ILLINOIS POLLUTION CONTROL BOARD

In the Matter of:)	
)	
PROPOSED AMENDMENTS TO)	
SOLID WASTE DISPOSAL:)	
GENERAL PROVISIONS)	R 07-008
35 Ill. Adm. Code 810; and,)	
)	(Rulemaking – Land)
STANDARDS FOR NEW SOLID)	
WASTE LANDFILLS)	
LANDFILLS 35 Ill. Adm. Code 811.)	

NOTICE OF FILING

TO: See attached Service List

PLEASE TAKE NOTICE that on February 15, 2007, I caused to be filed electronically with the Office of the Clerk of the Pollution Control Board, on behalf of the National Solid Wastes Management Association the attached Errata Sheet #3, the "Testimony of Tom Hilbert Concerning an Analysis of Economic Effect of the Proposed Regulatory Amendments to 35 Illinois Administrative Code Parts 810 and 811, and a Notice of Filing in the above matter, copies of which are hereby served upon you.

By: Charles I Northrun

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PRE-FILED TESTIMONY OF NSWMA WITNESS THOMAS A. HILBERT CONCERNING AN ANALYSIS OF ECONOMIC EFFECT OF THE PROPOSED REGULATORY AMENDMENTS TO 35 ILLINOIS ADMINISTRATIVE CODE PARTS 810 and 811

My name is Thomas Hilbert and as the Board knows form my previous testimony, I have been involved in this rulemaking as a representative of the NSWMA for several years. In this testimony I would simply like to present an economic analysis of the possible effect of the proposed rule amendments. It is apparent from the analysis that the proposed amendments will result in some cost savings to the regulated community, but I want to emphasize that that is not the driving force behind these proposals. The cost savings are a secondary result of the NSWMA's desire to create a better environmental monitoring system that will not be burdened with focusing resources on studying statistical or sampling artifacts. The overall estimated cost savings are an insignificant portion of actual landfill operation costs. The proposed amendments are motivated first and foremost by a desire to address advances and greater knowledge and experience in the filed; advances and knowledge which we believe will result in better landfill management and oversight as well as environmental protection.

In conducting this economic analysis, basic assumptions used to analyze the potential economic effects of the proposal upon <u>owners and operators</u> of Municipal Solid Waste Landfills (MSWLF) are as follows:

- 1) Each facility has a minimum of 20 groundwater monitoring wells and 4 leachate monitoring locations. Current routine groundwater monitoring consists of 13 parameters that require laboratory analysis and 5 field parameters. Routine leachate monitoring consists of 26 parameters that require laboratory analysis and 3 field parameters.
- 2) There are 51 active MSWLF in Illinois

The economic effect upon the Illinois Environmental Protection Agency and local regulatory authorities are not addressed in this analysis.

This review presents a detailed economic analysis that outlines the estimated annual cost for each item under the current regulatory framework and compares it to the estimated annual costs to be incurred under the proposed regulations. The difference is expressed as either a decrease (cost benefit to owners and operators) or a increase (cost increase to owners and operators). Any additional assumptions over those outlined above are presented in the detailed analysis.

1. Proposed Amendment 1.

810.104(a)(1) -- Updating Federal Regulations Incorporated by Reference.

Non-substantive and no economic effect.

2. Proposed Amendment 2.

810.104(a)(1) -- Updating Federal Regulations Incorporated by Reference

Non-substantive and no economic effect.

3. Proposed Amendment 3.

810.104(a)(1) -- Updating Federal Guidance Incorporated by Reference

Non-substantive and no economic effect.

4. Proposed Amendment 4.

811.309(g)(1) — Leachate Monitoring List

The list of leachate monitoring parameters has been codified in the regulations. The new monitoring list is similar to the current list sampled once per year and typically referenced as the L1 & L2 list in MSWLF facility operating permits. The L1 list referenced in permits has been deleted. The L1 list is currently sampled 3 times per year. The proposed list in 811 appendix C will be sampled semi-annually. In summary, leachate monitoring is proposed to be changed from quarterly to semi-annual during the initial 2 years of monitoring. The sampling frequency is unchanged during the life of the site subsequent to the first 2 years. The list of monitoring parameters has been expanded to include 202 constituents during every sampling event.

