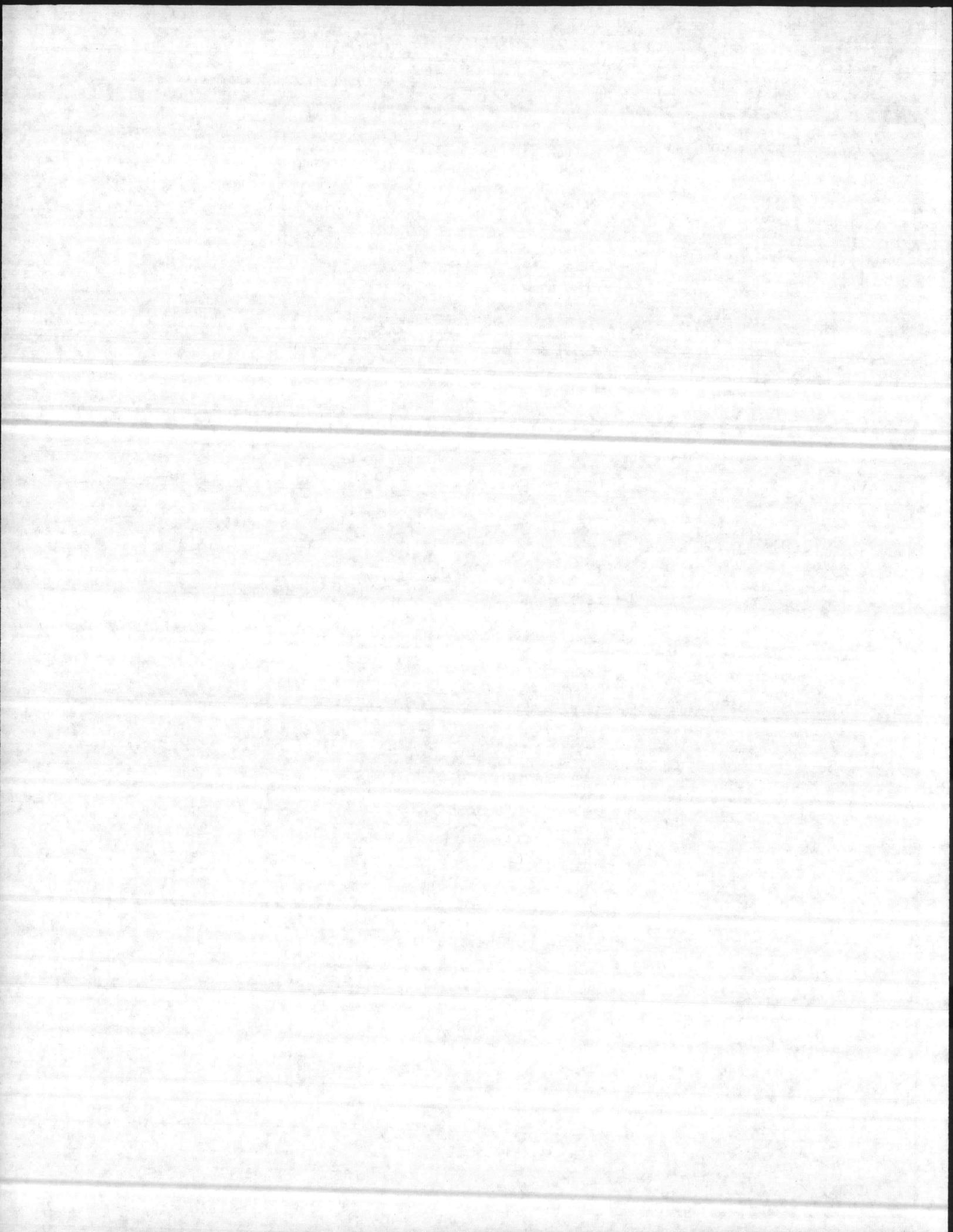
SAMPLE MARKED	QUARTS	LOCATION	QUANTITY
#1	2	Hadnot Point Bldg 20	1552 ml
#2	1	Hadnot Point Bldg 670	708 ml
#3	1	Tarawa Terrace TT-38	452 ml
#4	1	Monford Point M-178	220 ml
#5	1	MCAS (H) Bldg 110	664 ml
#6	1	Courthouse Bay BB-190	132 ml
#7	1	Rifle Range RR-85	220 ml
#8	1	Onslow Beach BA-138	52 ml
			4000 ml

Respectfully submitted,  
 JENNINGS LABORATORIES, INC.

