

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

RECEIVED  
CLERK'S OFFICE

SEP 02 2011  
STATE OF ILLINOIS  
Pollution Control Board

IN THE MATTER OF:	)	
	)	
PROPOSED AMENDMENTS TO	)	
CLEAN CONSTRUCTION OR DEMOLITION	)	R12-9
DEBRIS FILL OPERATIONS (CCDD):	)	(Rulemaking – Land)
PROPOSED AMENDMENTS TO 35 Ill.	)	
Adm. Code 1100)	)	

ORIGINAL

NOTICE OF FILING

John T. Therriault, Clerk  
Illinois Pollution Control Board  
James R. Thompson Center  
Suite 11-500  
100 W. Randolph  
Chicago, Illinois 60601

Mitchell Cohen  
Chief Legal Counsel  
Illinois Dept. of Natural Resources  
One Natural Resources Way  
Springfield, Illinois 62702-1271

Matthew J. Dunn, Chief  
Environmental Enforcement/Asbestos  
Litigation Division  
Illinois Attorney General's Office  
69 West Washington St., 18<sup>th</sup> Floor  
Chicago, Illinois 60602

Marie E. Tipsord  
Hearing Officer  
Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph, Suite 11-500  
Chicago, Illinois 60601

Attached Service List

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board the Illinois Environmental Protection Agency's Prefiled Testimony of Douglas W. Clay, Stephen F. Nightingale, Paul M. Purselove, and Leslie D. Morrow, copies of which are herewith served upon you.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By: Mark Wight  
Mark Wight  
Assistant Counsel

DATE: September 1, 2011

1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
(217) 782-5544  
Mark.Wight@illinois.gov

ILLINOIS POLLUTION CONTROL BOARD

RECEIVED  
CLERK'S OFFICE  
SEP 02 2011  
STATE OF ILLINOIS  
Pollution Control Board

IN THE MATTER OF: )  
)  
PROPOSED AMENDMENTS TO )  
CLEAN CONSTRUCTION OR DEMOLITION ) R2012-009  
FILL OPERATIONS ) (Rulemaking-Land)  
(35 ILL. ADM. CODE 1100) )  
)  
)

ORIGINAL

PRE-FILED TESTIMONY OF STEPHEN F. NIGHTINGALE ON ILLINOIS EPA'S  
PROPOSED AMENDMENTS TO PART 1100

Qualifications

My name is Stephen F. Nightingale. I am the manager of the Permit Section of the Bureau of Land at the Illinois Environmental Protection Agency ("Agency"). The Bureau of Land Permit Section is generally responsible for the permitting and day-to-day activities associated with the State (solid waste), RCRA (hazardous waste), and underground injection control (UIC) programs when dealing with waste treatment, storage and disposal.

I graduated from the University of Missouri at Rolla in 1982 with a B.S. degree in Civil Engineering. Following graduation I spent four years employed by the Missouri Pacific/Union Pacific Railroad Company as a staff engineer. My work included activities in the mechanical, construction, and environmental fields. Since June of 1986 I have been employed by the Agency in a variety of positions, including my current position as Bureau of Land Permit Section Manager. I assumed this position in April of 2006. I am registered as a Professional Engineer in Illinois. I have approximately 25 years experience in the environmental engineering field. A brief summary of my education and work experience is included as Attachment 1.

Today I will be testifying in support of the proposed amendments to the existing 35 Ill. Adm. Code Part 1100 mandated by Public Act 96-1416.

## Testimonial Statement

I will be testifying in support of the proposed amendments and additions to the existing 35 Ill. Adm. Code Part 1100 mandated by Public Act 96-1416 (415 ILCS 5/22.51a).

Specifically, I will be testifying in support of the proposed amendments to existing Subparts A, B, C and D and the addition of Subparts E, F (Section 1100.615, only) and G.

### **I. SUBPART A: GENERAL**

To carry out the requirements of Public Act 96-1416 (415 ILCS 5/22.51a), the Agency is proposing extensive changes to existing Subpart A, particularly the definitions given in Section 1100.103. In developing the proposed amendments, an attempt was made, where feasible, to use existing statutory language with as little alteration as possible. However, in many instances, the Illinois EPA found it necessary to craft new language tailored specifically for CCDD and soil only fill operations.

#### Section 1100.101: Scope and Applicability

##### Subsection (a)

The Agency revised the scope to include uncontaminated soil fill operations pursuant to the new Section 22.51a of the Illinois Environmental Protection Act (“Act”) added by P.A. 96-1416 (415 ILCS 5/22.51a).

##### Subsection (b)

This subsection describes uses of Clean Construction and Demolition Debris (“CCDD”) and uncontaminated soil that are not regulated by Part 1100. The following testimony describes each subsection in detail.

##### Subsection (b)(1)

The Agency added the phrase “or uncontaminated soil” to the subsection to acknowledge that uncontaminated soil is only regulated if it is placed in a CCDD or uncontaminated soil fill site.

Subsection (b)(2)

The Agency revised this subsection to add “or uncontaminated soil” since uncontaminated soil disposed of on-site is not regulated by Part 1100. In addition, The Agency removed the italics used to denote statutory language because the subsection, as amended, would apply to uncontaminated soil fill operations that are regulated by a different section of the Act.

Subsection (b)(3)

The Agency revised this subsection to add “or uncontaminated soil” because “uncontaminated soil” used in Illinois Department of Transportation applications will be treated the same as CCDD. In addition, the Agency removed the italics used to denote statutory language as noted above.

Subsection (b)(4)

Again, the Agency revised subsection to add “or uncontaminated soil” since Part 1100 regulations only apply to mines, quarries, and other excavations that use CCDD or uncontaminated soil for fill. Also, the Agency removed the italics used to denote statutory language as noted above.

Subsection (b)(5)(A)

The Agency revised this subsection to add “or soil” because Part 1100 does not apply to soil that is considered a waste.

Subsection (b)(5)(B)

The Agency revised this subsection to add “or uncontaminated soil” because Part 1100 does not apply to any material used as fill other than CCDD or uncontaminated soil.

### Subsection (b)(6)

Since the proposed changes to Part 1100 will cover uncontaminated soil fill sites, the Agency added the phrase “or an uncontaminated soil fill operation” to this subsection.

### Section 1100.103: Definitions

“Acceptable detection limit” is a new definition added by the Agency due to the provisions for soil sampling and testing in Section 1100.605(a)(4). The definition matches the definition in 35 Ill. Adm. Code Section 742.200, known as the Tiered Approach to Corrective Action Objectives (TACO).

The definition of “aquifer” comes from the Illinois Groundwater Protection Act (415 ILCS 55/1 et seq.) with the phrase “and whose boundaries can be identified and mapped from hydrogeologic data” added. The Agency added the phrase because the Agency cannot regulate unknown or non-delineated aquifers. This term needed to be defined because it is used in other definitions.

Since the proposed changes to Part 1100 include groundwater sampling, the Agency added a definition for “background groundwater quality.” The term is commonly used by Agency staff and other environmental professionals to establish what contaminants are present in the groundwater and unaffected by the activity of concern. This term is defined to distinguish its use in the groundwater monitoring of Subpart G from the use of the term “background” as it relates to sampling in Subpart F.

The Agency revised the definition for “CCDD fill operation” to match the current definition in the Act, which was modified by P.A. 96-1416.

The definition for “clean construction or demolition debris” was expanded to include painted CCDD. This change is made to accommodate the Agency’s proposal at Section

1100.212 to allow painted CCDD to be used as fill. Additionally, the part of the definition describing the use of CCDD outside a fill site was removed, because it is not relevant. The phrase “or other” was added to match the current definition in the Act, as modified by P.A. 95-121.

The Agency defined “compliance boundary” since it is used in the proposed Subpart G of Part 1100, specifically Section 1100.720(c).

The Agency defined “compliance point” since it is used in proposed Sections 1100.720(b), 1100.720(c) and 1100.755(b). It is expected that the compliance point will be a groundwater monitoring well on or inside the compliance boundary.

The Agency added the term “cone of depression” because it is used in the proposed Section 1110.760(a). This term is commonly used by Agency staff and other environmental professionals in reference to the configuration of piezometric surfaces (i.e., the water table) impacted by groundwater extraction (e.g., dewatering at mines and quarries).

The Agency added a definition for “dewatering” due to its use in Section 1100.760. This term is defined since it has a specific consequence within the context of Subpart G, which is dewatering to an extent that a cone of depression is formed.

The Agency defined “fill operation” because the proposed Part 1100 amendments include both CCDD fill sites and uncontaminated soil fill sites. “Fill operation” describes both types of sites that the proposed amendments will regulate.

The Agency removed the definition for “malodor.” The Agency believes that the term “malodor” is not appropriate for Bureau of Land regulations since it is related to air pollution. Within the regulations, the term “malodor” was replaced with “foul odor,” which the Agency believes does not need to be defined.

The only change the Agency made to the definition of “operator” was striking “CCDD” since the proposed regulations will cover both CCDD and uncontaminated soil fill operations. This leaves the more generic term “fill operations” as defined in this Section.

The meaning of “other excavation” was previously combined with the definition for “CCDD fill operation.” The Agency moved it into its own definition to give it more prominence and to reduce the confusion of the regulated community and public over which excavations would require permitting. The Agency added “created primarily for the purpose of extracting resources (e.g. soil, sand, gravel, clay)” to provide specific examples of excavations that are regulated by Part 1100. The Agency has previously determined that certain instances of soil placement or filling are not subject to CCDD fees, permitting or registration. For example, “other excavations” do not include: filling in basements, backfilling a cleanup site, installing or maintaining sewer trenches, or filling in natural depressions.

The Agency proposes that the definition for “potentially impacted property” be used to identify loads of soil that may be contaminated by current or historical use or by proximity to a contaminated source. Although Section 22.51(f)(2)(B)(i) of the Act refers to “commercial or industrial purposes” as the dividing line between presumed uncontaminated and suspect soils, the Agency believes that “potentially impacted property” more accurately describes soils that need to be evaluated by an Illinois Licensed Professional Engineer or Licensed Professional Geologist as part of the load checking procedures in Part 1100.205.

The Agency added the definition for “practical quantitation limit” to identify the smallest level of contamination that can be reliably measured. The phrase is used in the definition of “acceptable detection limit,” a phrase which is in turn used in Section 1100.605(a)(4).

The Agency added the definition for “Professional Geologist” as a result of to P.A. 97-

137, which modifies Sections 22.51(f)(2)(B) and 22.51a(d)(2)(B) of the Act to allow Licensed Professional Geologists to sign and seal the soil certification form, LPC-PA663.

The Agency defined “representative groundwater conditions” due to the addition of the groundwater monitoring requirements in Subpart G. This term is defined to describe the normal groundwater conditions at a fill operation that would exist without the pumping or dewatering during resource extraction at the fill site.

The Agency defined “site of origin” to distinguish between the site from which the soil or CCDD was removed and the site of the fill operation.

The definitions for “source site operator” and “source site owner” were added to identify the person(s) required to sign and/or produce information for forms, specifically the LPC-662 and LPC-663. The forms are used to identify the site of origin and other information required by Sections 3.160(f)(2)(A), 22.51(f)(2)(A) and 22.51a(d)(2)(A) of the Act.

The definition for “uncontaminated soil” comes from Section 3.160(c) of the Act. The Agency incorporated language from Section 3.160(b) of the Act regarding uncontaminated soil “generated during construction, remodeling, repair, and demolition of utilities, structures, and roads” to clarify that the soil must be from construction or demolition activities. Also, Illinois EPA added language stating that Subpart F of Part 1100 must be consulted to further define the meaning of the term “uncontaminated.”

The definition of “uncontaminated soil fill operation” comes from Section 22.51a(a)(2) of the Act.

The Agency revised the definition of “unit” to add uncontaminated soil, since the proposed amendments will cover both CCDD and uncontaminated soil fill operations.

The Agency added the term “uppermost aquifer” because it is referred to in the definition



of “compliance boundary.” The definition of “uppermost aquifer” is the same as the Board’s definition of “uppermost aquifer” at 35 Ill. Adm. Code 720.110.