The current requirement is to sample the L1 list quarterly for 2 years and semiannual for the subsequent 38 years. Since the initial 2 years of sampling only adds 2 additional sampling events during the facility lifetime they are not included in this analysis.

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If the L1 list cost to collect a sample is \$200 and the cost for analysis is \$350 per location, the annual cost is approximately \$2,200.

 $4 \times \$550 \times 1 \text{ per year} = \$2,200$

If the L1 and L2 list cost to collect a sample is \$250 and the cost for analysis is \$1,000, the minimum annual cost is \$5,000 for the life of the facility. $4 \times $1,250 \times 1$ quarter = \$5,000

The current estimated annual cost for leachate monitoring is \$7,200.

The new requirement is to monitor the appendix C list semi-annually for the 40 year life of the facility.

If the appendix C list (similar to L1 & L2) cost to collect a sample is \$250 and the cost for analysis is \$1,000, the minimum annual cost is \$10,000 for the life of the facility.

4 X \$1,250 X 2 quarters = \$10,000

The proposed estimated annual leachate monitoring is \$10,000

ECONOMIC EFFECT

Individual annual cost increase = \$2,800

Industry annual cost increase = \$142,000

5. <u>Proposed Amendment 5.</u>

811.309(g)(2)(G) – List of Monitoring Parameters

See analysis in proposed amendment 5

6. <u>Proposed Amendment 6.</u>

811.309(g)(3)(D) – List of Monitoring Parameters

See analysis in proposed amendment 5

7. Proposed Amendment 7.

811.309(g)(4) – Leachate Monitoring Location Network

See analysis in proposed amendment 5

8. Proposed Amendment 8.

811.309(g)(5) - Frequency of Leachate Monitoring

See analysis in proposed amendment 5

9. Proposed Amendment 9.

811. Appendix C - List of Leachate Monitoring Parameters

See analysis in proposed amendment 5

10. Proposed Amendment 10.

811.315(e)(1)(G)(i) - Groundwater standard

No quantifiable economic effect.

11. Proposed Amendment 11.

811.315(e)(1)(G)(ii) – Groundwater standard

Non-substantive and no economic effect.

12. Proposed Amendment 12.

811.318(e)(6)(B) – Depth of Well Measurements

For wells which contain dedicated sampling pumps, eliminating the requirement to measure the total depth of the monitoring at each sampling event will certainly reduce the amount of man-hours required to collect samples at each individual well. It is not a tangible cost that can be easily quantified. In addition, the value of ensuring that the integrity of the sample collected from the well is protected by not disturbing the well and reducing the risk of introducing contaminants is difficult to quantify. However, these costs may be balanced by the increased cost to install and maintain dedicated sampling pump systems.

The primary driver of this proposal is improved data quality. The NSWMA is of the opinion that there is a modest positive economic effect by reducing the frequency of total well depth measurements. The actual amount is not easily quantifiable and has not been estimated in this study.

13. Proposed Amendment 13.

811.318(e)(6)(C) - Ph

Non-substantive and no economic effect.

14. Proposed Amendment 14.

811.318(e)(6)(D) – Temperature

Non-substantive and no economic effect.

15. <u>Proposed Amendment 15</u>.

811.318(e)(6)(E) – Specific Conductance

Non-substantive and no economic effect.

16. Proposed Amendment 16.

811.318(e)(7) – Well Depth

See analysis in proposed amendment 12

17. Proposed Amendment 17.

811.318(e)(8) - Additional Monitoring Well Requirements for MSWLF

Non-substantive and no economic effect.

18. Proposed Amendment 18.

811.319(a)(2)(A)(ii) - Public or Food Processing Water Supply Standard

This section has been deleted. The actual economic effect is summarized in proposed amendment 19.

19. Proposed Amendment 19.

811.319(a)(2)(A)(ii) – Monitored Constituents (New Section)

A specific list of indicator parameters for monitoring groundwater has been codified in this proposed amendment. The current requirement is to specify an indicator list referenced as the G1 list in the facility operating permit. The G1 list is a indicator list that is sampled quarterly throughout the life of a facility. This proposal amends the G1 list by deleting certain constituents and adding others.