*E. R. Douglas*  
 CHEMIST

Laboratory  
 Analysis No. 2518

Enclosure (1)



JENNINGS LABORATORIES, INC.  
ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

EPA CERTIFIED LABORATORY for  
inking Water Analysis - Microbiological,  
Inorganic and Organic

Official Referee Chemists for:  
AMERICAN OIL CHEMISTS SOCIETY  
NATIONAL SOYBEAN  
PROCESSORS ASSOCIATION

Laboratory Certified by VA. STATE WATER  
CONTROL BOARD for Analysis of  
Effluents for NPDES PERMITS  
CERTIFIED OFFICIAL U.S.D.A. LABORATORY  
FOR MEAT ANALYSIS

ASBESTOS ANALYSIS - NIOSH 582

CERTIFICATE OF ANALYSIS

Mr. Dave Goodwin  
Building N-23 Atlantic Division  
Naval Facilities Engineering Command  
Norfolk, Virginia 23511

DATE: October 31, 1980

8 OF WATER SAMPLES (8) - Blank made on each analysis. Bromochloromethane,  
ED 2-bromo-1-chloropropane, 1-4 dichlorobutane used as internal standard.  
IS calibrated with perfluorotributylamine, SIM MODE. All test run according to  
TEST PROCEDURES.  
IAL SAMPLE BY:

