



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 1  
1 CONGRESS STREET, SUITE 1100  
BOSTON, MASSACHUSETTS 02114-2023

October 12, 1999

Mr. Mohamed Deria,  
Supervising Environmental Analyst  
Waste Management Bureau  
Connecticut Department of Environmental Protection  
79 Elm Street  
Hartford, CT 06106

Dear Mr. Deria:

I am writing to formally thank you and the members of your staff who supported me with review of the Environmental Indicator Evaluations (EIEs) for two Dexter Corporation facilities in Windsor Locks, CT.

More specifically, I'd like to thank Sandra Brunelli and Diane Duva for their review of the EIE's that were submitted by Dexter Corporation in August of this year. As a result of the technical support provided by your staff, EPA was able to document that the Dexter Corporation, American Writing Facility (EPA ID No. CTD983895137) has satisfied both the Human Exposures and Groundwater Releases Environmental Indicators (EIs).

As you may be aware, achievement of the EIs is among the highest priorities for the EPA RCRA Corrective Action Program. Therefore, we are truly grateful for the time your staff devoted to this task. It was their knowledge of these sites (Sandra's for the Dexter, Main Plant and Diane's at the American Writing facility) which gave EPA the level of confidence necessary to achieve this task in the timely manner in which it was conducted. I can only hope to work with them again when EPA evaluates the additional investigative work and interim measures that will be necessary to satisfy the EIs at the Dexter, Main Plant; their technical expertise and familiarity with the site data is truly invaluable.

Thank you again.

Sincerely,

A handwritten signature in cursive script that reads "Aaron R. Gilbert".

Aaron R. Gilbert  
RCRA Corrective Action

cc: Sandra Brunelli, CT DEP  
Diane Duva, CT DEP  
Matthew Hoagland, EPA



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
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October 14, 1999

Mr. J. Michael Joyce  
Director of Engineering and Regulatory Affairs  
Dexter Corporation, Nonwoven Materials  
2 Elm Street  
Windsor Locks, CT 06096

Re: RCRA Corrective Action  
Dexter Corporation, American Writing Facility  
EPA ID No. CTD983895137

Dear Mr. Joyce:

The United States Environmental Protection Agency (EPA) is pleased to inform you that EPA has determined that the Dexter Corporation, American Writing facility has achieved the federal goal of Stabilization (watch for the listing of this achievement at EPA's, Office of Solid Waste web site at: <http://www.epa.gov/epaoswer/osw/cleanup.htm#achievers>).

EPA New England considers Stabilization as the achievement of the two Environmental Indicators (EI), *Current Human Exposures Under Control* and *Migration of Contaminated Groundwater Under Control*. These EI's were originally set forth in a July 29, 1994 memorandum by then Director of EPA's Office of Solid Waste, Michael Shapiro. This memorandum has been the subject of recent amendments; the most current amendment to the EI's is set forth in a February 5, 1999 Interim Final memorandum under Acting Director of EPA's Office of Solid Waste, Elizabeth Cotsworth.

Stabilization is an interim goal meaning that the environmental conditions at a given site/facility do not pose a current risk to human health. You should be aware, therefore, that any change in facility operations or land use which results in a human health exposure scenario would affect this determination.

Also, because Stabilization is an interim goal, facilities that achieve the goal of Stabilization should be aware that they will be expected to achieve the goal of a final remedy at some point in the future. Environmental actions intended for the purpose of achieving Stabilization should therefore be consistent with any anticipated final remedy. Facilities should be particularly

careful when considering construction activities which could ultimately impact the ability to achieve a final remedy.

Thank you for your continuing commitment to environmental excellence. If you have any questions, please do not hesitate to contact me at (617) 918-1238.

Sincerely,

A handwritten signature in black ink that reads "Aaron R. Gilbert". The signature is written in a cursive style with a large initial 'A'.

Aaron R. Gilbert  
RCRA Corrective Action Section

cc: S. Brunelli, CT DEP  
D. Duva, CT DEP

File: Dexter Corp.  
- Windsor Locks  
- REP

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA 750)  
Migration of Contaminated Groundwater Under Control

RECEIVED

AUG 02 1999

Facility Name: American Writing Paper Company - Dexter Nonwovens Division

Facility Address: Canal Bank, Windsor Locks, CT.

Facility EPA ID #: ~~CTD983871914~~ CT D 983895137

DEP-WASTE MANAGEMENT BUREAU  
WASTE ENGINEERING & ENFORCEMENT

1. Has all available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC), been considered in this EI determination?

If yes - check here and continue with #2

If no - re-evaluate existing data, or

If data are not available, skip to #8 and enter "IN" (more information needed) status code

**BACKGROUND**

**Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

**Definition of "Migration of Contaminated Groundwater Under Control" EI**

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("Ye" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

**Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, (GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated groundwater and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

**Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

**Migration of Contaminated Groundwater Under Control  
Environmental Indicator (EI) RCRIS code (CA 750)  
Page 2**

2. Is groundwater known or reasonably suspected to be “contaminated”<sup>1</sup> above appropriately protective “levels” (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

\_\_\_\_\_ If yes - continue after identifying key contaminants, citing appropriate “levels,” and referencing supporting documentation.

√ If no - skip to #8 and enter “Ye” status code, after citing appropriate “level,” and referencing supporting documentation to demonstrate that groundwater is not “contaminated.”

\_\_\_\_\_ If unknown - skip to #8 and enter “IN” status code.

**Rationale and Reference (s):**

*Based on soil sample results, the constituents detected that could pose a release to the groundwater were lead and tetrachloroethylene, however these constituents have not been detected under 40 CFR 265 Subpart F detection monitoring for the period of record from 1994 to the present above the appropriate levels. Quarterly detection monitoring consists of analyses for sodium, pH, specific conductivity, temperature and USEPA 8260B VOC. Detection monitoring under RCRA is performed when there is no evidence of a release. There were no constituents subject to RCRA detected in groundwater monitoring wells above appropriate protective levels. The appropriate levels are based on the CTDEP Remediation Standard Regulations (RSR) Groundwater Protection Criteria (GWPC), USEPA and Connecticut Department of Public Health (CTDPH) maximum contaminant levels (MCL) and CTDPH Action Levels. The site is located on the canal bank island between the Windsor Locks canal to the west and the Connecticut River to the east. Groundwater flows from west to east and discharges to the Connecticut River. Monitoring well AW-1 is the upgradient location and monitoring wells AW-2 through AW-5 are downgradient of the RCRA Unit #17, along the banks of the Connecticut River. There are no constituents detected in the downgradient wells above the protective levels.*

**Footnotes:**

<sup>1</sup>“Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

**Migration of Contaminated Groundwater Under Control**  
**Environmental Indicator (EI) RCRIS code (CA 750)**  
Page 3

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater”<sup>2</sup> as defined by the monitoring locations designated at the time of this determination)?

\_\_\_\_\_ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the “existing area of groundwater contamination”<sup>2</sup>.

\_\_\_\_\_ If no - (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”<sup>2</sup>) - skip to #8 and enter “NO” status code, after providing an explanation.

\_\_\_\_\_ If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference (s):

Footnotes:

<sup>2</sup>“existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e. including public participation) allowing a limited area for natural attenuation.

**Migration of Contaminated Groundwater Under Control**  
**Environmental Indicator (EI) RCRIS code (CA 750)**  
Page 4

4. Does "contaminated" groundwater discharge into surface water bodies?

- \_\_\_\_\_ If yes - continue after identifying potentially affected surface water bodies.
- \_\_\_\_\_ If no - skip to #7 (and enter a "Ye" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.
- \_\_\_\_\_ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference (s):

**Migration of Contaminated Groundwater Under Control  
Environmental Indicator (EI) RCRIS code (CA 750)**

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5. Is the discharge of “contaminated” groundwater into surface water likely to be “insignificant” (i.e., the maximum concentration<sup>3</sup> of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and the number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

\_\_\_\_\_ If yes - skip to #7 (and enter “Ye” status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration<sup>3</sup> of key contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

\_\_\_\_\_ If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration<sup>3</sup> of each contaminant discharged above its groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations<sup>3</sup> greater than 100 times their appropriate groundwater “levels,” the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

\_\_\_\_\_ If unknown - enter “IN” status code.