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Although there is a slight increase in cost, the net change in economic cost of amending the indicator list is insignificant. Therefore no economic effect is attributed to this proposed change.

20. Proposed Amendment 20.

811.319(a)(3)(A)(i) – Monitored Organic Constituents (New Section)

The Petitioner proposes, with the concurrence of the Illinois EPA, to add a specific list of organic chemicals that must be monitored on a semi-annual basis. Currently, organic monitoring is performed once every year and is specified in the facility operating permit as the G2 list. This proposed amendment codifies the current G2 list and increases the monitoring frequency to semi-annually. The revised list does eliminate certain, less mobile, semi-volatile, pesticide/herbicides, and PCBs though incorporates phenols and oil and grease. Although the language in this section is specific to the monitoring of organic chemicals the G2 list also contains a list of inorganic constituents which are monitored without filtering of the sample which is referred to as total value. Since the requirement for monitoring total inorganics has been removed this analysis will also consider the impact of removing total inorganics, semi-volatile organics, pesticides/herbicides, and PCB's.

The current requirement is to sample the G1 & G2 list annually for the lifetime of the facility. The requirement to sample the G1 list is essentially unchanged.

If the cost for collecting a sample for the G2 list is \$250 and the cost for analysis is approximately \$1000. The annual cost is \$25,000.

 $20 \times 1250 \times 1 = 25,000$

The estimated cost for the current annual G1 & G2 sampling is \$25,000

The proposed sampling requirements are for the G1 list and volatile organic chemicals semi-annually for the lifetime of the facility. The G2 list is no longer required. The only new cost is for volatile organic chemical analysis.

If the cost to collect a sample is \$200 and the cost for analysis is \$175. The annual cost is \$15,000.

 $20 \times \$375 \times 2 = \$15,000$

The estimated cost for the proposed semi-annual sampling requirement is \$15,000

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ECONOMIC EFFECT

Individual annual cost decrease = \$10,000 Industry annual cost decrease = \$510,000

21. Proposed Amendment 21.

811.319(a)(3)(B) – Monitoring Frequency

Non-substantive and no economic effect.

22. Proposed Amendment 22.

811.319(a)(3)(C) – Organic Monitoring Frequency

See analysis in proposed amendment 20

23. <u>Proposed Amendment 23</u>.

811.319(a)(4)(A)(i) – Confirmation Monitoring

The proposed amendment provides the opportunity for a facility to reduce their respective false positive rate from current high levels (i.e., > 5%) to approximately 5% consistent with USEPA guidance. This will reduce the amount of confirmation sample events and the potential for unnecessarily triggering an assessment monitoring requirement. The effect of the proposed change will be a potential reduction in the number of assessment monitoring events. The actual economic effect of this specific proposed change is difficult to quantify. An analysis of the effect that this overall rulemaking's potential to reduce unnecessary assessment monitoring events is presented in the analysis under proposed amendment 36.

24. Proposed Amendment 24.

811.319(a)(4)(B)(i) -- Verification Samples

This proposed amendment will allow for a complete review of the laboratory analysis and verify that any confirmation of a "Monitored Increase" is not a laboratory or sampling artifact. It will also reduce the amount of samples collected and analyzed by allowing the verification sampling to be conducted during the next quarterly sampling event. In many instances due to the high false positive rate under the existing regulations, MSWLF facilities are monitoring 8 times per year during the verification process rather than the required 4 times per year. This creates problems for maintaining sample independence which is an important statistical basis.

The actual economic effect of the proposed change will vary significantly from site to site and is not directly quantifiable. However, an estimate of the overall effect is presented as a rough approximation.

A typical facility may be required to perform verification sampling on at least one parameter in 50% of the wells for every quarterly sampling event. If the cost is \$200 to collect the sample and \$50 to analyze the sample, the annual cost is \$10,000.

10 wells X \$250 X 4 = \$10,000

ECONOMIC EFFECT

Individual annual cost decrease = \$10,000 Industry annual cost decrease = \$510,000

25. Proposed Amendment 25.

811.319(a)(4)(B)(iii) -- Notice of Confirmation and Source Determination

No economic effect.