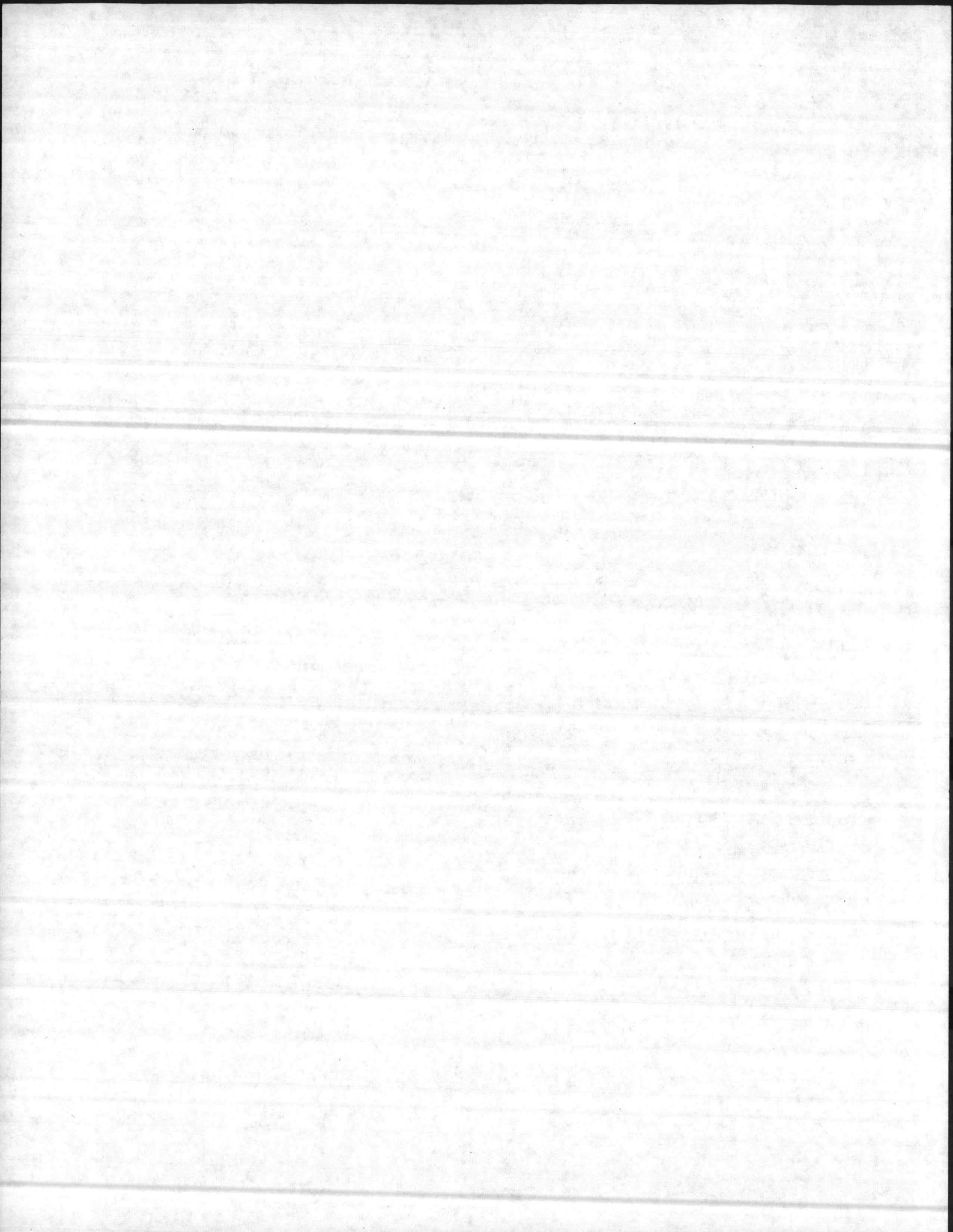
PURGEABLE ORGANICS

		DETECTION LIMITS $\mu\text{g}/\text{l}$
Acrolein	None Detected	2.0
Acrylonitrile	None Detected	2.0
Benzene	None Detected	10.0
Toluene	None Detected	10.0
Ethylbenzene	None Detected	10.0
Carbon Tetrachloride	None Detected	10.0
Chlorobenzene	None Detected	.007
1,2-Dichloroethane	None Detected	.03
1,1,1-Trichloroethane	None Detected	.006
1,1-Dichloroethane	.005 $\mu\text{g}/\text{l}$	.005
1,1-Dichloroethylene	.004 $\mu\text{g}/\text{l}$	.004
1,1-Dichloroethylene	.006 $\mu\text{g}/\text{l}$	.006
1,1,2-Trichloroethane	.006 $\mu\text{g}/\text{l}$	.006
1,1,2,2-Tetrachloroethane	.006 $\mu\text{g}/\text{l}$	.006
Chloroethane	.01 $\mu\text{g}/\text{l}$	.01
2-Chloroethyl vinyl ether	.08 $\mu\text{g}/\text{l}$	.08

Respectfully submitted,  
JENNINGS LABORATORIES, INC.

*E. R. Douglas*  
CHEMIST

Laboratory  
Analysis No 2518



PURGEABLE ORGANICS (continued)

		DETECTION LIMITS $\mu\text{g}/\text{l}$
Chloroform	None Detected	
1,2-Dichloropropane	None Detected	.010
1,3-Dichloropropane	None Detected	.004
Methylene Chloride	None Detected	.006
Methyl Chloride	None Detected	.010
Methyl Bromide	None Detected	.009
Bromoform	None Detected	.03
Dichlorobromomethane	None Detected	.02
Trichlorofluoromethane	None Detected	.006
Dichlorodifluoromethane	None Detected	.03
Chlorodibromomethane	None Detected	.01
Tetrachloroethylene	None Detected	.01
Trichloroethylene	.005 $\mu\text{g}/\text{l}$	.007
Vinyl Chloride	.01 $\mu\text{g}/\text{l}$	.005
1,2-trans-Dichloroethylene	.006 $\mu\text{g}/\text{l}$	.01
bis(chloromethyl) ether	.003 $\mu\text{g}/\text{l}$	.006
		.003

