

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO:) R06-10
TIERED APPROACH TO CORRECTIVE) (Rulemaking – Land)
ACTION OBJECTIVES)
(35 Ill. Adm. Code 742))

PUBLIC COMMENTS OF THE ILLINOIS ASSOCIATION OF ENVIRONMENTAL
LABORATORIES, INC. (IAETL)

My name is Jarrett Thomas and I am the Vice President and co-owner of Suburban Laboratories, Inc., an IEPA accredited environmental testing laboratory, established in 1936 and located in Hillside, Illinois. I am also the President and co-founder of IAETL. IAETL was formed in 1996 with the following goals:

- To promote the generation of high quality analytical data by member laboratories.
- To disseminate regulatory and technical information to member laboratories.
- To provide a forum where analytical and regulatory problems may be discussed and clarified.
- To encourage the use of private laboratories as the primary source of environmental testing.
- To actively participate in the development and improvement of environmental regulations.

The following comments are submitted on behalf of IAETL.

1) Applicability

For the past four years, IAETL has tried to work with the IEPA to resolve several analytical problems inherent in the regulation. It is the agency's responsibility to ensure that the analytical objectives of the regulation are clear and achievable. The agency's original proposal did not address many of the issues raised by IAETL and we appreciate the Board's allowing these issues to be brought forward. IAETL requests that the analytical limitations of TACO be addressed in this rulemaking. Failure to address these issues at this time will result in continued ambiguity, misinterpretation of method applicability, etc.

2) ADLs

According to testimony presented by Mr. Hornshaw and Ms. Hurley, the agency clearly intended the cleanup objectives found in TACO to be analytically achievable. Exhibit 15 lists the USEPA SW-846 methods and quantitation limits the USEPA expected laboratories to use to verify compliance with TACO objectives. Unfortunately the agency did not address USEPA's warning that method EQLs are highly matrix dependent, and that the EQLs listed in SW-846 are provided for guidance and may not always be achievable. Also, the agency did not consider the limited number, and in some cases the complete lack of accredited laboratories that may be able to achieve the published EQLs, and the potential costs of implementing non-routine and specialized methods. Linking TACO objectives to SW-846 EQLs represents significant risk because of the tendency for the methods to change over time. In fact, USEPA is removing all references to EQLs from future methods and revisions. The following is an excerpt of an

email received on March 9, 2006 from the USEPA Office of Solid Waste (OSW) Methods Information Communication Exchange (MICE) Service.

OSW is now in the process of removing requirements for MDL studies and EQL guidance in both the individual methods and chapters. Hopefully, the Fourth Edition of the manual, which should be published sometime early next year, will include these revisions. In addition, the SW-846 Methods Team is discouraging the use and application the MDL determination, regardless of the sample matrix type, as defined in 40CFR Pt 136 Appendix B, for the simple reason that it is not a true indication of the method sensitivity. The MDL calculation has been used repeatedly for a number of EPA programs and it demonstrates the potential data variability for a given sample matrix at one point in time, however, it does not represent what can be detected or most importantly the lowest concentration that can be calibrated. For this reason the OSW now recommends establishing the method detection limit or sensitivity as the lowest point of quantitation or in most cases the lowest point in the calibration curve.

Although the Agency, intended the TACO objectives to be determined and achieved analytically, the reality is that there are some compounds for which TACO objectives cannot be readily achieved. Mr. Dunn testified that even though the Agency is aware that the objectives cannot be achieved, they do not intend to add or revise the ADLs to reflect the use of best available technology. Mr. Dunn has offered four non-analytical options to achieve compliance. These options remove the requirement to run a

sample in an accredited laboratory and prove analytically the presence or absence of a compound at an achievable remediation objective.

These analytical issues can be addressed in a positive manner and can most likely be resolved by including ADLs that are achievable using best available technology. Attachment A contains IAETL's proposed ADLs and methods. In all cases the methods proposed by IAETL are equal to methods specified by IEPA in Part 740 Appendix A and are the commonly used methods of analysis in the environmental laboratory industry. The proposed ADL and methods are also equal to the Contract Required Quantitation Limit and method required by the USEPA Contract Lab Program (CLP), Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1) USEPA OSWER Document 540-F-05-008, July 2005. The use of these methods in a consistent manner within the analytical laboratory community will also aid in the comparability of data when examined by the agency, because the methods of analysis will be the same from laboratory to laboratory.

3) Technical Advisory Committee

TACO contains numerous technical requirements affecting laboratories. Attempts to address the analytical problems of TACO with the agency have been unsuccessful. As the methods of analysis and capabilities of laboratory instrumentation are constantly evolving, IAETL strongly recommends that the Board consider establishing a Technical Advisory Committee that would include members of IAETL. This committee can offer guidance to the agency on a routine basis with the goal of ensuring the regulation is technically sound and method/ADL references are kept current.