26. Proposed Amendment 26.

811.319(b)(2) -- Assessment Monitoring, Timing of Plan Filing

No economic effect.

27. Proposed Amendment 27.

811.319(b)(5)(A) – Assessment Monitoring, Additional Constituents

No economic effect.

28. Proposed Amendment 28.

811.319(b)(5)(D) - Assessment Monitoring, Timing

Although the proposed language may infer some economic benefit it is not easily quantifiable since the actual list of constituents to be monitored will vary from facility to facility. Therefore no quantifiable economic impact of the proposed change is identified

29. Proposed Amendment 29.

811.319(b)(5)(E) - Assessment Monitoring, Constituents

No economic effect.

30. Proposed Amendment 30.

811.319(b)(5)(G) – Assessment Monitoring, Constituents

No economic effect.

31. Proposed Amendment 31.

811.319(d)(1)(A) - Assessment Monitoring, Capitalization Correction.

Non-substantive and no economic effect.

32. Proposed Amendment 32.

811.319(d)(3)(A) -- Assessment Monitoring, Reference Clarification

Non-substantive and no economic effect.

33. Proposed Amendment 33.

811.320(a)(3)(B) – Groundwater Quality Standards, Board Established Standards

No economic effect.

34. Proposed Amendment 34.

811.320(b)(2) - Adjusted Groundwater Quality Standards

No economic effect.

35. Proposed Amendment 35.

811.320(b)(4) – Adjusted Groundwater Quality Standards

No economic effect.

36. Proposed Amendment 36.

811.320(d)(1) - Establishment of Groundwater Background Concentration

The proposed language of this section as well as the proposed changes in other sections of this rulemaking are designed to reduce unnecessary assessment monitoring triggered by an excessively high false positive rate during statistical review of groundwater monitoring data. The net affect will be to reduce the number of assessment monitoring events which are not necessary. Although the economic effect of a reduction in the number of assessment monitoring plans is presented in this section, the estimated reduction in assessment monitoring plans will result from the language changes proposed throughout this rulemaking.

The actual cost of an assessment can vary depending on the event that triggered the requirement to develop an assessment monitoring plan. Some plans require the installation of additional wells. Since this is not required for every event this analysis simply estimates the cost for preparing an assessment monitoring plan that contains the necessary information to be reviewed by the Illinois Environmental Protection Agency as a "Significant Modification" to the facility operating permit.

The estimated cost to prepare an assessment monitoring plan is typically \$25,000. The current rules trigger an assessment at least semi-annually.

 $$25,000 \times 2 = $50,000$

Therefore the current annual cost is estimated at \$25,000

It is anticipated that the proposed changes will reduce the amount of assessments by 50%.

25,000 X 1 = 25,000

Therefore the proposed annual cost is estimated at \$25,000

ECONOMIC EFFECT

Individual annual cost decrease = \$25,000 Industry annual cost decrease = \$1,275,000

37. Proposed Amendment 37.

811.320(d)(2) - Adjustment to Background Concentrations

See analysis in proposed amendment 36

38. Proposed Amendment 38.

811.320(d)(3) - Background Concentrations

See analysis in proposed amendment 36

39. Proposed Amendment 39.

811.320(d)(4) - Background Concentrations, Monitoring Wells

Non-substantive and no economic effect.

40. <u>Proposed Amendment 40</u>.

811.320(d)(5) - Background Concentrations, Non-Hydraulically Upgradient

Non-substantive and no economic effect.

41. Proposed Amendment 41.

811.320(d)(6) - Background Concentrations, Alternatives

Non-substantive and no economic effect.

42. Proposed Amendment 42.

811.320(e)(1) - Statistical Analysis of Groundwater Data

No economic effect.

43. Proposed Amendment 43.

811.320(e)(3) - Use of the Practical Quantification Limit ("PQL")

No economic effect.

44. Proposed Amendment 44.

$$811.320(e)(3)(A)$$
 – Use of POL's

No economic effect.

45. Proposed Amendment 45.

811.320(e)(3)(B) - Alternative Groundwater Analysis Procedures

No economic effect.