Rationale and Reference (s):

Footnotes:

<sup>3</sup> As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

**Migration of Contaminated Groundwater Under Control  
Environmental Indicator (EI) RCRIS code (CA 750)  
Page 6**

6. Can the discharge of “contaminated” groundwater into surface water be shown to be “currently acceptable” (i.e., not cause impacts to surface water, sediments, or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented <sup>4</sup>)?

- \_\_\_\_\_ If yes - continue after either: identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site’s surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment, <sup>5</sup> appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialist, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment “levels,” as well as any other factors, such as effects on ecological receptors (e.g., via bio/assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.
- \_\_\_\_\_ If no - (the discharge of “contaminated” groundwater can not be shown to be currently acceptable”) - skip to #8 and enter “NO” status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.
- \_\_\_\_\_ If unknown - skip to # 8 and enter “IN” status code.

Rationale and Reference (s):

Footnotes:

<sup>4</sup> Note, because areas of inflowing groundwater can be critical habitats (e.g. nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

<sup>5</sup> The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that the discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

**Migration of Contaminated Groundwater Under Control**  
**Environmental Indicator (EI) RCRIS code (CA 750)**  
Page 7

7. Will groundwater **monitoring** / measurement data (surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the “existing area of contaminated groundwater?”

\_\_\_\_\_ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the “existing area of groundwater contamination.”

\_\_\_\_\_ If no - enter “NO” status code in #8.

\_\_\_\_\_ If unknown - enter “IN” status code in #8.

Rationale and Reference (s):

Migration of Contaminated Groundwater Under Control  
Environmental Indicator (EI) RCRIS code (CA 750)

Page 8

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

√ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified.  
Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the American Writing Paper Co. - Dexter Nonwovens Division facility,  
EPA ID # CTD983871914  
located at Canal Bank, Windsor Locks, CT.

Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater." This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

\_\_\_\_\_ NO - Unacceptable migration of contaminated groundwater is observed or expected.

\_\_\_\_\_ IN - More information is needed to make a determination.

Completed by: (signature) *Diane W. Druva* *Aaron Gilbert* 9/14/99  
(print) *Diane W. Druva* *Aaron Gilbert* Date: *August 31, 1999*  
(title) *Environmental Analyst* *Environmental Engineer, EPA, RCRA C.*

Supervisor: (signature) *Mohamed Deria* Date: *8-31-99*  
(print) *MOHAMED DERIA*  
(title) *Supv. Env. Analyst*  
(EPA Region or State) *USEPA Region I*  
*State of CT* *Matthew R. Hoagland*  
*Section Chief*  
*Region I* *9/15/99*

Locations where References may be found:

1. Annual RCRA Groundwater Monitoring Reports 1995, 1996, 1997, 1998, The Dexter Corporation Nonwovens Division, Windsor Locks, Connecticut. References are on file @ CTDEP, Hartford, Connecticut and USEPA, Region 1, Boston, Massachusetts.
2. Attached tables and graphs. Note that figure and table numbers are those assigned in the original reference documents and have not been revised for this document.

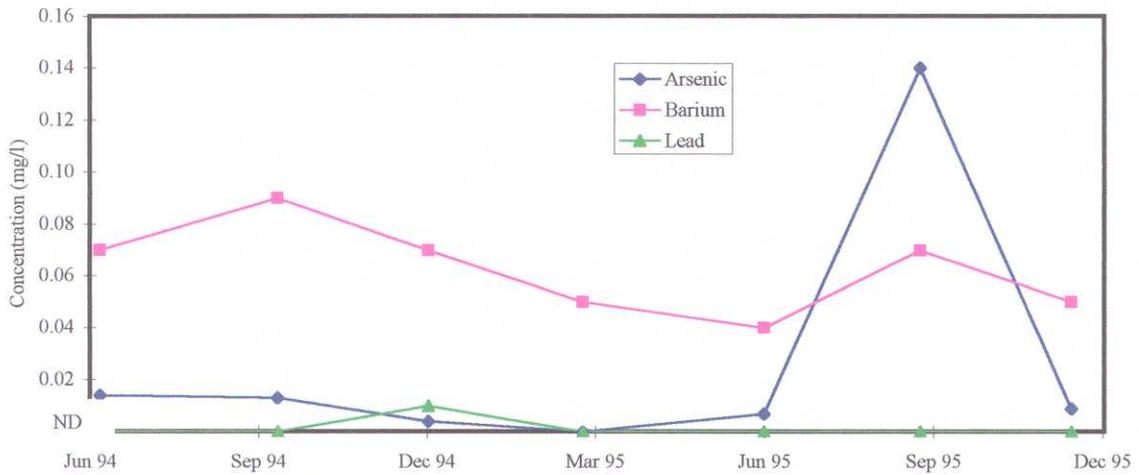
Contact telephone and e-mail numbers:

(name)