The Agency revised the definition of “working face” to add uncontaminated soil, since the proposed amendments will cover both CCDD and uncontaminated soil fill operations.

#### Section 1100.104: Incorporations by Reference

Human Health Toxicity Values in Superfund Risk Assessments (2003): This USEPA guidance memorandum presents a hierarchy for selection of toxicity values used for the quantitative evaluation of risks to human health due to exposure to environmental contaminants.

This prioritization of toxicity values was used to complete the formulas and equations for the Tier I objectives calculations in Part 742, Tiered Approach to Corrective Action Objectives (TACO) regulations. The TACO regulations are cited extensively in the proposed Subpart F: Standards for Uncontaminated Soil Used as Fill Material at Fill Operations Regulated by this Part.

IRIS: Integrated Risk Information System: EPA's Integrated Risk Information System (IRIS) is a human health assessment program that evaluates risk information on effects that may result from exposure to environmental contaminants. Through the IRIS Program, EPA provides the highest quality science-based human health assessments to support the Agency’s regulatory activities. The IRIS database contains information for more than 550 chemical substances containing information on human health effects that may result from exposure to various substances in the environment.” (directly from IRIS introduction) The IRIS database provides first priority toxicity values for human health evaluations. The IRIS database can be accessed through the internet (URL: <http://www.epa.gov/iris/>).

Test Methods for Evaluating Solid Waste, Physical/Chemical methods, EPA Publication

SW-846: This reference was revised to list the current publishing address and include update IV.

RCRA Ground-Water Monitoring: Draft Technical Guidance (1992): This publication is used by the USEPA and many states, including Illinois, for guidance in designing and installing a groundwater monitoring network. It is incorporated since proposed Section 1100.725 requires the owners and operators of fill operations to install a groundwater monitoring system.

Statistical Analysis of Groundwater Data at RCRA Facilities – Unified Guidance (2009): This USEPA document is the standard guidance for interpreting groundwater data and determining which statistical methods are appropriate to analyze the data for both hazardous and non-hazardous facilities. The USEPA, the Agency, and most states use this publication for determining acceptable statistical analysis of groundwater data.

## **II. SUBPART B: OPERATING STANDARDS FOR CCDD FILL OPERATIONS**

“Operating” and “CCDD Fill Operations” has been added to the general heading of “Standards” in order to better describe the section and to clarify that this Subpart pertains primarily to CCDD fill operations. However, many of the requirements of this Subpart also apply to uncontaminated soil fill operations by way of a cross-reference at Section 1100.505 of Part 1100. The Agency believes that changing the heading will direct uncontaminated soil fill operations to Subpart E first to determine which sections of Subpart B are applicable.

### Section 1100.201 - Prohibitions

Subsection (d) is copied from the statutory language of Section 22.51(g)(1) of the Act as amended by P.A.96-1416.

Subsection (e) is copied from the statutory language of Section 22.51(g)(2) of the Act as amended by P.A.96-1416.

Subsection (f) is added prohibiting the use of any painted CCDD as fill material at a

CCDD fill operation except as provided in Section 1100.212. Previously all painted CCDD was prohibited from being used as fill material at a CCDD fill operation. The addition of Section 1100.212 to Subpart B allows for the use of painted CCDD as fill in certain circumstances described in that Section. Another Agency witness, Paul Purseglove, will present testimony on Section 1100.212; therefore, my testimony will exclude explanation of that Section.

#### Section 1100.203 – Annual Facility Map

Added to this Section is the requirement that the annual facility map be submitted with the annual report. From its experience with the CCDD permit program, the Agency has determined that the annual map and annual report should be submitted together to provide a more meaningful review of each.

#### Section 1100.204 – Operating Standards

Subsection (j) regarding odor and nuisance has been added to the operating standards of a CCDD fill operation and also an uncontaminated soil fill operation by way of cross-reference. This subsection was added to specifically address the acceptance of dredged materials (which may present odor problems) for use as fill at either a CCDD or uncontaminated soil fill operation. However, any CCDD or uncontaminated soil may be rejected by the fill owner or operator based on odor alone.

#### Section 1100.205 – Certifications and Load Checking

“Certifications” is added to the title due to the addition in this section of the requirements for uncontaminated soil certifications. Under interim standards, P.A. 96-1416 required both CCDD fill operations and uncontaminated soil fill operations to obtain for all soil a certification from the site owner or site operator or a professional engineer that the soil is uncontaminated. The Agency has carried over this same requirement for soil certifications in Part 1100 in addition

to providing professional geologists with the authority to certify that soil is uncontaminated as established by P.A. 97-137.

Subsection (a) requires a certification by the source site owner or source site operator, professional engineer or professional geologist that soil taken to the fill operation is uncontaminated. Also required by subsection (a) is documentation that the CCDD or uncontaminated soil was not part of a cleanup or removal of contaminants, and that soil to be tested should be tested in accordance with Subpart F.

Subsection (a)(1) specifies that one of two forms must be submitted for all uncontaminated soil, including soil mixed with CCDD. These forms (LPC-662 and LPC-663) are Agency prescribed forms available on the Agency website.

Subsection (a)(1)(A) describes the forms to be used when the uncontaminated soil certification comes from a source site owner or source site operator. It affirms that the site of origin is not a potentially impacted property and that the soil is presumed to be uncontaminated. The use of the term “potentially impacted property” would replace “industrial/commercial.” Though the term “industrial/commercial” is required during the interim period, this language is closely identified with zoning designations and, as a result, has caused confusion among stakeholders. PA 96-1416 intended to identify soil that is more likely to be contaminated and in need of professional evaluation and certification before placement within a fill site. To better align with the purpose of the certification requirement and to give more flexibility to source site owners and operators, receiving facilities, contractors and environmental professionals, the Agency has created a new term, “potentially impacted property.” As defined in the proposed amendments, “potentially impacted property” means property on which historical or current use increases the presence or potential presence of contamination. The Agency deleted specific

reference to rights of way and easements because the term “potentially impacted property” can be applied directly to these land uses.

Subsection (a)(1)(B) references the form to be used when the uncontaminated soil comes from a potentially impacted property and requires certification by a Licensed Professional Engineer or a Licensed Professional Geologist. As stated previously, Professional Geologists were granted authority to certify uncontaminated soil by P.A. 97-137.

Subsection (a)(2) requires confirmation and documentation that the CCDD or uncontaminated soil was not removed from a site as part of a cleanup or removal of contaminants. The language comes from 22.51(f)(2)(C) and 22.51a(d)(2)(C) of the Act and is part of the interim requirements that the Agency opted to carry over to the regulations in Part 1100. Please note that fill operators may accept CCDD or uncontaminated soil from cleanup sites, such as those regulated by the Leaking Underground Storage Tank Section or the Site Remediation Program, if the material is not removed as part of a cleanup or removal of contaminants (e.g., fill operators may accept clean overburden or other on-site soil or material that does not require excavation or treatment as part of the remediation activities).

Subsection (a)(3) specifies that any soil testing needed to determine that a load is not contaminated must follow the requirements of Subpart F of this Part. Subpart F is a new section that establishes standards for uncontaminated soil generated during construction or demolition activities and used as fill material at fill operations.

The Agency re-lettered many subsections under Subsection (b) to accommodate changes in the previous subsection.

Under Subsection(b)(3)(A), fill operations would be required to collect additional documentation, including the date the CCDD or uncontaminated soil was received; the weight

or volume of the CCDD or uncontaminated soil (for purposes of assessing the fee required by P.A. 96-1416 and 35 Ill. Adm. Code Part 1150); and the name of the hauler. Also required to be documented are the names of the source site owner and source site operator, and the location of the site of origin of the CCDD or uncontaminated soil. The “location of the site origin” has replaced the “source of the CCDD” for clarity because the “source” could mean either the physical location or the property owner or operator’s name. These additional documentation requirements carry over from the interim standards found at Sections 22.51(f)(2)(A) and 22.51(d)(2)(A) of the Act.

The Agency re-lettered additional subsections under Subsection (b)(3) and (4) to accommodate changes in the previous subsection, and where appropriate, added “uncontaminated soil” due to the regulation of uncontaminated soil as fill material.

The written notice requirements under Subsection (b)(4)(A)(ii) have been changed to allow rejection of a load because it is suspected to be a waste or causes foul odors. This subsection also allows for management of the rejected load other than disposal at a landfill. Previously, the section required the rejected material to be properly recycled or disposed of at a permitted landfill. This new flexibility is in response to situations where the PID instrument at the CCDD facility or soil only fill operation detects volatile contaminants in soil that has been certified by a Professional Engineer or Professional Geologist and is accompanied by laboratory analytical results demonstrating that the soil is uncontaminated. Ordinarily, laboratory results would trump field instrument readings, but neither screening is 100 percent accurate. As a result, any PID reading in excess of background levels must result in rejection of the inspected load. Professional Engineers and Professional Geologists who have obtained laboratory results demonstrating the soil meets the standards of Subpart F are advised to also screen their loads

with a PID instrument before sending the trucks to the fill operation.

Subsection (b)(4)(A)(iii) has been reassigned from (d)(1)(C), and the section now requires the owner or operator to record the weight or volume of the CCDD or uncontaminated soil in addition to previously requiring the name of the hauler, the source site owner and source site operator, and the location of the site of origin of the fill. The original intent of this subsection in R2006-019 was to discourage illegal dumping of rejected loads. Again, these additional documentation requirements carry forth the interim standards found at Sections 22.51(f)(2)(A) and 22.51(d)(2)(A) of the Act.

Subsection (b)(4)(B) has been reassigned from (d)(2) and “uncontaminated soil” has been added due to the regulation of uncontaminated soil as fill material.

Subsection (b)(5) has been reassigned from (e) and “uncontaminated soil” has been added due to the regulation of uncontaminated soil as fill material. Additional examples are added as precautionary measures fill operations should take before accepting loads from persons suspected of transporting materials other than CCDD or uncontaminated soil. This language was added to encourage communications between the source site owners and operators and the fill operation owners and operators regarding the acceptance of future loads from a suspected source.

Subsection (b)(6) has been reassigned from (f) and “uncontaminated soil” has been added due to the regulation of uncontaminated soil as fill material.

Subsection (b)(7) has been reassigned from (g) and “uncontaminated soil” has been added due to the regulation of uncontaminated soil as fill material.

Subsection (b)(8) has been reassigned from (h).

Subpart (b)(8)(A) had been reassigned from (h)(1).

Subsection (b)(8)(B) had been reassigned from (h)(2).

Subsection (b)(8)(C) had been reassigned from (h)(3). “Other written Agency approval” has been added so that written correspondence from the Agency does not have to be solely in permit form since uncontaminated soil fill operations do not require a permit.

Subsection (c) has been reassigned from (i). “Other written Agency approval” has been added so that written correspondence from the Agency does not have to be solely in permit form since uncontaminated soil fill operations do not require a permit. The additional language added to this subsection has been copied from the statutory language of Sections 22.51(f)(3) and 22.51(d)(3) of the Act.

Subsection (d) has been added to provide a requirement that the CCDD fill site owner/operator obtain certification by a professional engineer that painted CCDD to be used as fill material at a CCDD fill operation satisfies requirements at proposed Section 1100.212. In addition, the CCDD fill site owner/operator must follow load checking standards for the acceptance of painted CCDD and documentation retention requirements for certifications. As stated previously, testimony regarding painted CCDD will be provided by Paul Purseglove.

#### Section 1100.206 – Salvaging

Subsection (a) “CCDD” has been eliminated from “fill operation” because this subsection also applies to uncontaminated soil fill operations by way of a cross-reference at Section 1100.505 of Part 1100.

Subsection (c)(1) “foul odors” has replaced “malodor” because malodor is related to air pollution and inappropriate for these regulations.

#### Section 1100.207 – Boundary Control

Subsection (b) “Uncontaminated soil” has been added due to the regulation of uncontaminated soil as fill material.