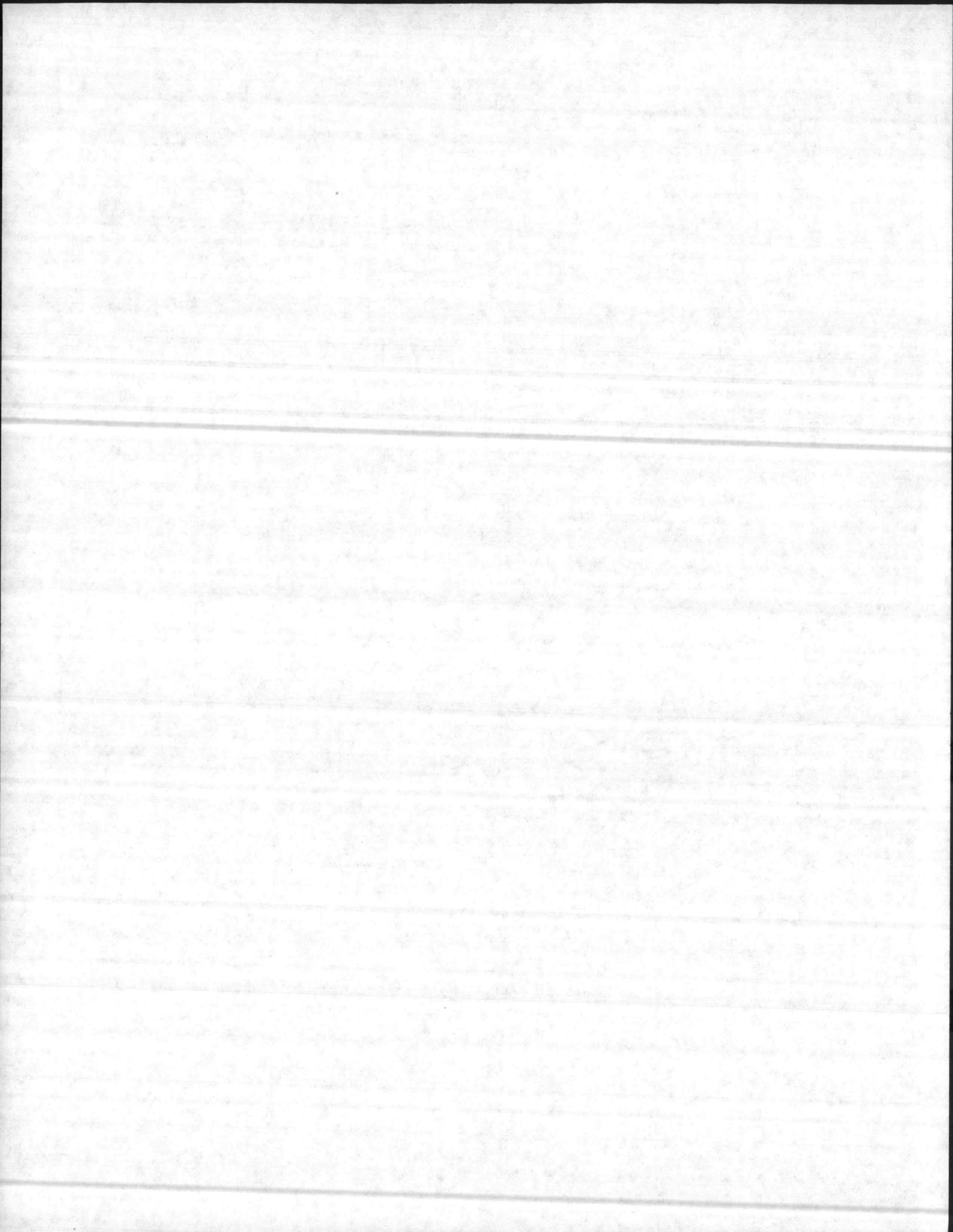
BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS

1,2-Dichlorobenzene	None Detected	.04
1,3-Dichlorobenzene	None Detected	.04
1,4-Dichlorobenzene	None Detected	.04
Hexachloroethane	None Detected	.04
Hexachlorobutadiene	None Detected	.001
Hexachlorobenzene	None Detected	.001
1,2,4-Trichlorobenzene	None Detected	.002
Bis(2-Chloroethoxy)methane	None Detected	.006
Naphthalene	None Detected	.40
2-Chloronaphthalene	None Detected	.04
Isophorone	None Detected	.04
Nitrobenzene	None Detected	5.0
2,4-Dinitrotoluene	None Detected	5.0
2,6-Dinitrotoluene	None Detected	.06
		.06