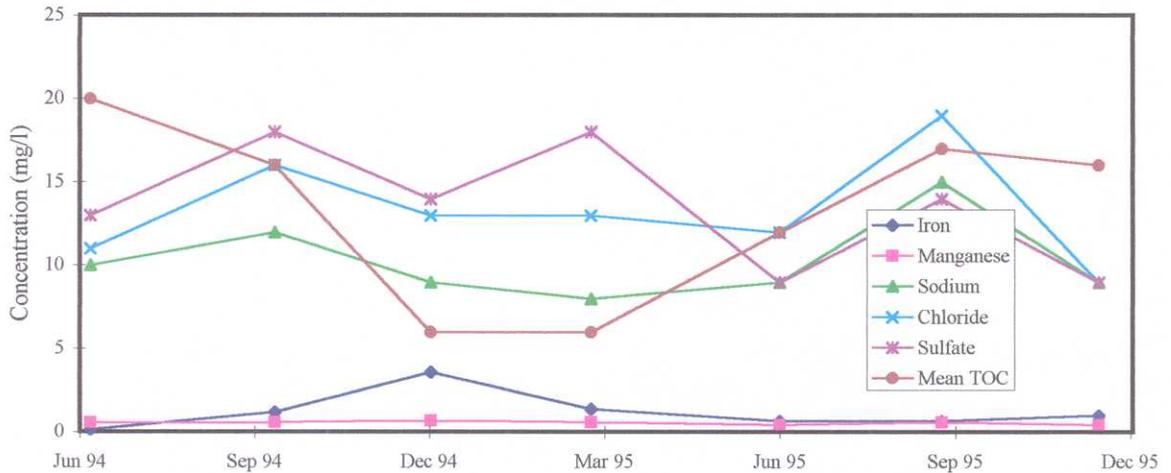
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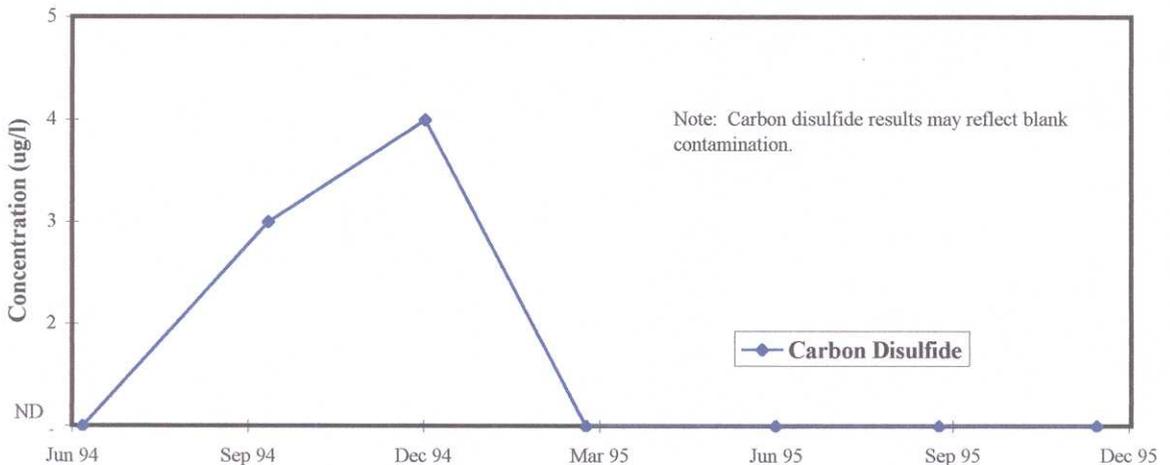
**FIGURE 1A**  
**AW-1 - 1994 & 1995 As, Ba & Pb**  
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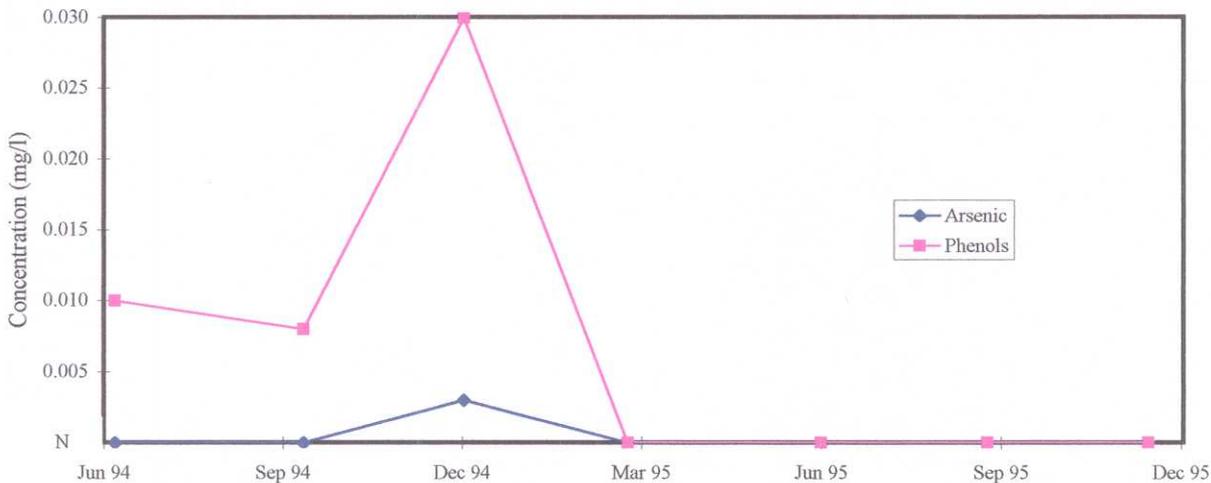
**FIGURE 1B**  
**AW-1 - 1994 & 1995 Fe, Mn, Na, Cl, Sulfate & Mean TOC**  
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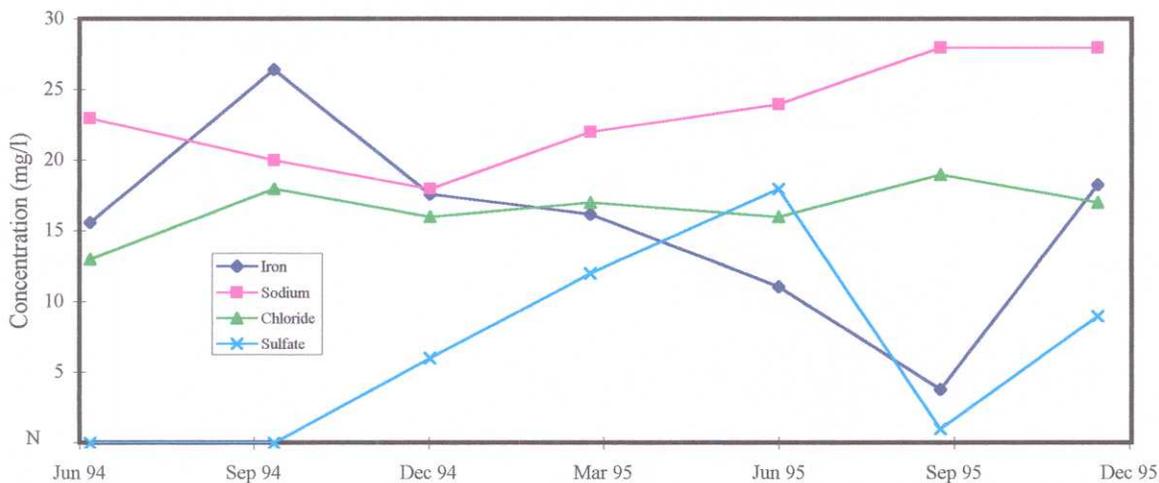
**FIGURE 1C**  
**AW-1 - 1994 & 1995 CARBON DISULFIDE**  
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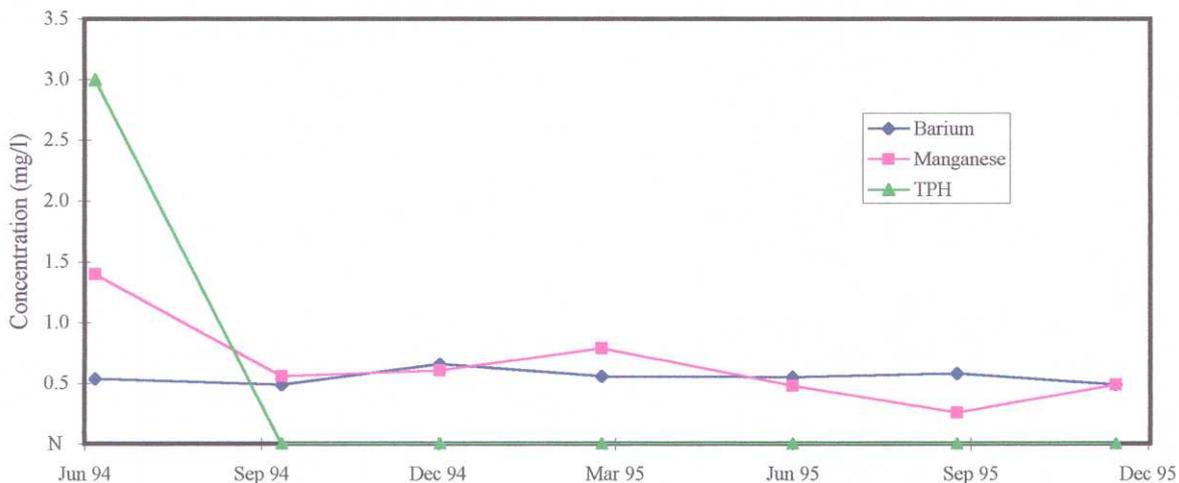
**FIGURE 2A**  
**AW-2 - 1994 & 1995 As & Phenols**  
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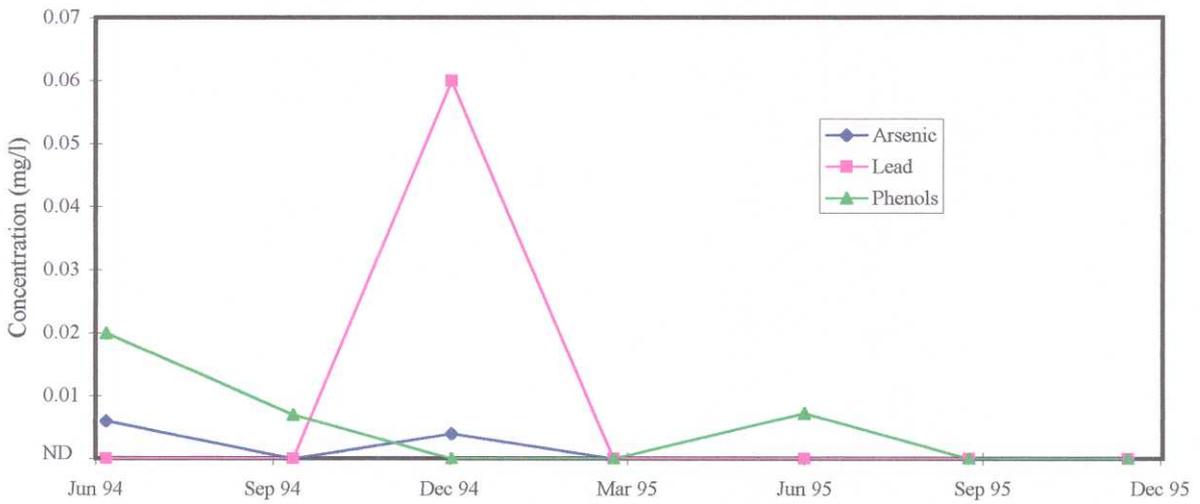
**FIGURE 2B**  
**AW-2 - 1994 & 1995 Fe, Na, Cl & SO<sub>4</sub>**  
**AMERICAN WRITING PAPER CO. UNIT**