#### Section 1100.208 – Closure

“CCDD” has been replaced with “CCDD or uncontaminated soil” due to the regulation of uncontaminated soil as fill material. “Uncontaminated soil” has been added throughout this section for the same reason.

#### Section 1100.209 – Post Closure Maintenance

“Other written Agency approval” has been added so that written correspondence from the Agency does not have to be solely in permit form since uncontaminated soil fill operations do not require a permit.

#### Section 1100.211 – Annual Reports

Subsection (b) requires owners and operators to report the amount of uncontaminated soil expected in the next year due to the regulation of uncontaminated soil as fill material.

Subsection (e) requires an annual facility map, which depicts the current stage of mining and fill operations at a site, to be submitted with the annual report. Submitting the annual map and report together will allow for a more meaningful review of each.

#### Section 1100.212 – Use of Painted CCDD as Fill Material

*See Pre-filed testimony of Paul Purseglove.*

### **III. SUBPART C: PERMIT APPLICATION INFORMATION FOR CCDD FILL OPERATIONS**

“Application” and “CCDD Fill Operations” have been added to the general heading of “Permit Information” to denote that this Subpart pertains primarily to CCDD fill operations. Some of the recordkeeping requirements of this Subpart also apply to uncontaminated soil fill operations by way of a cross-reference at Section 1100.510 of Part 1100. The Agency believes that changing the heading will direct uncontaminated soil fill operations to Subpart E first to determine which requirements of Subpart C are applicable.

#### Section 1100.304 – Site Location Maps

Subsection (e) changes “Safe Water Drinking Act” to the correct term “Safe Drinking Water Act.”

#### Section 1100.306 – Narrative Description of the Facility

“Uncontaminated soil” has been added due to the regulation of uncontaminated soil as fill material.

#### Section 1100.307 – Proof of Property Ownership and Certifications

The Agency updated the language of this Section so that the owner or operator does not have to certify beforehand that they will inform the Agency of a change in ownership within seven days. This was a language error in the original rulemaking that has caused problems during operation of the CCDD permit program. The Agency has replaced the language to instead require a written notification within seven days after a change in ownership has occurred.

#### Section 1100.309 – Closure Plan

Subsection (b) “CCDD filling” has been replaced by “fill operation” because the fill operation can include uncontaminated soil in addition to the CCDD. Also, this subsection applies to uncontaminated soil fill operations by way of a cross-reference at Section 1100.510(h) of Part 1100.

Subsection (e) “CCDD filling” has been replaced by the “fill operation” because the fill operation can include uncontaminated soil in addition to the CCDD. Also, as stated above, this subsection applies to uncontaminated soil fill operations by way of a cross-reference at Section 1100.510(h) of Part 1100.

#### **IV. SUBPART D: PROCEDURAL REQUIREMENTS FOR PERMITTING CCDD FILL OPERATIONS**

“CCDD Fill Operations” has been added to the title for Subpart D to clarify that this

Subpart pertains only to CCDD fill operations.

#### Section 1100.412 – Procedures for Closure and Postclosure Maintenance

The Agency revised subsection (a) due to the regulation of uncontaminated soil as fill material and added a reference to Section 1100.208 which provides the operating requirements for closure.

Subsection (c)(1)(D) is a new condition for terminating a CCDD fill operation permit. Under this subsection, fill operations are required to demonstrate compliance with either 35 Ill. Adm. Code Part 620 Class I groundwater quality standards or the background groundwater quality, whichever is higher, for three years prior to closure. These groundwater monitoring program requirements are presented in Subpart G. Existing facilities will have one year from the date the Part 1100 amendments become effective to decide whether to install a groundwater monitoring system or to terminate the permit under current requirements. Facilities remaining in operation one year after the effective date of the amendments must have installed a groundwater monitoring system. Facilities that enter postclosure maintenance before the one year anniversary of the effective date of Subpart G are exempt from its requirements.

#### **V. SUBPART E: UNCONTAMINATED SOIL FILL OPERATIONS**

This new Subpart provides operating standards and requirements for uncontaminated soil fill operations, which are not issued permits by the Agency. Instead, as required by PA 96-1416, uncontaminated soil fill operations are required to register their fill sites with the Agency. For this reason, the closure and post-closure periods for uncontaminated soil fill operations are self-implementing with no Agency oversight. The owner or operator must submit an affidavit to the Agency along with a Professional Engineer certification that the closure and post-closure periods have complied with the regulations. All of the other operating standards – such as the load

checking, soil certification, and recordkeeping requirements – mirror the requirements for CCDD facilities. Because the regulations for uncontaminated soil fill operations were modeled after the regulations for CCDD fill operations, the Agency found it easiest to utilize cross-references to the existing regulations for CCDD fill operations whenever possible. A number of provisions for uncontaminated soil fill operations under these proposed amendments to Part 1100 are identical to the provisions for permitted CCDD fill operations because uncontaminated soil fill operations and CCDD fill operations pose many of the same risks to the environment. Following is an overview of each Section.

#### Section 1100.500 – Prohibitions

This section lists prohibited activities including the statutory prohibition against accepting soil other than uncontaminated soil for fill at the facility. The prohibitions are modeled after Section 1100.201 regarding prohibitions for CCDD fill operations. This section is required to assure that the facilities are operated in accordance with applicable regulations and accept only uncontaminated soil or other non-waste for use as fill (e.g., mine spoils that are generated onsite). Subsection (e) prohibits uncontaminated soil fill operations from locating within a setback zone to prevent potable water supply wells from being impacted from the operation.

#### Section 1100.505 – Operating Standards

This section sets forth the operating standards for uncontaminated soil fill operations that are substantially similar to CCDD fill operations. Instead of listing the same operating standards, the Agency decided to cross-reference to the CCDD operating standards. These operating standards include surface water drainage, placement of fill material, size and slope of working face, equipment and utilities, maintenance, dust control, noise control, fill elevation, mud

tracking, odor and nuisance, load checking, salvaging, boundary control, and closure and post-closure maintenance. This section is required to prevent harmful impacts to the environment from the operation of the facility.

#### Section 1100.510 – Recordkeeping Requirements

This section lists records to be kept for the life of the uncontaminated soil fill operation and is based on Sections 1100.210 and 1100.304 through 1100.310 regarding recordkeeping for CCDD fill operations. Although uncontaminated soil fill operations are not required to submit information in a permit application to the Agency, as do the CCDD fill operations, the Agency believes that since the two operations are so similar, the uncontaminated soil fill operation should have the same records prepared and available for review by the Agency inspectors and its delegated authorities. Any information that would be submitted in a permit application or in an annual report by a CCDD fill operation would be information that is kept on site at an uncontaminated soil fill operation. Instead of listing the same documentation requirements, the Agency cross-referenced the CCDD record keeping requirements in Subparts B and C of Part 1100.

This section is required so that Agency inspectors can confirm that the owner or operator is conducting operations in accordance with the requirements of Subpart E. The opening paragraph of Section 1100.510 informs the owner or operator of his responsibility for maintaining records at a designated location and of the Agency's right to inspect and copy the records during normal business hours. Subsection (a) requires the facility to keep any written correspondence with the Agency in its records. Subsection (b) requires the facility to keep written procedures for load checking, load rejection notification and training required under Section 1100.205. Subsections (c) through (h) require, respectively, site location map, facility

plan map, a narrative description of the facility, proof of property ownership, a surface water control plan, and a closure plan and postclosure maintenance plan.

#### Section 110.515 – Registration

This section requires uncontaminated soil fill operations to register with the Agency on forms and in a format prescribed by the Agency. The registration form is available on the Agency website. Facilities that were registered with the Agency under the interim standards required by P.A. 96-1416 must re-register with the Agency under Subpart E of Part 1100 if they intend to keep operating. Since there is currently no requirement for uncontaminated soil fill operations to notify the Agency if they cease operations, this re-registration is necessary for the Agency to identify those still in operation after the adoption of Subpart E. The 60-day window provides a reasonable time frame for registration and allows registered uncontaminated soil fill operations who intend to cease operations to do so within the 60 days without being subject to the requirements, including documentation and closure requirements, of Subpart E. During the 60-day window, uncontaminated soil fill operations that have already registered may continue filling operations.

#### Section 1100.520 – Required Signatures

This section identifies the signatures needed on registration applications and is modeled after Section 1100.303 regarding required signatures for CCDD fill operations.

#### Section 1100.525 – Procedures for Closure

This section states the requirements for closure of the uncontaminated soil fill operation, including the Professional Engineer certification for closure, and is modeled after Section 1100.412(a) and (b)(1) regarding closure of CCDD fill operations. Because there is no permit, the closure and post-closure periods for the uncontaminated soil fill operations are self-

implementing with no Agency oversight. The owner or operator must submit an affidavit to the Agency along with the certification of the Professional Engineer that the closure and post-closure periods have met the Part 1100 regulations. Compliance with this section assures that the closure of the uncontaminated soil fill operations will not cause harmful impacts to the environment.

#### Section 1100.530 – Termination of Post-closure Maintenance

This section presents the requirements for termination of post-closure maintenance for the uncontaminated soil fill operation and is modeled after Section 1100.412(c)(1) regarding the post-closure maintenance period of CCDD fill operations. As stated previously, fill operations are required to demonstrate compliance with either 35 Ill. Adm. Code Part 620 Class I groundwater quality standards or the background groundwater quality, whichever is higher, for three years prior to closure. The exemption in Subpart (d) allows owners of uncontaminated soil fill operations who do not want to implement the groundwater monitoring requirements of Subpart G to close their facility within one year of the effective date of the Part 1100 amendments.

### **VI. SUBPART F: STANDARDS FOR UNCONTAMINATED SOIL USED AS FILL MATERIAL AT FILL OPERATIONS REGULATED BY THIS PART**

#### Section 1100.615 -- Wastes and Materials Other Than Chemical Constituents in Soils

Primary testimony for this Subpart will be delivered by Agency witnesses Doug Clay on Section 1100.600 and Les Morrow on Sections 1100.605 and 1100.610. My testimony is limited to Section 1100.615. The purpose of this Section is to address contaminants other than chemical constituents that would cause soil to be considered “contaminated” and possibly unacceptable for placement at CCDD fill operations, soil-only fill operations, or both. More specifically, Section 1100.615 identifies how uncontaminated soil is categorized when it includes or is commingled with various other materials.

Subsection (a) allows uncontaminated soil to include incidental amounts of specific naturally-occurring materials that are commonly found in soil, namely: stone, clay, rock, sand, gravel, roots and vegetation. This provision is contained in the original Section 1100.103 definition of “clean construction or demolition debris” and was added there in response to stakeholder comments in PCB R2006-019. The Agency merely repeats the language here because it is relevant to the specific topic addressed in this section. It reiterates that, for purposes of this Part, “uncontaminated soil” may include naturally occurring materials that might be expected to be in soil found anywhere.

The Agency received stakeholder comments on subsection (a). One commenter stated that the term “incidental” is too vague to provide a meaningful standard for the quantities of such materials that may be included in “uncontaminated soil.” Another suggested adding “sediment” to the naturally occurring materials that might be expected to be found in soil. A third asked if soils that contain more than incidental amounts of clay or sand would be excluded from the definition of uncontaminated soil by this subsection.

The Agency’s inclination is not to reopen the provision by suggesting revisions to language that originated in public comments and was settled in the initial Part 1100 rulemaking. The nature of the recent comments indicates how quickly this discussion could become open-ended while debating the merits of listing each of the naturally occurring organic and inorganic materials that might be found in soil in at least some locations and the precise amounts of such materials that would be allowed in “uncontaminated soils.” In the end, the list still would be incomplete and the amounts of each material allowed would be arbitrary. The current language is sufficient to enable source site owners and operators, fill operation owners and operators, and the Agency to apply their judgment on a case-by-case basis as to whether soil contains unacceptable



materials or amounts. Although the word “incidental” does not provide a numeric standard, it does convey the idea that the naturally occurring materials must be associated with the excavation of soil and present in minor amounts compared to the volume of soil. In exercising judgment, generators may communicate with facility owners and operators prior to delivery, owners and operators may reject any loads that raise concerns, and the Agency must be prepared to defend its judgments on appeal. The Agency is not aware of any problems that have arisen from the language since its original adoption in 2006.