LAB # 2518

BY

*E. R. Douglas*  
CHEMIST

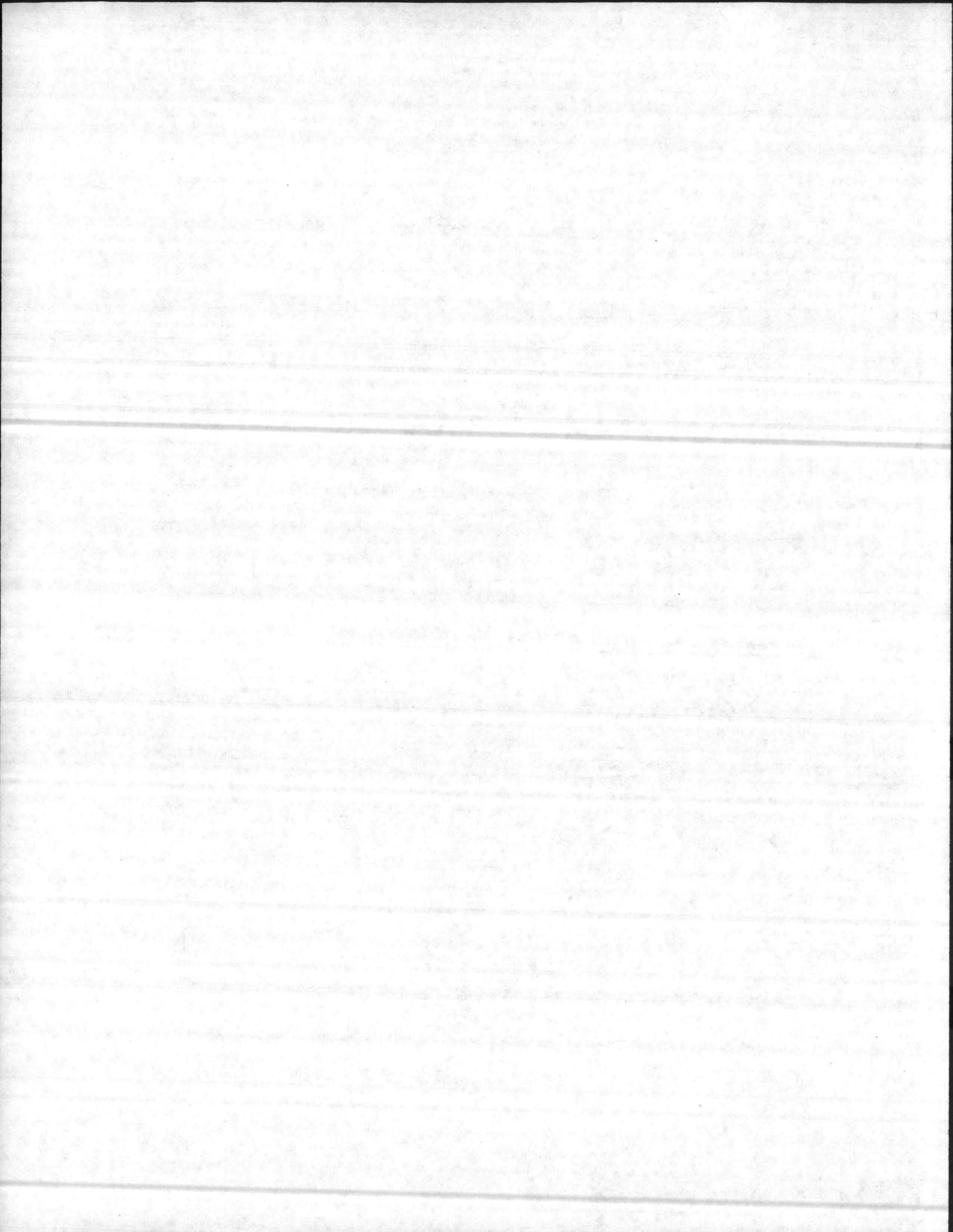


BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS (continued)