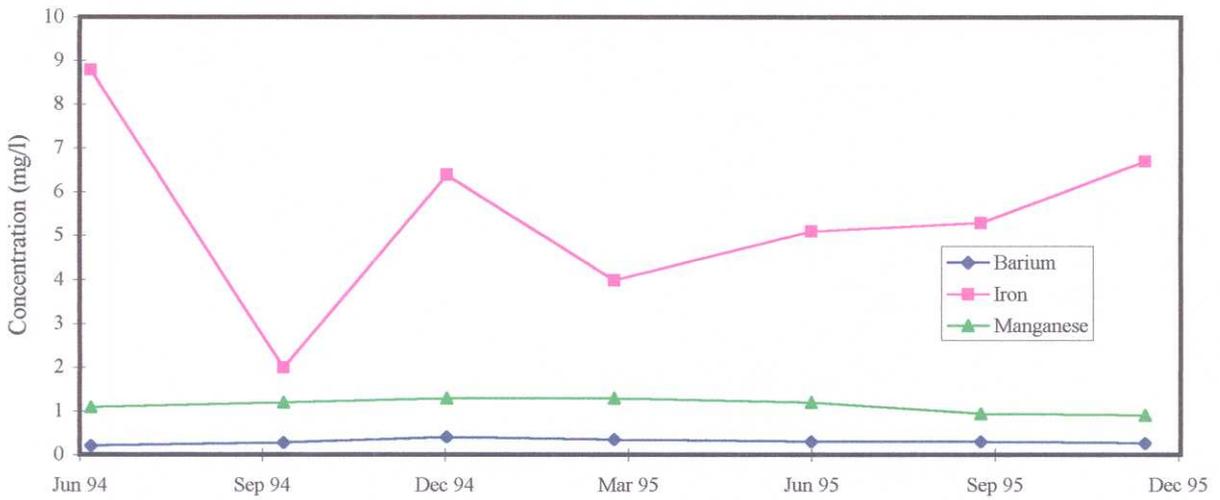
**FIGURE 2C**  
**AW-2 - 1994 & 1995 Ba, Mn & TPH**  
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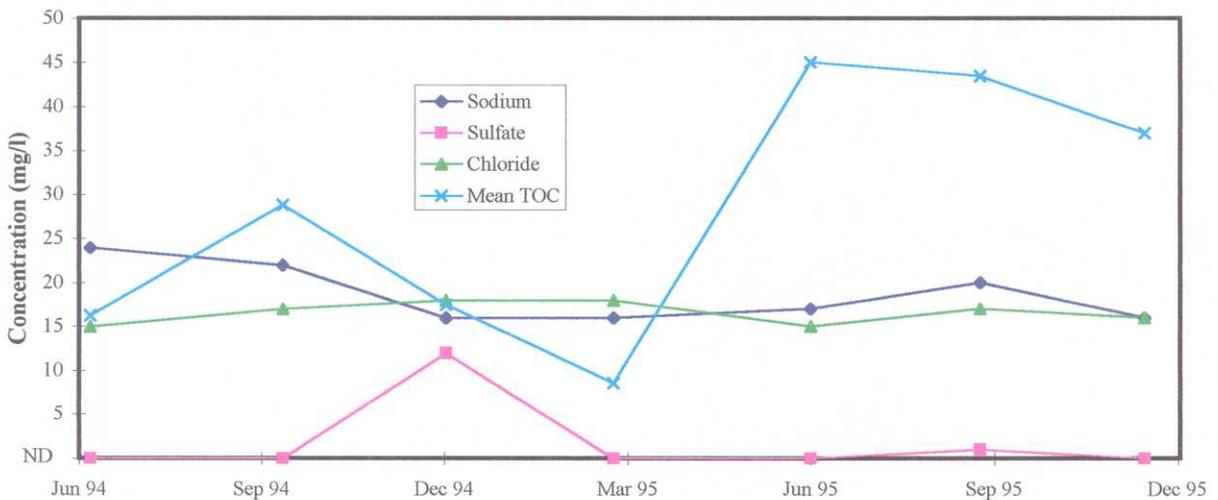
**FIGURE 3A**  
**AW-3 - 1994 & 1995 As, Pb & Phenols**  
**AMERICAN WRITING PAPER CO. UNIT**