Subsection (b) restates existing law by providing that soil containing waste or other materials is not “uncontaminated soil,” aside from the exceptions allowed by subsection (a) and the concentrations of chemical constituents allowed under Subpart F. Subsections (b)(1) and (b)(2) restate provisions from the definition of “construction or demolition debris” at Section 3.160 of the Act providing that soil commingled with general construction or demolition debris or CCDD becomes debris for purposes of solid waste law and must be managed as such.

## **VII. SUBPART G: GROUNDWATER MONITORING**

The goal of the certifications required by Sections 1100.205 and 1100.212 and the standards described in Part 1100 Subpart F is to prevent any materials that exceed the maximum allowable concentrations from ever being accepted at any fill operation. If full achievement of this goal were assured, groundwater monitoring at these fill operations would not be necessary. However, the Agency anticipates a certain percentage may not meet these standards, and with the sheer volume of material accepted at these fill operations, even a small percentage of missed contamination could cause groundwater problems – especially since these fill operations are placing material directly in contact with groundwater. Therefore, in Subpart G, the Agency proposes groundwater monitoring at both CCDD fill operations and uncontaminated soil fill

operations. Furthermore, Sections 22.51(f)(1) and 22.51a(d)(1) of the Act mandate the protection of groundwater from pollution by these fill operations.

Subpart G does not require groundwater monitoring at fill operations that have certified closure within one year of the effective date of the proposed amendments to Part 1100. Also, at fill operations that are being dewatered, Subpart G allows groundwater monitoring to be delayed until dewatering has ended.

It makes little sense to require groundwater monitoring without provisions to take corrective action in the event that groundwater contamination is found. Thus, if groundwater monitoring indicates potential groundwater contamination at a fill operation, Subpart G requires further investigation and, if necessary, groundwater corrective action. Subpart G allows owners and operators of fill operations where groundwater contamination is suspected, based on data from routine detection monitoring, to either demonstrate that the groundwater has not been contaminated by the fill operation or to develop and implement a groundwater corrective action program. Regardless of which route is taken, within 240 days of collecting a sample pointing to possible groundwater contamination, owners and operators must have either demonstrated that the fill operation did not cause the groundwater to be contaminated or to have developed and to have begun to implement a groundwater corrective action program.

35 Ill. Adm. Code 615, Subpart B (“Part 615”), which contains the groundwater monitoring requirements for existing activities (i.e., certain types of surface impoundments and storage units) in a setback zone or regulated recharge zone, was used as the template in developing Subpart G. Part 615 was determined to be more appropriate for this purpose than the groundwater monitoring requirements for solid waste landfills at 35 Ill. Adm. Code 811, Sections 315-320 (“Part 811”) based on an assessment, that in terms of their threat to groundwater, CCDD

and uncontaminated soil fill operations are more akin to Part 615 surface impoundments and storage units than to Part 811 landfills. Also, both Part 615 surface impoundments and storage units and Part 1100 CCDD and uncontaminated soil fill operations are unlined allowing direct contact to the groundwater at the site.

The groundwater monitoring, investigations into possible groundwater contamination, and groundwater corrective actions required by Subpart G are all self-implementing for both CCDD fill operations and uncontaminated soil operations. That is, the requirements of Subpart G will not be administered through the permit process. Instead, owners and operators of fill operations must follow the procedures described in Subpart G and submit the required reports to the Agency, in much the same way that the owners and operators of permit-exempt landfills comply with the requirements of 35 Ill. Adm. Code 815.

A section-by-section discussion of Subpart G follows.

#### Section 1100.700 – Purpose and Applicability

Section 1100.700 sets forth the purpose and applicability of Subpart G. Subsection 1100.700(a) requires the groundwater monitoring procedures to be followed by all owners and operators of uncontaminated soil fill operations that are required to register with the Agency and all owners and operators of CCDD fill operations required to be permitted by the Agency. Subsection 1100.700(b) provides an exemption from the Subpart G groundwater monitoring requirements for fill operations that close and certify completion of closure within one year of the effective date of proposed amendments. This exemption does not extend to fill operations that first certify completion of closure within one year of the effective date but then resume filling.

#### Section 1100.705 – Recordkeeping

Section 1100.705 requires owners and operators of fill operations to keep the documentation required by Subpart G at the fill operation or an alternative location approved by the Agency. This requirement is similar to the recordkeeping requirements of Sections 1100.210 and 1100.510 for other types of documentation related to CCDD and uncontaminated soil fill operations. Owners and operators of fill operations would obtain approval for alternative Subpart G recordkeeping locations through correspondence with the Agency.

Section 1100.705 also requires that: 1) Subpart G documentation related to appeals, litigation or other disputes to be maintained for at least three years after final disposition of the dispute, and 2) Subpart G documentation must be made available to the Agency and units of local government for inspection and copying. These requirements incorporate the legislative language of Sections 22.51(f)(3) and 22.51a(d)(3).

#### Section 1100.710 – Professional Engineer Supervision

Because the groundwater monitoring is self implementing, the Agency relies on Professional Engineers to supervise the groundwater monitoring system and program. Section 1100.710 requires all systems, programs, plans, notifications and reports, mandated by Subpart G, to be designed or prepared under the supervision of a Professional Engineer. All final documents related to such work must: 1) identify the Professional Engineer responsible for the work by name and registration number, 2) provide the date of preparation, and 3) contain the engineer's professional seal and a statement by the engineer attesting to the accuracy of the work. Based on their education, training and experience, Professional Engineers are well qualified to provide the necessary oversight and guidance.

#### Section 1100.715 – Compliance Period

Section 1100.715 is modeled on Section 615.202 of Part 615 and defines the compliance

period for Subpart G requirements as the active life of a fill operation including closure and the post-closure maintenance period.

#### Section 1100.720 – Compliance with Groundwater Quality Standards

Section 1100.720 is modeled on Section 615.203 of Part 615 and requires owners and operators of all fill operations subject to Subpart G to ensure that their fill operations do not cause the Class I groundwater standards, given in 35 Ill. Adm. Code 620.410, to be exceeded.

Subsection 1100.720(a) requires owners and operators of all fill operations that are subject to the requirements of Subpart G to install groundwater monitoring systems.<sup>1</sup> However, under the provisions of Subsections 1100.700(b) and 1100.715(a), existing fill operations that are closed and certify completion of closure within one year of the effective date of Subpart G, are not subject to the requirements of Subpart G and, therefore, will not be required to install a groundwater monitoring system. The one-year window, provided by Subsections 1100.700(b) and 1100.715(a), should give owners and operators of existing fill operations sufficient time to close and to certify closure or to continue fill operations and to develop and install groundwater monitoring systems and to begin groundwater monitoring.

Subsection 1100.720(b) requires owners and operators of fill operations subject to Subpart G to monitor groundwater for compliance with Class I groundwater standards, given in 35 Ill. Adm. Code 620.410, at the compliance point or points. Subsection 1100.720(b) also allows owners and operators of fill operations that are being dewatered to delay groundwater monitoring for up to one year after dewatering ceases as provided for in Section 1100.760.<sup>2</sup>

---

<sup>1</sup> Although not explicitly stated in Subsection 1100.720(a), owners and operators of fill operations that are being dewatered will not be required to install groundwater monitoring systems until dewatering ceases. The provision that allows the installation of groundwater monitoring systems to be delayed at fill operations that are being dewatered is contained in Subsection 1100.760(a).

<sup>2</sup> Subsection 1100.720(b), references “subsection (d)” but there is no Subsection 1100.720(d). The reference should be to Section 1100.760 (“Dewatering Fill Operations”) which will be addressed by the Agency in a future errata sheet.

Subsection 1100.720(c) requires the compliance point(s) to be on or within the compliance boundary, which is consistent with the definition of “compliance point” given in Section 1100.103. Subsection 1100.720(c) also requires the compliance point(s): 1) to be representative of the groundwater conditions at the fill operation, and 2) to be determined as part of the design and development of the Subpart G groundwater monitoring system.

#### Section 1100.725 – Groundwater Monitoring System

Section 1100.725 is modeled on Subsection 615.204 of Part 615 and identifies what the groundwater monitoring system must do and describes its minimum construction standards as well as specifies by reference the procedure to be used in abandoning groundwater monitoring wells that are no longer needed.

Subsection 1100.725(a) is modeled on Subsection 615.204(a) of Part 615<sup>3</sup> and requires the installation of a groundwater monitoring system with a sufficient number of wells, bored at locations and completed at depths, to properly monitor groundwater conditions at the fill operation. Subsection 1100.725(a)(1) requires the groundwater monitoring system to be capable of producing samples that represent “background groundwater quality,” which is a defined term in Section 1100.103. Subsection 1100.725(a)(2) requires the groundwater monitoring system to also be capable of producing samples that are representative of the quality of groundwater that may be affected by constituents from the fill operation, that is, groundwater which is downgradient of the fill operation with respect to three-dimensional groundwater flow.

Subsection 1100.725(b) is modeled on Subsection 615.204(c) of Part 615 and addresses groundwater monitoring at sites that include more than one fill operation. Such sites are not

---

<sup>3</sup> Section 615.204 (Groundwater Monitoring System) and Section 615.205 (Groundwater Monitoring Program) include provisions to allow potable water production wells to be used as groundwater monitoring wells. The corresponding sections in the proposed amendments to Part 1100 (Sections 1100.725 and 1100.730) do not contain such provisions because this is generally recognized to be an undesirable practice.

required to have separate groundwater monitoring systems for each fill operation as long as the well network that is installed is capable of detecting and measuring potential groundwater contamination from each fill operation.

Subsection 1100.725(c) is modeled on Subsection 615.204(d) of Part 615 and describes the minimum construction requirements for Subpart G groundwater monitoring wells.

Subsection 1100.725(c)(1) requires Subpart G groundwater monitoring wells to be constructed in such a way that enables groundwater samples to be collected. Subsection 1100.725(c)(2) requires the casings and screens of Subpart G groundwater monitoring wells to be made of durable materials, that are resistant to degradation under the conditions expected at fill operations and that will not impact the quality of the groundwater samples collected from the well. Subsection 1100.725(c)(3) requires annular space in the screened intervals of monitoring wells (i.e., the space between the borehole and the well screen) to be filled with sand or gravel, to facilitate the collection of groundwater samples. Subsection 1100.725(c)(3) also requires the annular spaces above and below screened intervals to be sealed to ensure that samples reflect the quality of the groundwater in the formation adjacent to the screened interval from which they were collected and to reduce the potential for monitoring wells to act as conduits for groundwater contamination.

Subsection 1100.725(d) is modeled on Subsection 811.318(a) of Part 811 and requires Subpart G monitoring wells to be maintained and records to be kept that identify each well's exact location, size, type, total depth and the depths of the top and bottom of the screened interval, along with a description of the design and construction practices used in installing the well. Furthermore, Subsection 1100.725(d) requires well construction diagram forms, prescribed and provided by the Agency, to be completed and maintained for each monitoring well. A

sample copy of a well construction diagram form is included as Attachment 2 of this testimony.

Subsection 1100.725(e) requires Subpart G monitoring wells, that are no longer needed, to be sealed following the procedures prescribed by a regulation administered by the Illinois Department of Public Health (77 Ill. Adm. Code 920.120). The purpose of this requirement is to prevent monitoring wells that are no longer in use from serving as pathways allowing contaminants to migrate into groundwater.