		DETECTION LIMIT I.I	LIMIT µg/l
4-Bromophenyl phenyl ether	None Detected		
bis(2-Ethylhexyl)phthalate	None Detected	.02	
Di-n-octyl phthalate	None Detected	.11	
Dimethyl phthalate	None Detected	.11	
Diethyl phthalate	None Detected	.13	
Di-n-butyl phthalate	None Detected	.02	
Fluorene	None Detected	.04	
Fluoranthene	None Detected	.04	
Chrysene	None Detected	.04	
Pyrene	None Detected	.04	
Phenathrene	None Detected	.04	
Anthracene	None Detected	.04	
Benzo (a) anthracene	None Detected	.04	
Benzo (b) fluoranthene	None Detected	.04	
Benzo (k) fluoranthene	None Detected	.04	
Benzo (a) pyrene	None Detected	.04	
Ideno (1,2,3-c,d) pyrene	None Detected	.10	
Dibenzo (a,h) anthracene	None Detected	.10	
Benzo (g,h,i) perylene	None Detected	.10	
4-Chlorophenyl phenyl ether	None Detected	2.2	
3,3'-Dichlorobenzidine	None Detected	.04	
Benzidine	None Detected	.04	
Bis(2-Chloroethyl) ether	None Detected	.04	
1,2-Diphenylhydrazine	None Detected	.04	
Hexachlorocyclopentadiene	None Detected	.04	
N-Nitrosodiphenylamine	None Detected	1.0	
Acenaphthylene	None Detected	.04	
Acenaphthene	None Detected	.04	
Butyl benzyl phthalate	None Detected	.04	
N-Nitrosodimethylamine	None Detected	.2	
N-Nitrosodi-n-propylamine	None Detected	.5	
bis(2-Chloroisopropyl) ether	None Detected	.9	

LAB # 2518

BY E. P. Douglas  
Chemist



JENNINGS LABORATORIES, INC.

ACID EXTRACTABLE ORGANIC COMPOUNDS

DETECTION LIMITS µg/l

Phenol	NONE DETECTED	1.4
2-Nitrophenol	None Detected	2.5
4-Nitrophenol	None Detected	2.5
2,4-Dinitrophenol	None Detected	7.0
4,6-Dinitro-o-cresol	None Detected	2.0
Pentachlorophenol	None Detected	10.0
p-Chloro-m-cresol	None Detected	.01
2-Chlorophenol	None Detected	2.0
2,4-Dichlorophenol	None Detected	2.1
2,4,6-Trichlorophenol	None Detected	3.0
2,4-Dimethylphenol	None Detected	1.7