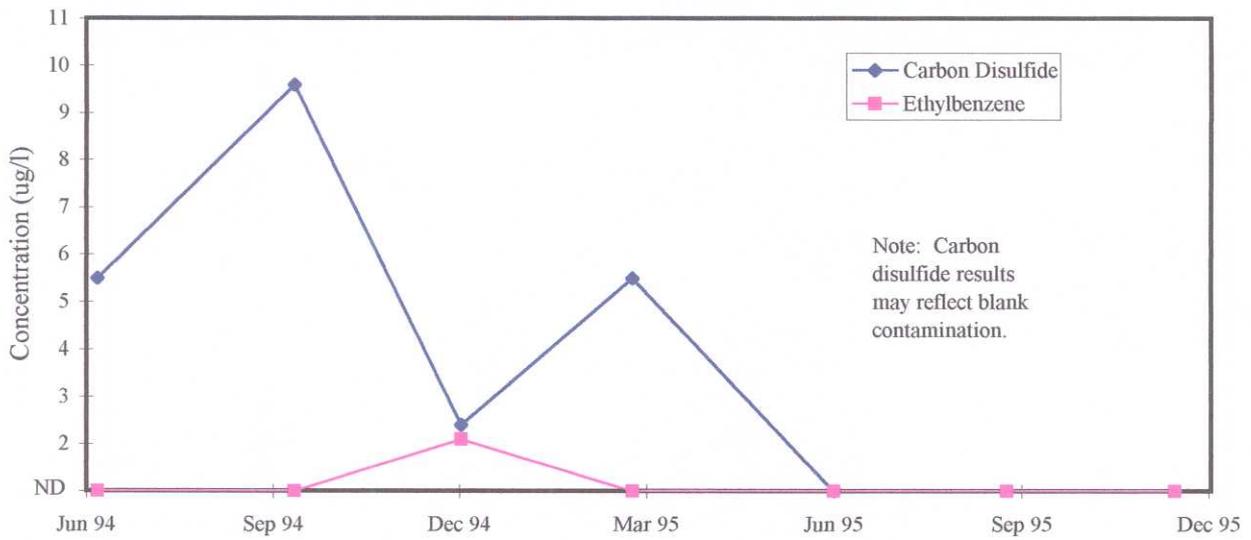
**FIGURE 3B**  
**AW-3 - 1994 & 1995 Ba, Fe & Mn**  
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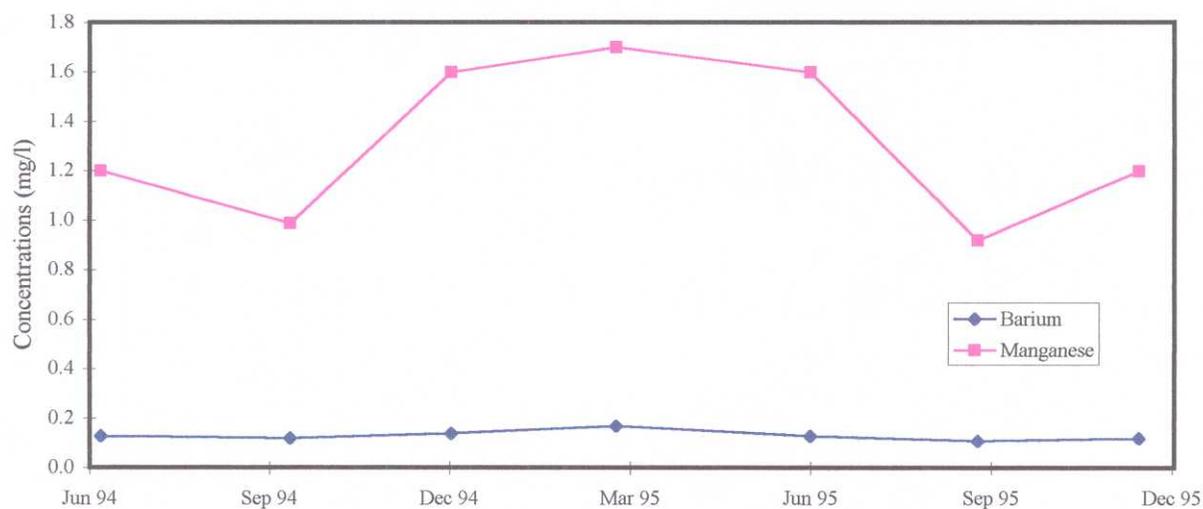
**FIGURE 3C**  
**AW-3 - 1994 & 1995 Na, SO4, Cl, and Mean TOC**  
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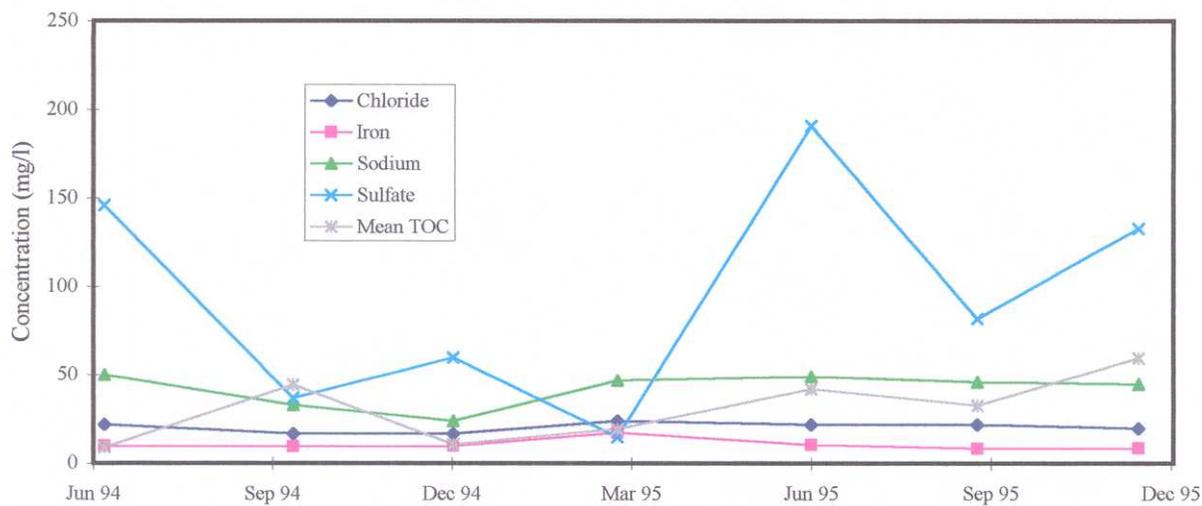
**FIGURE 3D**  
**AW-3 - 1994 & 1995 CS<sub>2</sub> & ETHYLBENZENE**  
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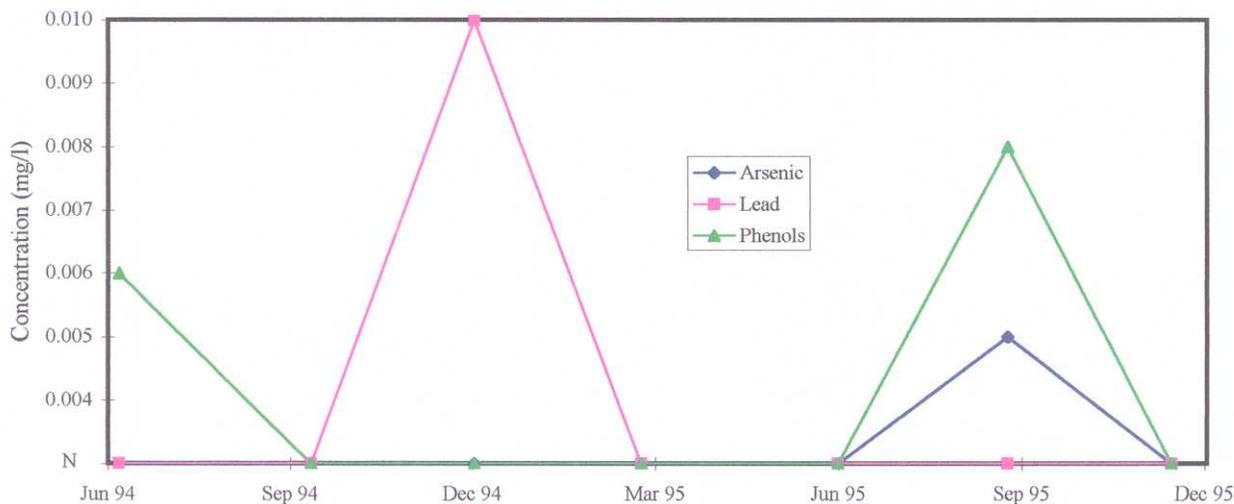
**FIGURE 4A**  
**AW-4 - 1994 & 1995 Ba & Mn**  
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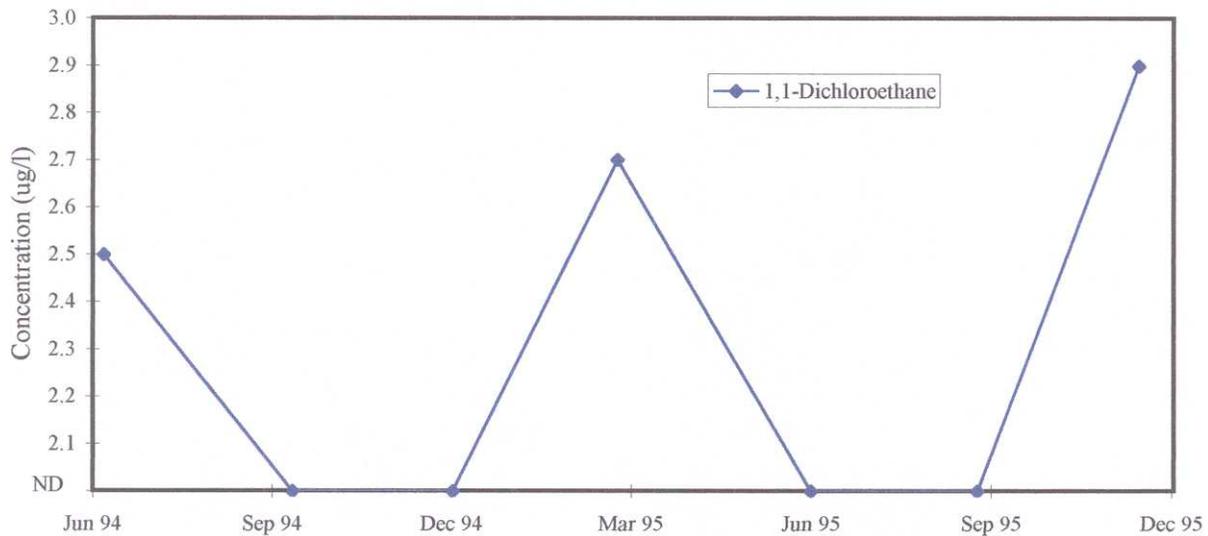
**FIGURE 4B**  
**AW-4 - 1994 & 1995 Cl, Fe, Na, SO4, & Mean TOC**  
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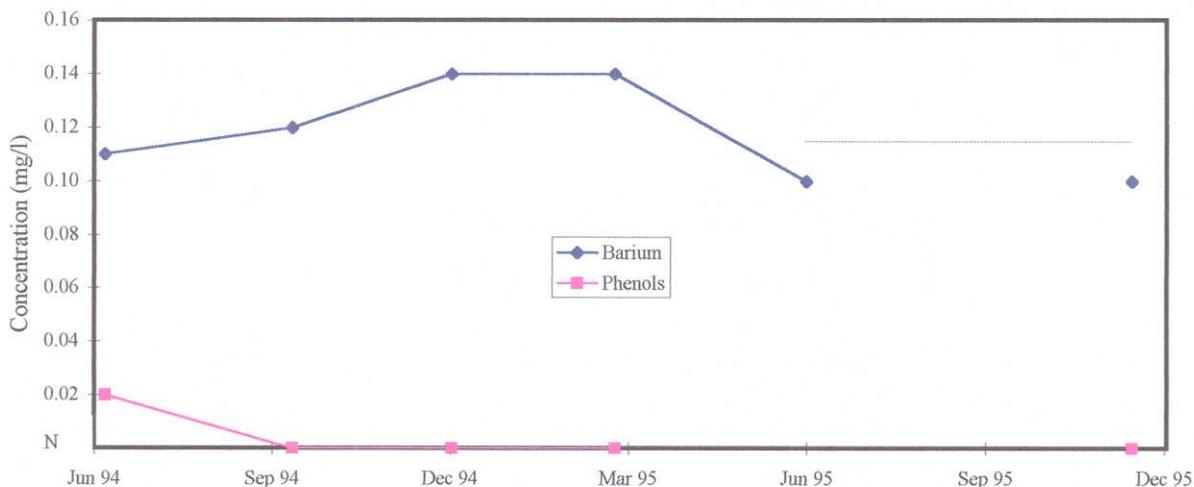
**FIGURE 4C**  
**AW-4 - 1994 & 1995 As, Pb, & Phenols**  
**AMERICAN WRITING PAPER CO. UNIT**