46. Proposed Amendment 46.

811.320(e)(3)(C) – Alternative Groundwater Analysis Procedures

No economic effect.

47. Proposed Amendment 47.

811.320(e)(4) - Specific Normal Theory Statistical Tests

No economic effect.

48. <u>Proposed Amendment 48</u>.

811.320(e)(5) - Nonparametric Statistical Tests

No economic effect.

49. Proposed Amendment 49.

811.320(e)(6) – Other Available Statistical Tests

No economic effect.

In conclusion, based on the above analysis of the potential economic effect upon MSWLF owners and operators the proposed rulemaking has an estimated annual cost savings of \$42,200 for each facility subject to the rules. The estimated annual cost savings to the industry for the 51 active MSWLF operating in the state of Illinois is \$2,153,000.

Thank you.

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

In the Matter of:	
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PROPOSED AMENDMENTS TO)	
SOLID WASTE DISPOSAL: GENERAL PROVISIONS)	R 07 - 008
35 Ill. Adm. Code 810; and,)	
	(Rulemaking – Land)
STANDARDS FOR NEW SOLID WASTE LANDFILLS)	· -
LANDFILLS 35 Ill. Adm. Code 811.	

ERRATA SHEET #3

NOW COMES Proponent, the National Solid Wastes Management Association – Midwest Region ("NSWMA") by and through its attorneys, Sorling, Northrup, Hanna, Cullen & Cochran, Ltd., Charles J. Northrup, of counsel, and hereby provides an Errata Sheet #3 with respect to a portion of the proposed rule amendments.

- 1. On July 27, 2006, the NSWMA filed its "Proposal to Amend Certain Pollution Control Board Regulations Related to Solid Waste Management Facilities." These proposed amendments related to certain requirements at 35 Ill.Adm. Code 810 and 811. On August 17, 2006, the Board accepted the Proposal for hearing.
- 2. On January 16, 2007 the NSWMA filed its "Supplemental Information and Errata Sheet."
 - 3. On January 25, 2007 the NSWMA filed its "Errata Sheet #2."

On January 29, 2007, the Board held its first hearing in this matter. During that 4. hearing, a number of comments were made concerning certain aspects of the proposed amendments that might be remedied by minor language changes. None of the comments address the substance of the proposed rule. These comments are addressed and incorporated into new language set out in the attached "Errata Sheet 3."

Respectfully submitted,

NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION

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ERRATA SHEET #3

- 1. Proposed (Revised) Section 811.319(a)(2) (New subsections (A)(iii) and (iv)
 - 2) Criteria for Choosing Constituents to be Monitored
 - A) The operator shall monitor each well for constituents that will provide a means for detecting groundwater contamination. Constituents shall be chosen for monitoring if they meet the following requirements:
 - i) The constituent appears in, or is expected to be in, the leachate: and
 - ii) Is contained within the following list of constituents.

Ammonia – Nitrogen (dissolved)

Arsenic (dissolved)

Boron (dissolved)

Cadmium (dissolved)

Chloride (dissolved)

Chromium (dissolved)

Cyanide (total)

Lead (dissolved)

Magnesium (dissolved)

Mercury (dissolved)

Nitrate (dissolved)

Sulfate (dissolved)

Total Dissolved Solids (TDS)

Zinc (dissolved)

- ii) The Board has established for the constituent a public or food processing water supply standard, at 35 III. Adm. Code 302, the Board has established a groundwater quality standard under the Illinois Groundwater Protection Act [415 ILCS 55], or the constituent may otherwise cause or contribute to groundwater contamination.
- iii) This is the minimum list for MSWLFs.
- iv) Any facility accepting more than 50% by volume non-municipal must determine additional indicator parameters based upon leachate characteristic and waste content.

- 2. Proposed (New) section 811.320(b)(1) (new regulatory references)
 - b) Justification for Adjusted Groundwater Quality Standards
 - 1) An operator may petition the Board for an adjusted groundwater quality standard in accordance with the procedures specified in Section 28.1 of the Act and 35 Ill. Adm. Code 104.400 et. seq.

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