#### Section 1100.730 – Groundwater Monitoring Program

Section 1100.730 is closely modeled on Section 615.205 of Part 615 and describes the minimum requirements for a Subpart G groundwater monitoring program. Subsection 1100.730(a) requires Subpart G groundwater monitoring programs to contain sampling and analysis procedures that are capable of consistently and accurately characterizing the quality of the groundwater in the vicinity of the fill operation. Subsection 1100.730(a) also specifies that at a minimum procedures and techniques for sample collection, sample preservation and shipment, analysis, and chain of custody control must be included in Subpart G groundwater monitoring programs. Subsection 1100.730(b) requires the sampling and analysis methods specified in Subpart G groundwater monitoring programs to be: 1) appropriate for testing groundwater samples for the Subpart G monitoring parameters, 2) capable of detecting and quantifying Subpart G monitoring parameters contained in groundwater samples, and 3) consistent with the sampling and analytical methods specified in Part 620. Subsection 1100.730(c) requires the groundwater elevations to be measured each time a groundwater monitoring well is sampled. Subsection 1100.730(d) requires the rate and direction of groundwater flow to be determined at least annually. Subsection 1100.730(e) requires owners and operators to make the appropriate changes to their fill operation's groundwater monitoring program within 90 days of determining



that the groundwater monitoring program no longer meets the requirements of Section 1100.700. Subsection 1100.730(e) also presents the situation in which a groundwater monitoring well's downgradient/upgradient status changes as an example of when changes to a groundwater monitoring program would need to be made.

#### Section 1100.735 – Monitoring Parameters

Section 1100.735 is modeled after Section 615.206 of Part 615 and requires each parameter for which Section 620.410 provides a Class I groundwater quality standard to be included as a monitoring parameter in Subpart G groundwater monitoring programs. The Agency chose to have the fill operations sample for all parameters because of the diverse sources and voluminous amounts of material being accepted at the fill operations and because the sampling only needs to be performed once per year.

#### Section 1100.740 – Sampling Frequency

Section 1100.740 is modeled after Section 615.207 of Part 615 and requires annual sampling from all monitoring wells. The Agency believes annual sampling is sufficient because of the load checking required by Section 1100.205 of this Part prior to the acceptance of the material as fill material at a CCDD or uncontaminated soil fill operation. Also, because testing is required pursuant to Section 1100.735 for all parameters for which Section 620.410 provides a Class I groundwater quality standard, the Agency believes annual sampling would keep costs lower for the fill operations compared to a more frequent testing requirement.

#### Section 1100.745 – Non-Compliance Response Program

Section 1100.745 is modeled on Section 615.209 and describes one of two ways in which owners and operators must proceed when routine detection monitoring indicates that groundwater has exceeded Class I groundwater quality standards. Whereas Section 615.209

makes resampling mandatory when Class I groundwater quality standards are exceeded, Section 1100.745 does not require resampling if notification is provided that the Alternate Non-Compliance Program, described in Section 1100.750, will be utilized.

When routine detection monitoring for a fill operation shows that Class I groundwater quality standards have been exceeded, Subsection 1100.745(a) requires the owner or operator to notify the Agency within 60 days after the groundwater sample was collected. This notification must identify the groundwater standards that have been exceeded and the well at which the exceedence occurred and must include the analytical results showing the exceedence. The 60 day period includes time for mailing the samples to the laboratory, lab analysis of the samples, lab report compilation and submittal to the fill site operator, and the fill site operator's notification to the Agency.

Within 60 days of the initial sampling event, Subsection 1100.745(b) requires: 1) all wells at which Class I groundwater quality standards have been exceeded to be resampled, and 2) the new samples to be tested for all parameters shown by the initial sampling and analysis to have exceeded Class I standards. The owner or operator must submit the results of resampling and analysis to the Agency within 60 days of the resampling event.

Within 120 days of providing analytical results from resampling to the Agency (i.e., within 240 days of the initial sampling event), Subsection 1100.745(c) requires owners or operators to have prepared and submitted a groundwater corrective action plan to the Agency, unless: 1) the results of the Subsection 1100.745(b) resampling and analysis show no exceedences for any of the parameters analyzed, or 2) the demonstration, described in Subsection 1100.750(b), is made. The 120 day period includes time to complete an investigation for the cause of the exceedence, to formulate a plan of corrective action, to bid out work, and to perform

any field activities or construction in preparation to implement the corrective action plan.

Also, Subsection 1100.745(d) requires within 120 days of providing analytical results from resampling to the Agency (i.e., within 240 days of the initial sampling event). the owner or operator must begin implementation of the corrective action plan, unless: 1) the results of the Subsection 1100.745(b) resampling and analysis show no exceedences for any of the parameters analyzed, or 2) the demonstration, described in Subsection 1100.750(b), is made.

Attachment 3 to this testimony provides a timeline for the Non-Compliance Response Program described in Section 1100.745.

#### Section 1100.750 – Alternate Non-Compliance Response Program

Section 1100.750 is modeled on 615.210 and provides an alternative to the requirements of 1100.745 for fill operations at which routine detection monitoring has indicated that Class I groundwater quality standards have been exceeded. Under the Alternate Non-Compliance Response Program set forth in Section 1100.750, resampling does not need to be done and a corrective action plan does not need to be developed and implemented if the owner or operator can demonstrate that either: 1) the exceedence of Class I groundwater standards was due to an error in sampling, analysis or evaluation, or 2) the exceedence was not statistically significant over background groundwater quality. The “Statistical Analysis of Groundwater Data at RCRA Facilities–Unified Guidance” (2009), incorporated by reference in the proposed amendments to Part 1100, provides the guidance needed to determine whether an exceedence is statistically significant over background groundwater quality.

The timeline for making the demonstration under Section 1100.750 is similar to Section 1100.745. After notifying the Agency of an exceedence of the Class I groundwater quality standards pursuant to Subsection 1100.745(a), the owner or operator has 60 days to notify the

Agency that they intend to make the Alternate Non-Compliance Response demonstration pursuant to Subsection 1100.750(a). Pursuant to Subsection 1100.750(b), this demonstration must be made in a report submitted to the Agency within 180 days of submittal of the notification required by Subsection 1100.750(a) (i.e., within 240 days of the initial sampling event). Finally, Subsection 1100.750(c) requires owners and operators using the Alternate Non-Compliance Response Program to continue routine detection groundwater monitoring prescribed by Sections 1100.730, 1100.735 and 1100.740.

Attachment 4 to this testimony provides a timeline for the Alternate Non-Compliance Response Program described in Section 1100.750.

#### Section 1100.755 Corrective Action Program

Section 1100.755 is modeled on Section 615.211 and describes when Subpart G groundwater corrective actions must begin, when they may end, and what their cleanup objectives are. Section 1100.755 also requires owners and operators of fill operations that are undergoing Subpart G corrective actions to develop and implement groundwater monitoring programs to assess and report to the Agency on the effectiveness of the corrective actions.

Subsection 1100.755(a) requires groundwater corrective action to begin within 120 days after the resampling test results were submitted to the Agency in accordance with Subsection 1100.745(b). This is consistent with Section 1100.745(c), which also requires groundwater corrective action to begin within the same timeframe.

Subsection 1100.755(b) essentially provides the cleanup objectives for Subpart G groundwater corrective actions within the fill operation's facility boundaries. This subsection states that Subpart G corrective actions must result in a demonstration that, at the compliance point(s), the fill operation does not contribute to an exceedence of Class I groundwater quality

standards or background groundwater quality, whichever is higher.

Subsection 1100.755(c) requires the establishment of an assessment groundwater monitoring program to demonstrate the effectiveness of the corrective action. Subsection 1100.755(c) also requires assessment monitoring programs to include quarterly groundwater sampling and analysis.

If corrective actions are needed beyond the fill operation's facility boundaries, Subsection 1100.755(d) specifies that owners and operators must achieve compliance with Part 620, which includes the non-degradation provisions. This means that when the background groundwater quality for a parameter is less than the parameter's Class I standard, the off-site cleanup objective would be more stringent than the on-site cleanup objective. When the background groundwater quality is above the Class I standard, the off-site cleanup objective and the on-site cleanup objective would be the same. Subsection 1100.755(d) also requires the owner and operator of a fill operation to take corrective action when the fill operation causes off-site non-compliance with Part 620, unless the off-site property access needed to take corrective action cannot be obtained. Subsection 1100.755(d) further stipulates that an inability to obtain off-site access does not relieve the owner and operator of the fill operation from liability for corrective action to achieve off-site compliance with Part 620.

Subsection 1100.755(e) requires corrective actions to be continued until the owner and operator are able to demonstrate to the Agency that the cleanup objectives identified in Subsection 1100.755(b) have been met for a period of three consecutive years.

Subsection 1100.755(f) requires owners and operators to report on the effectiveness of correction action semi-annually, starting 90 days after corrective action is implemented.

Subsection 1100.755(g) requires owners and operators to modify corrective action

programs and to report on the modifications to the Agency within 90 days of determining that the corrective action program no longer satisfies the requirements of Section 1100.755.

#### Section 1100.760 Dewatering Operations

Section 1100.760 is not modeled on a section of Part 615 or other existing regulatory or legislative language. The Agency developed Section 1100.760 in recognition of the following facts: 1) many mines and quarries are dewatered during operation, 2) dewatering may continue, after mining and quarrying operations have ceased, to facilitate filling the excavation, 3) significant dewatering generally creates a cone of depression in the piezometric surface, and 4) developing and implementing a useful groundwater monitoring program that provides meaningful data at a site with a cone of depression would be difficult, if not impossible. Therefore, Section 1100.760(a) allows compliance with Subsections 1100.715-1100.755 to be delayed as long as an owner and operator: 1) demonstrate, in a report, that a cone of depression has been established at the fill operation and 2) provides notification to the Agency each year by January 30 that a cone of depression has been established at the fill operation and that it has been maintained throughout the preceding year, or since it was established.<sup>4</sup> Subsection 1100.760(b) requires owners and operators to comply with Subsections 1100.715-1100.755 within one year after ceasing to dewater.

#### **VIII. Concluding Statement**

I would like to thank the stakeholders for their thoughtful comments and the Board for its consideration of the amendments that the Agency is proposing to Part 1100.

---

<sup>4</sup> Section 1100.760 does not provide an exemption from the requirements Section 1100.710; therefore, certification by a Professional Engineer would be needed.

ATTACHMENT 1

RESUME

STEPHEN F. NIGHTINGAL, PE.  
MANAGER, PERMIT SECTION  
BUREAU OF LAND  
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

EDUCATION

1982

UNIVERSITY OF MISSOURI AT ROLLA  
B. S. CIVIL ENGINEERING

EXPERIENCE

4/06 - PRESENT

MANAGER, PERMIT SECTION, BUREAU OF LAND -  
RESPONSIBLE FOR STATE (SOLID WASTE), RCRA (HAZARDOUS  
WASTE), AND UNDERGROUND INJECTION CONTROL  
PERMITTING ACTIVITIES.

2/01 - 4/06

MANAGER, RCRA UNIT, PERMIT SECTION, BUREAU OF LAND -  
RESPONSIBLE FOR PERMITTING ACTIVITIES RELATED TO RCRA  
(HAZARDOUS WASTE) AND UNDERGROUND INJECTION  
CONTROL PERMITTING

2/95 - 2/01

MANAGER, INDUSTRIAL UNIT, PERMIT SECTION, BUREAU OF  
WATER - RESPONSIBLE FOR STATE AND NPDES PERMITS FOR  
INDUSTRY.

6/86 - 2/95

ENVIRONMENTAL PROTECTION ENGINEER I, II, III, IV,  
INDUSTRIAL UNIT, PERMIT SECTION BUREAU OF WATER -  
RESPONSIBLE FOR EVALUATING PERMIT APPLICATIONS AND  
DEVELOPING STATE AND NPDES PERMITS FOR INDUSTRY  
BASED ON STATE AND FEDERAL REGULATIONS.