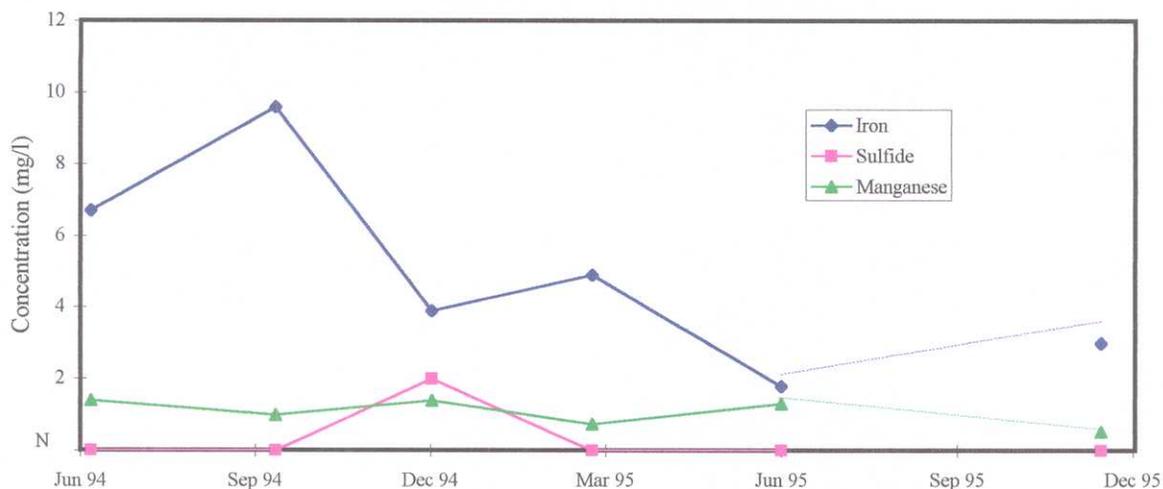
**FIGURE 4D**  
**AW-4 - 1994 & 1995 1,1-DICHLOROETHANE**  
**AMERICAN WRITING PAPER CO. UNIT**