Attachment A

Section 742 APPENDIX B Table A and Table B Soil Remediation Objectives

Analyte (Soil)	Minimum TACO Objective or ADL (mg/kg)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/kg)	IAETL Proposed Method Reference	Justification
N-Nitrosodi-n-propylamine	0.0018	SW8070A	0.17	SW8270C	<ul style="list-style-type: none"> The PQL/EQL referenced in Exhibit 15 and the subsequent ADL in TACO is incorrect and unachievable. Method 8070A does not list EQLs for soil and groundwater. The soil EQL can be estimated as follows: <p style="text-align: center;"><i>EQL factor x MDL x Soil Extraction Factor</i></p> <p style="text-align: center;"><i>10 x 0.00046 x 33 = 0.1518 mg/kg</i></p> There are no labs accredited by IEPA for this analyte by method 8070A. Analysis by method 8070A may be cost prohibitive. The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Soil)	Minimum TACO Objective or ADL (mg/kg)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/kg)	IAETL Proposed Method Reference	Justification
Pentachlorophenol	0.03	SW8151A	0.33	SW8270C	<ul style="list-style-type: none"> • Analysis of all other semi-volatile compounds in soil can be performed by method 8270C. Analysis using an additional method will increase cost of analysis. • Some laboratories have elected not to perform method 8151A because of potential hazards associated with the use of ether in the extraction procedure. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Section 742 APPENDIX B Table E Class I Groundwater Remediation Objectives

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
Bromodichloromethane	0.0002	SW8021B	0.005	SW8260B	<ul style="list-style-type: none"> TACO objective is less than the Safe Drinking Water Act MCL for Total Trihalomethanes of 0.080 mg/L. Method 8260B with a 5 mL purge has adequate sensitivity to achieve proposed ADL. Method 8260B is already required for the analysis of volatile organic compounds. Utilizing method 8021B in addition to 8260B will add to the cost of analysis, and will likely add only a modicum of immediate tangible benefit. The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
Bromoform	0.001	SW8260B 25 mL purge	0.005	SW8260B 5 mL purge	<ul style="list-style-type: none"> • TACO objective is less than the Safe Drinking Water Act MCL for Total Trihalomethanes of 0.080 mg/L. • Method 8260B with a 5 mL purge has adequate sensitivity to achieve proposed ADL. • A 25mL purge is not applicable to contaminated ground waters and can lead to significant instrument malfunction and down time if a sample is contaminated. Laboratories routinely use a 5 mL purge. Utilizing a 25mL purge will increase analysis costs. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
Chloroform	0.0002	SW8021B	0.005	SW8260B	<ul style="list-style-type: none"> TACO objective is less than the Safe Drinking Water Act MCL for Total Trihalomethanes of 0.080 mg/L. Method 8260B with a 5 mL purge has adequate sensitivity to achieve proposed ADL. Method 8260B is already required for the analysis of volatile organic compounds. Utilizing method 8021B in addition to 8260B will add to the cost of analysis, and will likely add only a modicum of immediate tangible benefit. The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005
cis-1,3-Dichloropropene	0.001	SW8260B 25 mL purge	0.005	SW8260B 5 mL purge	<ul style="list-style-type: none"> A 25mL purge is not applicable to contaminated ground waters and can lead to significant instrument malfunction and down time if a sample is contaminated. Laboratories routinely use a 5 mL purge. Utilizing a 25mL purge will increase analysis costs. Method 8260B with a 5 mL purge has adequate sensitivity to achieve proposed ADL. The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
trans-1,3-Dichloropropene	0.001	SW8260B 25 mL purge	0.005	SW8260B 5 mL purge	<ul style="list-style-type: none"> • A 25mL purge is not applicable to contaminated ground waters and can lead to significant instrument problems and down time if a sample is contaminated. Laboratories routinely use a 5 mL purge. • Method 8260B with a 5 mL purge has adequate sensitivity to achieve proposed ADL. • Utilizing a 25mL purge will increase analysis costs. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005
2,4-Dinitrotoluene	0.00002	SW8330	0.005	SW8270C	<ul style="list-style-type: none"> • There are only three labs in the State of Illinois that are accredited for this method and analyte. • Utilizing method 8330 versus 8270C will greatly increase the cost of analysis. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
2,6-Dinitrotoluene	0.00031	SW8330	0.005	SW8270C	<ul style="list-style-type: none"> • There are only three labs in the State of Illinois that are accredited for this method and analyte. • Utilizing method 8330 versus 8270C will greatly increase the cost of analysis. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005
Hexachlorobenzene	0.00006	SW8121	0.005	SW8270C	<ul style="list-style-type: none"> • There are no labs in the State of Illinois that are accredited by IEPA for this analyte by method 8121. • Utilizing method 8121 versus 8270C will greatly increase the cost of analysis. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
N-Nitrosodiphenylamine	0.0032	SW8070A	0.005	SW8270C	<ul style="list-style-type: none"> • There are no labs accredited by IEPA for this analyte by method 8070A. • Utilizing method 8070A versus 8270C will greatly increase the cost of analysis. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005
N-Nitrosodi-n-propylamine	0.0018	SW8070A	0.005	SW8270C	<ul style="list-style-type: none"> • There are no labs in the State of Illinois accredited by IEPA for this analyte by method 8070A. • Utilizing method 8070A versus 8270C will greatly increase the cost of analysis. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005

Analyte (Groundwater)	Minimum TACO Objective or ADL (mg/L)	Hurley Exhibit 15 Method Reference	IAETL Proposed ADL (mg/L)	IAETL Proposed Method Reference	Justification
Pentachlorophenol	0.001	SW8151A	0.005	SW8270C	<ul style="list-style-type: none"> • Analysis of all other semi-volatile compounds in soil can be performed by method 8270C. Analysis using an additional method will increase cost of analysis. • Some laboratories have elected not to perform method 8151A because of potential hazards associated with the use of ether in the extraction procedure. • The proposed method is equal to the method specified by IEPA in Part 740 Appendix A. • The Proposed ADL and method are equal to the Contract Required Quantitation Limit and method from the USEPA Contract Lab Program (CLP), <u>Multi-Media, Multi-Concentration Organic Analytical Service for Superfund (SOM01.1)</u> USEPA OSWER Document 540-F-05-008, July 2005