4/82 - 05/06

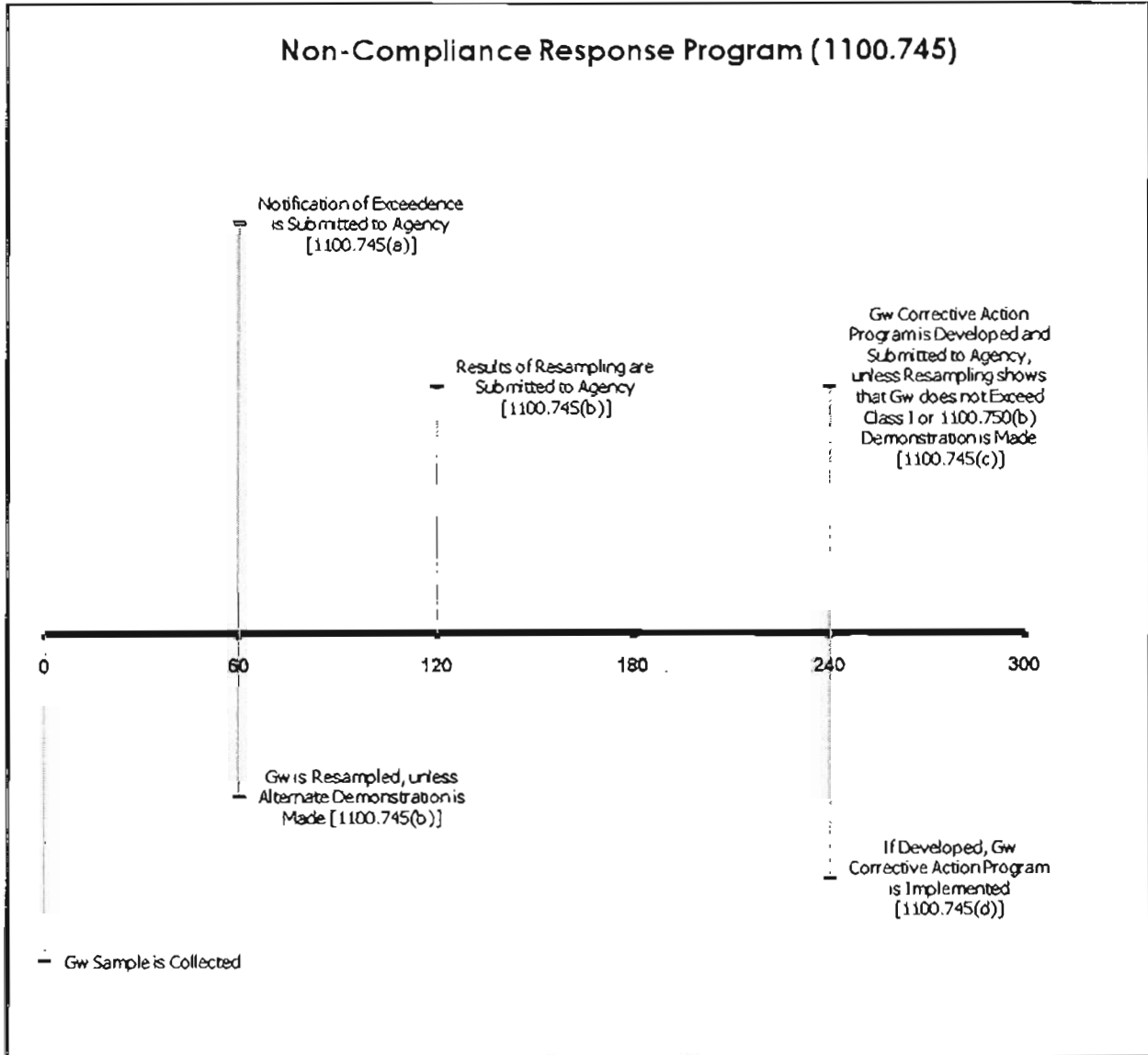
STAFF ENGINEER, MISSOURI PACIFIC/UNION PACIFIC -  
RESPONSIBLE FOR ACTIVITIES RELATED TO ENGINEERING IN  
THE FIELDS OF MECHANICAL, CONSTRUCTION AND  
ENVIRONMENTAL FIELDS.

REGISTERED AS PROFESSIONAL ENGINEER IN ILLINOIS

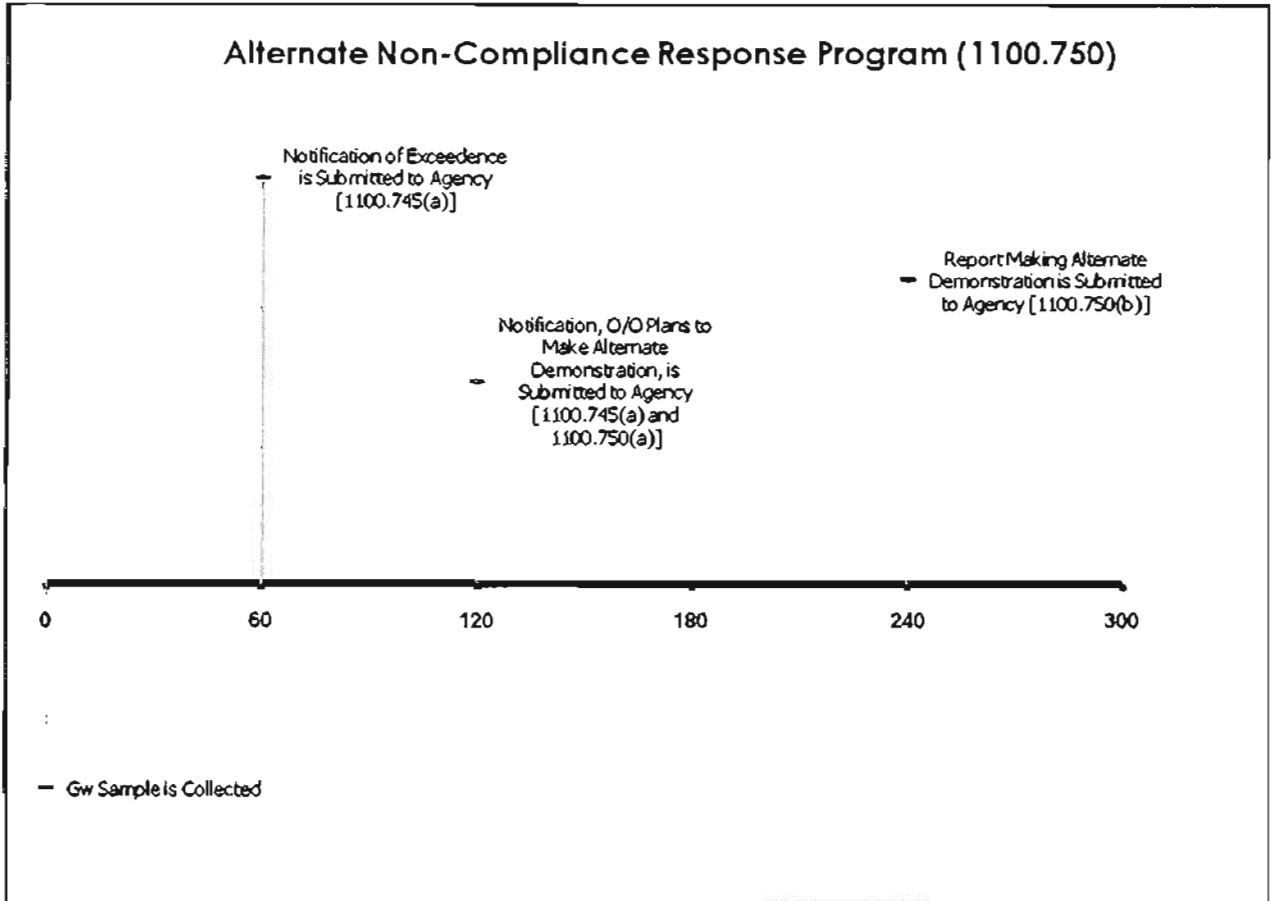




ATTACHMENT 3



ATTACHMENT 4



RECEIVED  
CLERK'S OFFICE

SEP 02 2011

STATE OF ILLINOIS  
Pollution Control Board

ORIGINAL

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED AMENDMENTS TO	)	
CLEAN CONSTRUCTION OR DEMOLITION	)	R12-9
DEBRIS FILL OPERATIONS (CCDD):	)	(Rulemaking – Land)
PROPOSED AMENDMENTS TO 35 Ill.	)	
Adm. Code 1100	)	

PREFILED TESTIMONY OF PAUL PURSEGLOVE ON ACCEPTANCE OF PAINTED CCDD AT CCDD FILL OPERATIONS: PROPOSED SECTIONS 1100.103, 1100.201(f), 1100.205(d), 1100.212

My name is Paul Purseglove. I am the Manager of the Field Operations Section within the Bureau of Land. The Field Operations Section is responsible for conducting inspections at the permitted CCDD facilities and the Uncontaminated Soil disposal sites to verify compliance with the Act and Board regulations. I have been the Section Manager since 1998. I graduated from Illinois State University in 1980 with a B.S. in Environmental Health. I have been employed with the Illinois Environmental Protection Agency ("Illinois EPA" or "Agency") for 31 years. My resume is attached as Attachment 1.

Today I will be testifying in support of the amendments proposed by Illinois EPA. Specifically, I will be testifying in support of Sections 1100.103 (amended definition of "clean construction or demolition debris"), 1100.201(f), 1100.205(d), and 1100.212 dealing with the process and procedures to be followed so that painted CCDD can be accepted as fill at a permitted CCDD facility.

To define the universe of materials included in the proposed amendments, the Illinois EPA is proposing an addition to the definition of "clean construction or demolition debris" at Section 1100.103. The proposed amendment states:

For purposes of this Part, CCDD may include uncontaminated broken concrete without protruding metal bars, bricks, rock, stone, or reclaimed or other asphalt pavement that has been painted ("painted CCDD") if the painted CCDD is used as fill material at a CCDD fill operation in accordance with Section 1100.212 of this Part.

"Paint" is not defined in the proposal and would be presumed to have its ordinary meaning – the thin, dry film of a liquid mixture, usually of a solid pigment in a liquid vehicle, applied to a surface as a decorative or protective coating or as signage. See THE AMERICAN HERITAGE DICTIONARY, 893 (2<sup>nd</sup> College Ed. 1991).

The Agency is proposing this change because it believes, based on experience, that significant quantities of painted concrete and other painted CCDD can be generated from construction and building demolition projects. The Agency's current policy relative to painted CCDD is that the paint is a contaminant and, as such, any painted CCDD cannot be accepted at a permitted CCDD site for disposal. This policy has been based on a conservative approach to the issue of the toxic heavy metals used in some paints. Exposures to the metals can occur through airborne paint dust created by certain management and processing practices and from leaching to groundwater. The result of this conservative approach is that significant quantities of painted CCDD such as concrete, bricks and masonry blocks are sent to landfills for disposal and sometimes are illegally open dumped.

The Agency's position is that at least some painted CCDD could be used safely as fill material at CCDD fill operations regulated under Part 1100. Placement of the painted CCDD in fill areas would minimize exposures from the generation of dust since there would be no additional processing of the material and the material would be covered after placement as fill. Concerns about leaching of toxic heavy metals and subsequent impacts on groundwater can be

addressed by following the screening and analytical testing procedures the Agency has proposed. Establishing specific procedures for sampling and analyzing the paint to demonstrate there will be no significant impact to the groundwater at the CCDD sites would conserve landfill space and may reduce the illegal disposal of this material.

One example of a project that generated large quantities of painted concrete was the demolition of the former Busch Stadium, which was a mostly concrete structure that had been extensively painted. Because the Agency had no mechanism for evaluating the environmental impact of using the painted concrete, it could not be accepted as CCDD in Illinois and the generator had to go elsewhere to dispose of it. By adopting our proposal a procedure will be in place so a technical analysis of the paint can be performed. If the testing demonstrates that the toxic heavy metals are below the regulatory levels, the painted concrete could be accepted at one of our permitted sites.