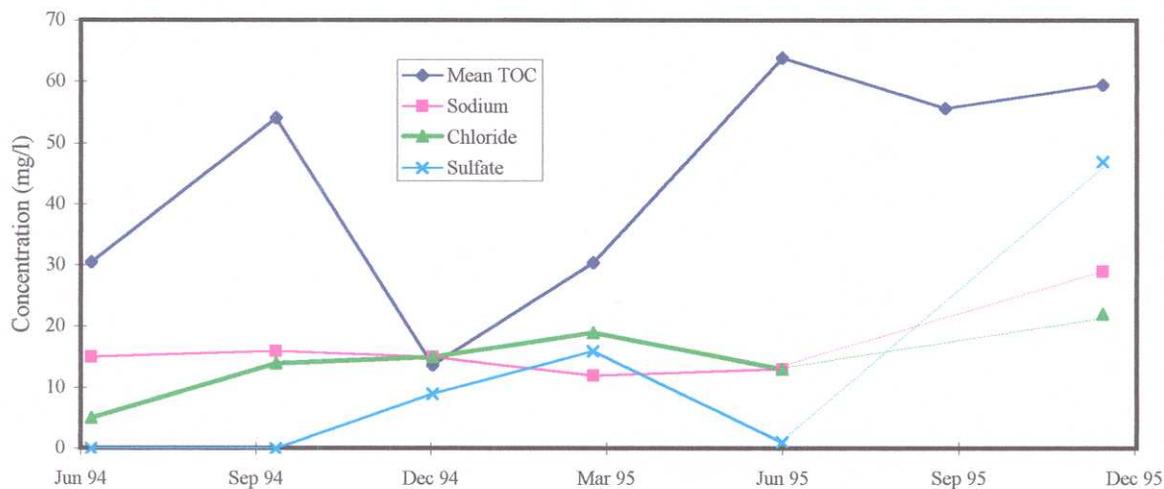
**FIGURE 5A**  
**AW-5 - 1994 & 1995 Ba & Phenols**  
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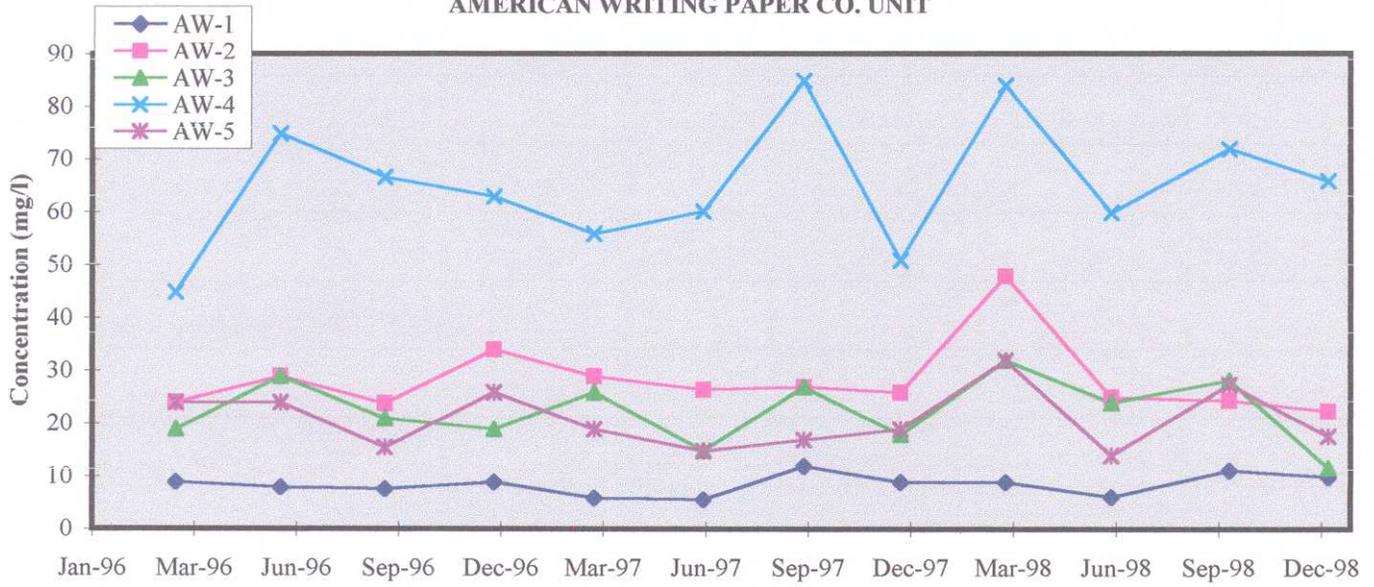
**FIGURE 5B**  
**AW-5 - 1994 & 1995 Fe, Mn & Sulfide**  
**AMERICAN WRITING PAPER CO. UNIT**



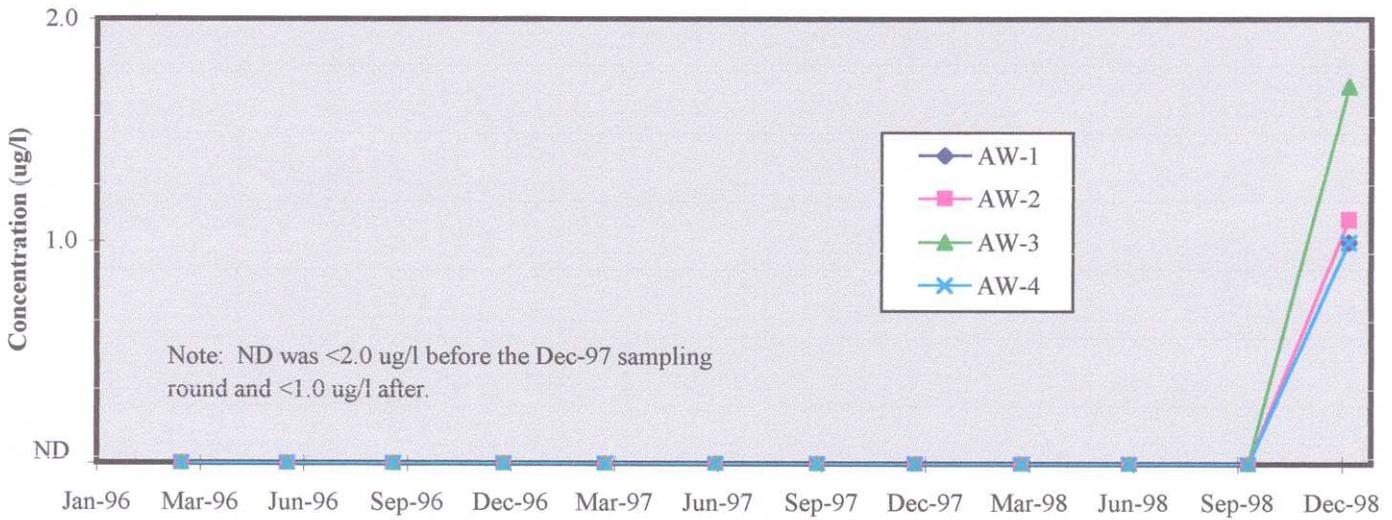
**FIGURE 5C**  
**AW-5 - 1994 & 1995 Mean TOC, Na, Cl & Sulfate**  
**AMERICAN WRITING PAPER CO. UNIT**



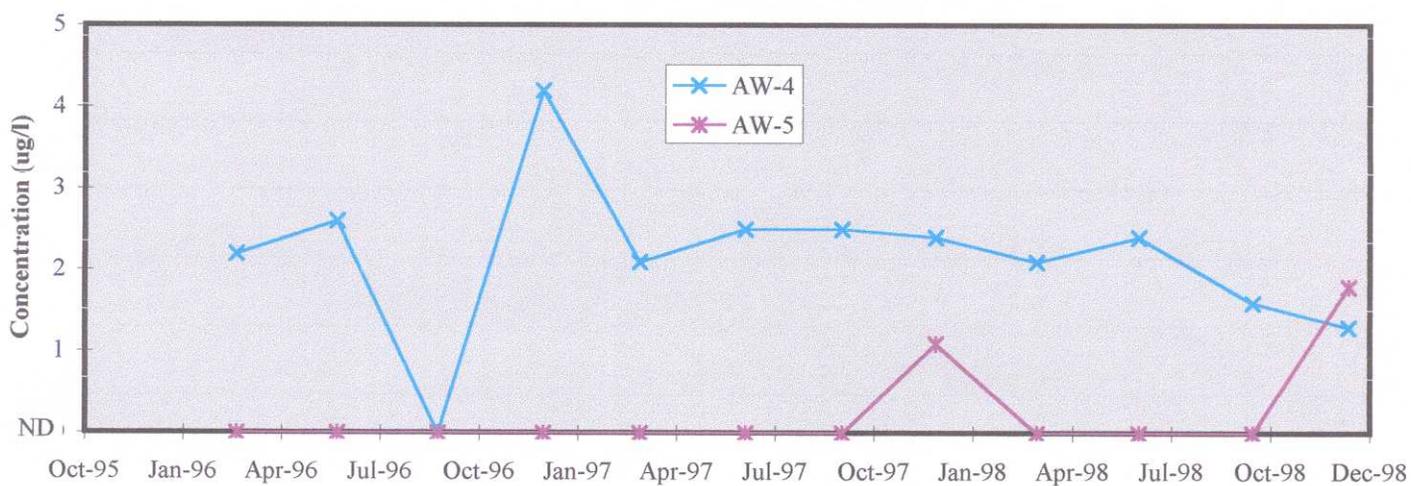
**FIGURE 1 1996 to 1998 SODIUM  
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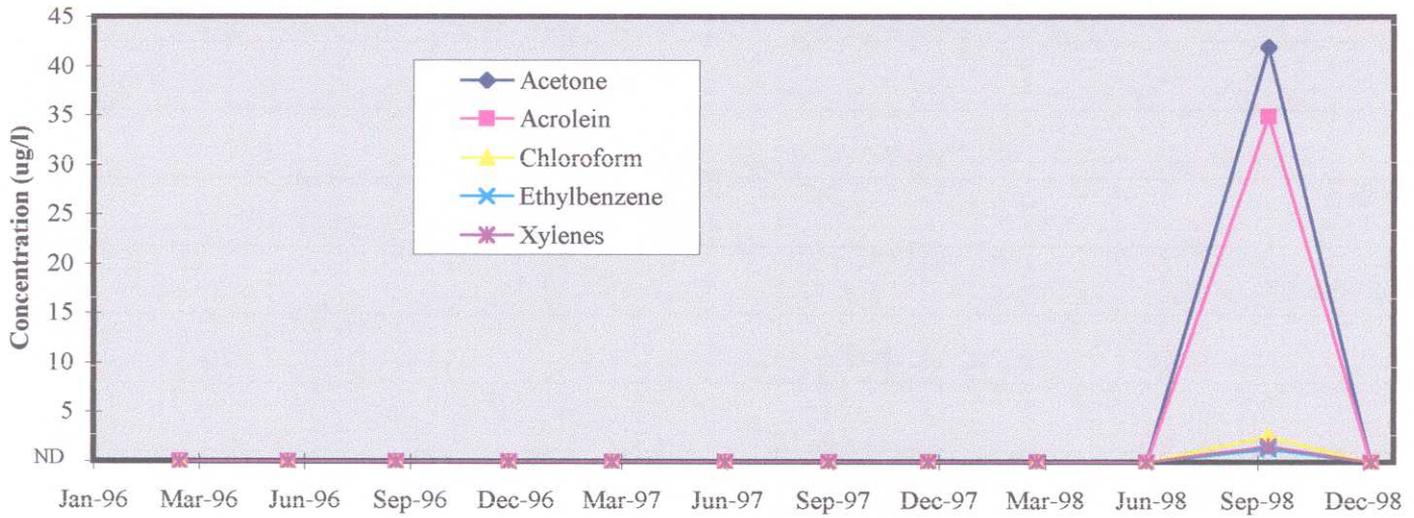
**FIGURE 2 1996 to 1998 TOLUENE  
AMERICAN WRITING PAPER CO. UNIT**