PESTICIDES/PCB's

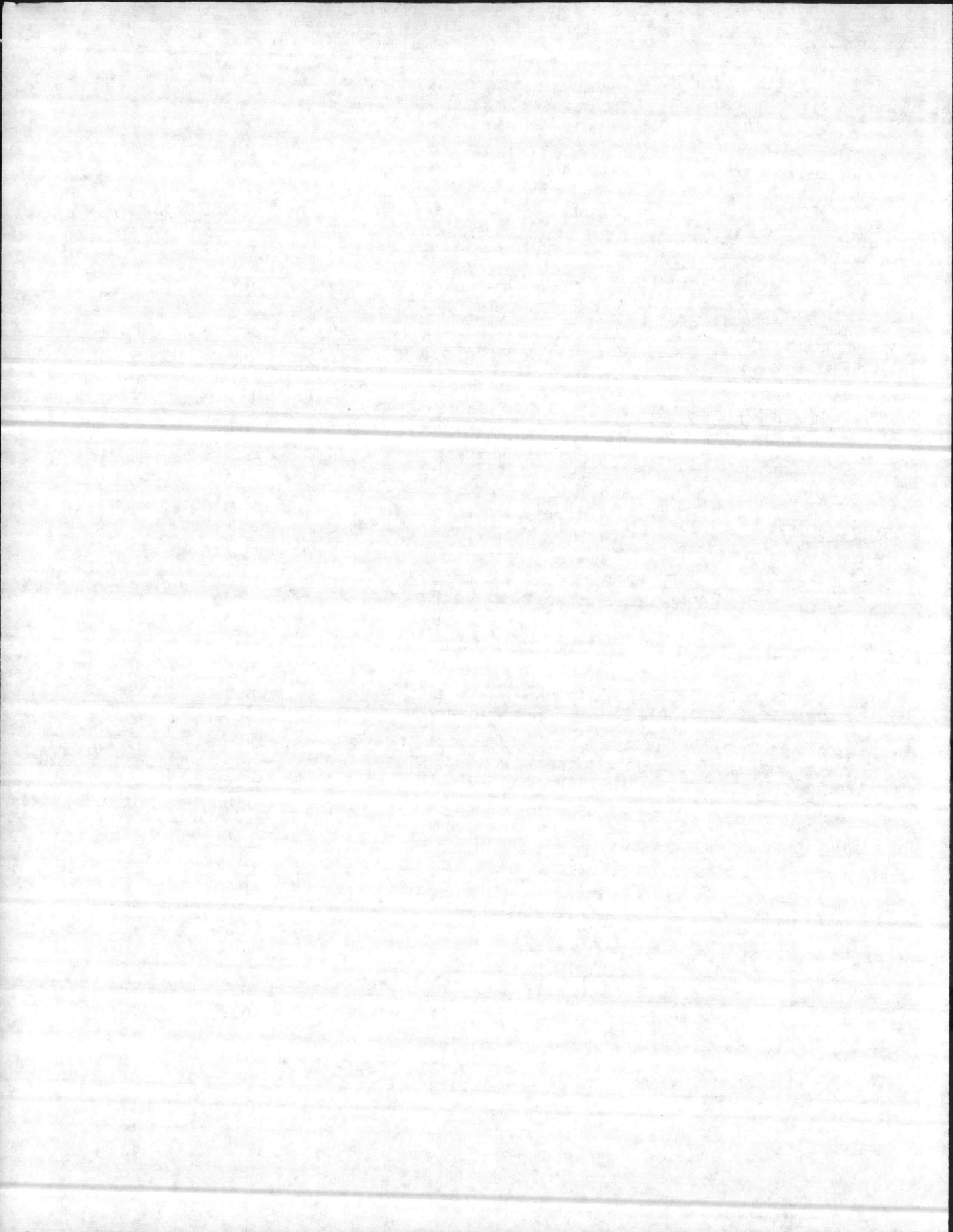
α-Endosulfan	None Detected	.005
β-Endosulfan	None Detected	.01
Endosulfan sulfate	None Detected	.03
α-BHC	None Detected	.002
β-BHC	None Detected	.004
δ-BHC	None Detected	.004
γ-BHC	None Detected	.002
Aldrin	None Detected	.003
Dieldrin	None Detected	.006
4,4'-DDE	None Detected	.006
4,4'-DDD	None Detected	.012
4,4'-DDT	None Detected	.016
Endrin	None detected	.009
Endrin Aldehyde	None Detected	.023
Heptachlor	None Detected	.002
Heptachlor Epoxide	None Detected	.004
Chlordane	None Detected	.04
Toxaphene	None Detected	.40

LAB # 2518

BY

*E. P. Douglas*

CHEMIST



JENNINGS LABORATORIES, INC.

PESTICIDES/PCB's (Continued)      DETECTION LIMITS µg/l

Aroclor 1016	None Detected	.04
Aroclor 1221	None Detected	.10
Aroclor 1232	None Detected	.10
Aroclor 1242	None Detected	.06
Aroclor 1248	None Detected	.08
Aroclor 1254	None Detected	.08
Aroclor 1260	None Detected	.15
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	None Detected	.003

	<u>METALS</u>	<u>DETECTION LIMITS mg/l</u>
Antimony	0.2 mg/l	0.2
Arsenic	<0.002 mg/l	0.002
Beryllium	<0.005 mg/l	0.005
Cadmium	0.006 mg/l	0.002
Chromium	<0.02 mg/l	0.02
Copper	<0.01 mg/l	0.01
Lead	<0.005 mg/l	0.005
Mercury	<0.002 mg/l	0.002
Nickel	<0.02 mg/l	0.02
Selenium	0.008 mg/l	0.002
Silver	<0.01 mg/l	0.01
Thallium	<0.1 mg/l	0.1
Zinc	0.005 mg/l	0.005

MISCELLANEOUS

Total Cyanides	None Detected	0.01
Asbestos (fibrous)	None Detected	
Total Phenols	None Detected	0.005

LAB# 2518

BY E. R. Conner  
CHEMIST