Sections 1100.212(a) through (c) set forth the Illinois EPA's proposed analytical testing and screening procedures for painted CCDD. Subsection (a) provides that a licensed professional engineer must determine the number and location of paint samples to be collected that will provide a representative analysis of the paint from the CCDD. Illinois EPA believes that these determinations must be made on a site-specific basis because a single protocol for numbers and locations of samples is impractical given the wide variety of circumstances in which painted CCDD may be generated. Subsection (b) requires the professional engineer to obtain paint samples consisting of representative paint chips or scrapings that include all layers of paint and that minimize the amount of concrete, brick, stone

or asphalt substrate in the sample. Subsection (c) requires laboratory analysis for six contaminants of concern: arsenic, cadmium, chromium (total), lead, mercury and zinc. Analysis must be performed using the Toxicity Characteristic Leaching Procedure (TCLP) or Synthetic Precipitation Leaching Procedure (SPLP) extraction tests. Analytical test results cannot be averaged, the analytical work must be performed by certified laboratories, and the sample chain of custody, laboratory results and procedures must be documented and certified by the authorized agent of the laboratory. Subsection (d) provides the analytical standards for painted CCDD used as fill material at regulated CCDD fill sites. The results for the laboratory tests must not exceed the chemical-specific Class I groundwater quality standard at 35 Ill. Adm. Code 620.410 for any contaminant of concern.

Section 1100.205 is also amended by adding subsection (d) so it is clear that a professional engineer's certification is required for painted CCDD as part of the certification and load checking procedures that must be followed by the operator of the CCDD disposal site. The Illinois EPA is preparing a certification form specific to painted CCDD that must be completed prior to sending any painted CCDD to a permitted site. The form must be collected by the fill site owner/operator and retained for at least three years. Section 1100.201(f) is proposed to reinforce the limitation that the use of painted CCDD as fill material is allowed only at regulated CCDD fill operations and only if the requirements of Sections 1100.212 and 1100.205(d) are satisfied.

This concludes my pre-filed testimony.

# ATTACHMENT 1

## PAUL M. PURSEGLOVE

405 Crown Point · Sherman, IL 62684 ·

### EDUCATION

ILLINOIS STATE UNIVERSITY, NORMAL, ILLINOIS  
1976 - 1980  
BACHELOR OF SCIENCE IN ENVIRONMENTAL HEALTH  
MINOR IN CHEMISTRY

SANGAMON STATE UNIVERSITY — POST GRADUATE COURSES  
ADMINISTRATIVE PRACTICES  
ORGANIZATIONAL DYNAMICS  
ADMINISTRATIVE USES OF ACCOUNTING INFORMATION  
ENVIRONMENTAL TOXICOLOGY

### EMPLOYMENT

1998 – PRESENT

MANAGER, FIELD OPERATIONS SECTION, BUREAU OF LAND

- 73 STAFF LOCATED IN 7 REGIONAL OFFICES AND HEADQUARTERS
- COORDINATE THE COMPLIANCE INSPECTION AND ENFORCEMENT PROGRAM
- MEMBER OF BOL ENFORCEMENT DECISION GROUP
- MEMBER OF AGENCY'S ENFORCEMENT DECISION GROUP FOR THE OFFICE OF EMERGENCY RESPONSE
- MEMBER OF BOL SITE REMEDIATION REFERRAL GROUP
- DUTY OFFICER FOR THE AGENCY'S OFFICE OF EMERGENCY RESPONSE

1989 – 1998

MANAGER, USED TIRE UNIT, BUREAU OF LAND

- FUNCTIONED IN A MANAGERIAL CAPACITY TO DEVELOP AND IMPLEMENT A USED TIRE PROGRAM FOR ILLINOIS EPA
- STARTED AND MANAGED THE USED TIRE CLEANUP PROGRAM FOR THE BUREAU OF LAND
- SUPERVISED THE ACTIVITIES OF 8 INSPECTORS LOCATED IN BOL REGIONAL OFFICES
- COORDINATED PLANNING ISSUES AND ASSISTED IN DEVELOPMENT OF REGULATIONS FOR THE USED TIRE PROGRAM

1987 – 1989

ASSISTANT TO THE MANAGER, FIELD OPERATIONS SECTION, BUREAU OF LAND

- COORDINATED FIELD STAFF ACTIVITIES WITHIN THE SOLID WASTE PROGRAM
- ASSISTED IN PLANNING AND MANAGING THE HAZARDOUS WASTE PROGRAM
- FOS'S REPRESENTATIVE OF THE AGENCY'S CLEANUP OBJECTIVE TEAM
- COORDINATED FOS'S INTERACTION WITH THE IEPA LABORATORIES
- MANAGED THE FOS COMPUTERIZED ACTIVITIES DATABASE

1980 – 1987

PERMIT ANALYSTS, BUREAU OF AIR

- COORDINATE THE TOXIC AIR PERMITTING FOR BOA
- ANALYSIS OF TOXIC AIR EMISSIONS AND ACCEPTABLE EMISSION LIMITS

## **HONORS**

- **LA REIN HATCH SCHOLARSHIP FROM THE NATIONAL ENVIRONMENTAL HEALTH ASSOCIATION**



BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PROPOSED AMENDMENTS TO CLEAN	)	R12-9
CONSTRUCTION OR DEMOLITION	)	(Rulemaking – Land)
DEBRIS FILL OPERATIONS (CCDD):	)	
PROPOSED AMENDMENTS TO 35 Ill.	)	
Adm. Code 1100	)	

RECEIVED  
CLERK'S OFFICE  
SEP 02 2011  
STATE OF ILLINOIS  
Pollution Control Board

ORIGINAL

PREFILED TESTIMONY OF DOUGLAS W. CLAY ON ILLINOIS EPA'S PROPOSED  
AMENDMENTS AT SECTION 1100.600

My name is Douglas W. Clay. I am the manager of the Division of Land Pollution Control within the Bureau of Land of the Illinois Environmental Protection Agency (Agency). I have been in my current position since 2007. From September 1994, until I assumed my current position, I was the manager of the Leaking Underground Storage Tank Section. I have been with the Agency since February, 1983. In December 1982, I received a B.S. in Civil Engineering from the University of Illinois. I am a licensed Professional Engineer in the State of Illinois. My resume is attached as Attachment 1.

Today, I will be testifying in support of the amendments proposed by the Agency to the 35 Ill. Adm. Code Part 1100 regulations regarding the regulation of clean construction or demolition debris and uncontaminated soil fill operations. Specifically, I will be testifying in support of the Agency's addition of Subpart F: "Standards for Uncontaminated Soil Used as Fill Material at Fill Operations Regulated by this Part," Section 1100.600 "Purpose and Applicability." Les Morrow will testify on proposed Sections 1100.605 and 1100.610. Steve Nightingale will testify on Section 1100.615.

**Section 1100.600 Purpose and Applicability**

Section 1100.600 sets forth the purpose, applicability and restrictions of Subpart F:

Standards for Uncontaminated Soil Used as Fill Material at Fill Operations Regulated by this Part. Subsection (b) provides that Subpart F only applies to soil that is generated during construction and demolition related activities as identified in Section 3.160 of the Illinois Environmental Protection Act (Act) and that is used as fill material at clean construction or demolition debris (CCDD) or uncontaminated soil fill operations regulated under this Part.

This Subpart is not intended to define “uncontaminated soil” for purposes other than those regulated under this Part. This is because the TACO Tier 1 remediation objectives on which the MACs are based address only the ingestion, outdoor inhalation, soil migration to groundwater, and construction worker exposure routes for human receptors. MACs based on the most stringent Tier 1 objectives among these exposure routes are acceptable for the controlled conditions at fill operations, but they do not address concerns that might arise if uncontrolled use is allowed for soil meeting the proposed MACs. For example, outside the fill operation context there would be no equivalent screening procedures required (e.g., review by professional engineers or geologists, certifications, load-checking, document retention).

In addition, the TACO Tier 1 remediation objectives on which the MACs are based do not take into account all potential exposure routes. The Illinois EPA has not evaluated what effect, if any, the proposed indoor inhalation standards might have on the uncontrolled use of the soil as fill material. Moreover, ecological receptors are not considered. Based on USEPA guidance for ecological soil screening levels (“EcoSSLs”), there is good reason to conclude that remediation objectives for ecological receptors would in some cases be more stringent than those for human receptors. If such remediation objectives were part of the MAC determination process, they could become the controlling values for MAC selection.

Subsection (c) clarifies that soil that is mixed with, or commingled with, CCDD regulated

under this Part must meet the maximum allowable concentrations of chemical constituents set forth in the Subpart if used as fill material at CCDD facilities. Even though this soil/debris mixture could not be considered “uncontaminated soil,” the same potential would exist for soil contamination in the mixture as in the unmixed soil. Allowing the soil/debris mixture in fill operations without the same precautions required for unmixed soil would defeat the purpose of taking those precautions for the unmixed soil. In addition, mixing debris with soil would be an easy way to evade the uncontaminated soil standards.

Subsection (d) generally identifies soils that cannot be used in CCDD or uncontaminated soil fill operations, regardless of the concentration of chemical constituents in the soil. These include soil that must be managed as hazardous waste -- for example, soil that is mixed with a listed hazardous waste, and therefore is still considered hazardous. Also, excluded from this Part is soil that is treated or diluted to reduce contaminant concentrations or their mobility. This does not include soil that is treated by physical separation from construction or demolition debris at the site of generation or at a site that is authorized by law or as part of an Agency permit to perform such separation.

In addition, under Subsection (d)(3), soil that is removed as part of a cleanup or removal of contaminants may not be placed at CCDD or uncontaminated soil fill operations, including but not limited to, soil from activities conducted under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended; as part of a closure or corrective action under the Resource Conservation and Recovery Act (RCRA), as amended; or under an Agency remediation program, such as the Leaking Underground Storage Tank (LUST) Program or the Site Remediation Program (SRP). Subsection (d)(3) only excludes soil that is removed as part of the cleanup action. This exclusion of soils generated during the cleanup or

removal of contaminants is carried over from Sections 22.51(f)(2)(C) and 22.51a(d)(2)(C) of the Act.

Subsection (d)(3) also includes two clarifications to the exclusion for soils generated during the cleanup or removal of contaminants. The first clarification is for sites subject to Section 58.16 of the Act where there is no presence or likely presence of a release of a regulated substance. Section 58.16 only applies to sites where a school is being constructed in Cook County. This reference is intended to clarify that soils from these sites, that are not in contaminated areas, may be used as fill at sites covered under this Part if they are within the maximum allowable concentrations of chemical constituents set forth in this Subpart.

The second clarification has been added to the statutory language by the Agency. It provides that subsection (d)(3) does not apply to all soil at the cleanup or removal site. For example, soil that is removed as part of a cleanup under SRP cannot be used as fill at a CCDD facility or uncontaminated soil fill operation, regardless of the chemical concentration of contaminants. However, soil from another part of the property, not included in the SRP cleanup, may be used at a CCDD facility or uncontaminated soil fill operation if it meets the maximum allowable concentrations set forth in this Subpart.

Another example that falls within the second clarification would be a highway authority's removal of soil from a right-of-way that is subject to a highway authority agreement because of an adjacent leaking underground storage tank site. The highway authority's removal of soil for widening the roadway or sewer construction would not be considered soil "excavated as part of a cleanup or removal of contaminants." The purpose of the removal would be roadway or utility construction, and the removal of contaminated soil, if any, would be incidental to the construction. However, the soil still would require evaluation under Subpart F and could not be

placed in regulated fill operations unless it satisfies the Subpart F requirements for uncontaminated soil.

Once again, I would like to emphasize that this Subpart F only applies to soils that are being used as fill at facilities and operations covered by the Part and is not intended to define soil as “clean” or uncontaminated for any other application or purpose.

This concludes my pre-filed testimony.

ATTACHMENT 1

**Douglas W. Clay, P.E.**

---

**Professional  
Experience**

2007 – Present                      Illinois Environmental Protection Agency  
**Division Manager**

- Responsible for managing the Division of Land Pollution Control, which includes the Bureau of Land's Permit Section, Field Operations Section and Waste Reduction and Compliance Section.
- Directly and indirectly manage approximately 130 staff and managers.