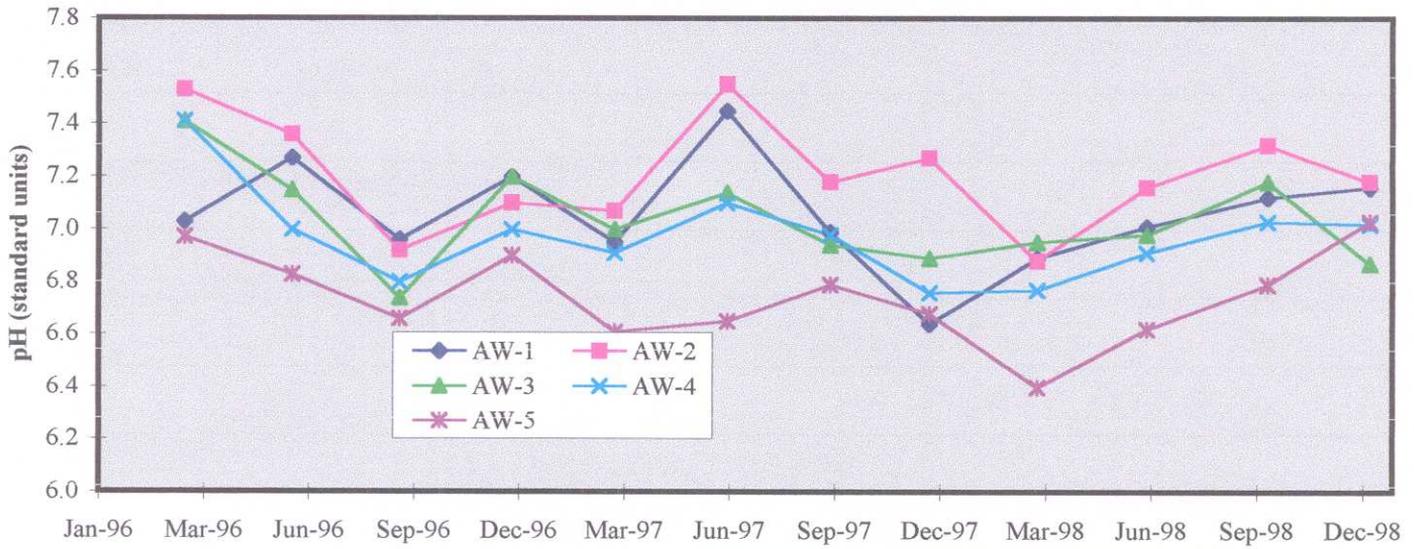
**FIGURE 3 1996 to 1998 1,1-DICHLOROETHANE  
AMERICAN WRITING PAPER CO. UNIT**



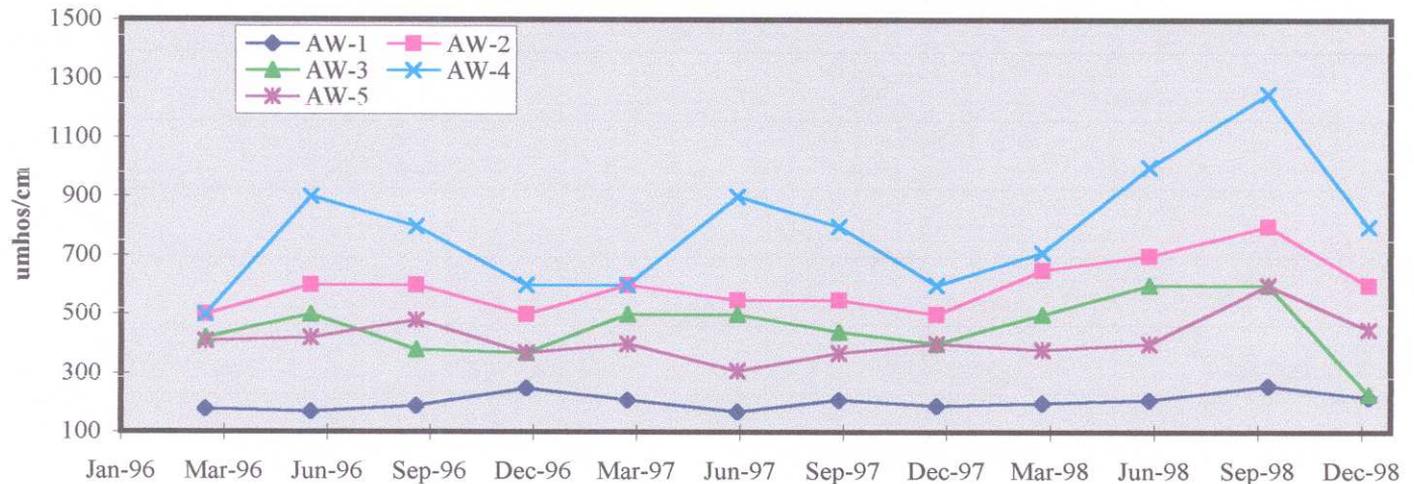
**FIGURE 4 1996 to 1998 OTHER VOC IN WELL AW-5  
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**FIGURE 5 1996 TO 1998 pH  
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**FIGURE 6 1996 TO 1998 SPECIFIC CONDUCTANCE  
AMERICAN WRITING PAPER CO. UNIT**



**FIGURE 7 1996 to 1998 WATER LEVEL ELEVATIONS  
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