1995 - 2007                          Illinois Environmental Protection Agency  
**Section Manager**

- Responsible for managing the Leaking Underground Storage Tank Program in Illinois, which oversees the cleanup of releases from underground storage tanks throughout the state to protect human health and the environment.
- Directly and indirectly manage approximately 43 staff and managers.
- Responsible for partial administration of the UST Fund, which is used to reimburse underground storage tank owners and operators.

1994 - 1995                          Illinois Environmental Protection Agency  
**Section Manager (Acting)**

- Responsible for managing the Leaking Underground Storage Tank Program in Illinois, which oversees the cleanup of releases from underground storage tanks throughout the state to protect human health and the environment.
- Directly and indirectly manager approximately 43 staff and managers.
- Responsible for partial administration of the UST Fund, which is used to reimburse underground storage tank owners and operators.

1990 - 1994                          Illinois Environmental Protection Agency  
**Unit Manager**

- Responsible for managing the Disposal Alternative Unit in the Bureau of Land, Permit Section
- The unit reviews permit applications for solid and hazardous waste treatment and storage facilities.

1988 - 1990                      Illinois Environmental Protection Agency  
**Environmental Protection Engineer IV**

- Review permit applications for solid waste disposal and transfer facilities in the Bureau of Land, Permit Section, Solid Waste Unit.
- Act as lead worker in the Solid Waste Unit.

1985 - 1988                      Illinois Environmental Protection Agency  
**Environmental Protection Engineer III**

- Review permit applications for sewage treatment plants, pump stations and sewer connections.

1984 - 1985                      Illinois Environmental Protection Agency  
**Environmental Protection Engineer II**

- Review permit applications for sewage treatment plants, pump stations and sewer connections.

1983 - 1984                      Illinois Environmental Protection Agency  
**Environmental Protection Engineer I**

- Review permit applications for sewage treatment plants, pump stations and sewer connections.

**Education**

1978 - 1982                      University of Illinois      Champaign-Urbana

- Received a B.S. in Civil Engineering

**Professional License**

Registered Professional Engineer in the State of Illinois

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

RECEIVED  
CLERK'S OFFICE

SEP 02 2011

STATE OF ILLINOIS  
Pollution Control Board

IN THE MATTER OF: )  
 )  
PROPOSED AMENDMENTS TO )  
CLEAN CONSTRUCTION OR DEMOLITION )  
DEBRIS FILL OPERATIONS (CCDD): )  
PROPOSED AMENDMENTS TO 35 Ill. )  
Adm. Code 1100 )

R12-9  
(Rulemaking – Land)

ORIGINAL

PREFILED TESTIMONY OF LESLIE MORROW ON THE AGENCY'S PROPOSED AMENDMENTS TO THE BOARD'S CLEAN CONSTRUCTION AND DEMOLITION DEBRIS RULES AT SECTIONS 1100.605 AND 1100.610

I. Introduction

Good morning. My name is Leslie Morrow. I have worked as an environmental toxicologist for the Illinois Environmental Protection Agency (Illinois EPA or Agency) since early 1988. During my employment, I have reviewed numerous regulatory risk assessments which evaluate the potential for chemical contaminants to harm humans and the environment. I have assisted in regulatory development and I am highly familiar with the Pollution Control Board's (Board's) Tiered Approach to Corrective Action Objectives (TACO) regulations (35 Ill. Adm. Code 742). Previously, I worked 15 years as a scientist conducting drug and chemical safety testing in laboratory animals. I received a Bachelor of Arts degree in biology and chemistry from Millikin University in Decatur, Illinois and I've completed 20 hours of graduate studies in risk assessment from the University of Illinois, Springfield, Illinois. My *curriculum vitae* is recorded as Attachment 1 to my testimony.

II. Overview



I am testifying today in support of the Illinois EPA's amendments to the Clean Construction or Demolition Debris (CCDD) Fill Operations regulations: 35 Ill. Adm. Code 1100. My testimony pertains to portions of a new subpart, "Subpart F: Standards for Uncontaminated Soil Used as Fill Material at Fill Operations Regulated By This Part." Subpart F establishes concentration standards for "uncontaminated soils" that are generated during construction and demolition activities and are destined for disposal at a CCDD or Uncontaminated Soil fill location. My testimony concentrates on Sections 1100.605 and 1100.610 of this subpart.

Based primarily on the statutory principles of Section 3.160 of the Illinois Environmental Protection Act (Act), there are three concepts guiding the Agency in its development of proposed Sections 1100.605 and 1100.610. These concepts will be touched on frequently in my testimony. First, the maximum allowable concentrations (MACs) should be based on Tier 1 soil remediation objectives from the Board's TACO rules. This follows from the limited options that are available for the task of establishing the chemical-specific MACs and by implication from the statutory references to the TACO tables and objectives.

Second, the MACs in soil must be based on the concentrations of chemical constituents in the soil itself and not on external controls or circumstances such as institutional controls, engineered barriers, exposure route exclusions, and so forth. This follows from the statutory directive in Section 3.160(c)(1) that the Agency must propose and the Board must adopt rules "specifying the maximum concentrations of contaminants that may be present in uncontaminated soil . . . ." (emphasis added) and from the very practical need for uniformity from site to site in the implementation and administration of these statewide rules. The

Agency has sought to identify a single set of constituent concentrations that can be applied to any fill site location in the state, whether currently existing or established in the future. If the MACs are allowed to differ from site to site based on site-specific variations, a substantially more complex and costly regulatory structure than that proposed here would be necessary to oversee the establishment and revisions of the site-specific MACs, and implementation of these rules would become much more complicated for soil generators, certifying professional engineers and geologists, and state and local inspectors.

Third, the MACs must apply only in the context of soil generated during construction or demolition activities as defined in Section 3.160 of the Act and placed at regulated CCDD or uncontaminated soil fill operations. This follows from the statutory directive at Sections 3.160(c) and 3.160(c)(1) to the Agency and the Board to propose and adopt contaminant concentration standards “for purposes of” Section 3.160, which limits the effort to soil generated during “construction, remodeling, repair and demolition of utilities, structures and roads . . .”. Moreover, the proposed MACs are not necessarily protective of ecological receptors, and the overall protectiveness of the MACs depends at least in part on the screening procedures and the operational controls prior to and after placement of the soil in regulated fill operations.

Section 1100.605 establishes methods for the determination of maximum allowable concentrations of chemical contaminants in uncontaminated soil for the purposes of this rule. This is accomplished in a narrative format that relies on existing Board regulations. Section 3.160(c) of the Act provides that “uncontaminated soil means soil that does not contain

contaminants in concentrations that pose a threat to human health and safety and the environment.” This definition does not preclude the presence of “non-threatening” concentrations of contaminants in uncontaminated soil. Methods for quantifying non-threatening concentrations of contaminants have been developed by various organizations including USEPA and several states, including Illinois. It was noted that many methods, including Illinois’s, have a common foundation in a 1996 USEPA guidance document. Furthermore, we note statutory references to the Illinois methods at Sections 3.160(c)(1) and 22.51(f)(3) of the Act. Based on the statutory association and its similarity with other sources, the Illinois EPA has relied on the Board’s TACO regulations as the basis for MAC determinations.

The purpose of Section 1100.610 is to provide guidance for establishing compliance with the MAC criteria established in 1100.605. This process is necessary to confirm the acceptability of soil identified as being from a “potentially impacted property” and requiring management by a licensed professional engineer or geologist. The procedures in Section 1100.610 are consistent with TACO and with Sections 22.51(f)(2)(D)) and 22.51(f)(3) of the Act.

### III. Section 1100.605 Maximum Allowable Concentrations for Chemical Constituents in Uncontaminated Soils

Section 1100.605(a) Methodology for Determining Maximum Allowable Concentrations:

Section 1100.605 establishes a methodology for determining the maximum allowable concentrations for chemical constituents in uncontaminated soils. The Illinois EPA has chosen to propose a methodology rather than simply proposing a table of values taken from the TACO Tier 1 residential and commercial-industrial tables so that MACs may be determined without amending Part 1100 tables each time the TACO tables are revised. Nonetheless, the Illinois EPA

will publish a table of MACs that have been determined using the promulgated methodology. A draft of that table is attached to my testimony as Attachment 2. This will simplify MAC determinations for those who do not wish to calculate the MACs themselves using the methodology and TACO tables. The Illinois EPA's position is that publication of the table will not constitute a generally applicable rule under the Administrative Procedure Act (5 ILCS 100/) as long as the values published in the table are determined using the promulgated methodology.

Section 1100.605(a)(1) MAC Determinations Using the Lowest TACO Exposure Value:

To advance the statutory goal of protecting public health, safety and the environment, the Agency determined that the lowest relevant TACO cleanup objective for each contaminant should become its respective MAC. TACO identifies three human receptors (residential, industrial/commercial, and construction worker) and three routes of exposure (soil ingestion, inhalation of dusts or volatiles, and two classes of migration from soil to ingested groundwater). Because the industrial/commercial receptor objectives are never lower than the residential values, only the residential and construction worker values are considered in this rulemaking. Additionally, Class II soil-to-groundwater objectives were eliminated from consideration because they are never lower than Class I values. Although Class II values might be directly applicable at some fill site locations, the Agency sought to maintain, as much as possible, uniform criteria for all facilities within the state. The conservative approach of using Tier 1, Class 1 values for the soil-to-groundwater exposure route provides the uniformity the Agency

believes is important and an additional layer of protection for groundwater resources from facilities that are not required to have a protective liner to control contaminant migration.

Thus, for each TACO contaminant, up to five unique cleanup concentrations must be considered to determine the MAC. From these five concentrations, the lowest must be selected to be the “uncontaminated soil” concentration. However, there is a statutory exception to this process for certain background concentrations as well as additional complicating factors that arise in TACO and are therefore incorporated into the methodology for determining MACs. These complications and the exception for background values are discussed below in subsections 1100.605(a)(2) through (a)(5) and (b).

#### Section 1100.605(a)(2) Ionizing Organic Constituents:

As in the TACO regulations, ionizing organic constituents require additional consideration with respect to the soil-to-groundwater exposure route. Contamination of groundwater by ionizing organic constituents is dependent upon several soil and chemical-specific properties. The most relevant soil variable is pH. Soil pH is a measure of the acidity and basicity of the soil and can range from 0 to 14 units. The TACO Tier 1 residential and industrial/commercial tables (35 Ill. Adm. Code 742.Appendix B, Tables A, B) list several ionizing organic constituents and note that the soil-to-groundwater values for these pH-sensitive constituents are based on a neutral pH of 6.8. The note further states that if pH values are other than 6.8, Section 742.Appendix B, Table C must be used for calculating Tier 1 residential or industrial/commercial soil objectives for the soil-to-groundwater exposure route. Section

742. Appendix B, Table C presents pH-specific Class I objectives over the pH range of 4.5 to 9.0 pH units for several ionizing organic constituents.

However, an additional factor must be taken into consideration before Table C may be used to determine a pH-sensitive MAC at fill operations -- pH conditions at fill operations are expected to be variable and unpredictable. At a remediation site where TACO is used, the pH of the contaminated soil itself and the soil immediately adjacent can easily be determined, so the applicable pH value can be used with Table C to select an appropriate pH-sensitive remediation objective for the soil-to-groundwater exposure route. However, the transportation of many loads of soil to a fill operation from a multitude of locations does not provide the same degree of certainty for determining the pH within the fill area itself -- the location that will have the greatest effect on the leachability of pH-sensitive constituents in soil used as fill material. In addition, operations with pits that descend close to or into bedrock will potentially encounter additional unpredictable pH conditions.

Within the State, natural soil pH varies widely near the surface. From the perspective of proposing and administering a state-wide rule, the Agency has concluded that outside of the pH extremes defined as hazardous waste (less than or equal to 2.0 or greater than or equal to 12.5), the pH of soil can vary throughout the non-hazardous range, and no single pH-dependant value would be directly applicable within any particular fill pit. Therefore, the Agency proposes a conservative approach of utilizing the lowest pH-dependant value from Appendix B, Table C for each ionizing organic constituent as the value to substitute for the pH-neutral, soil-to-

groundwater value from Appendix B, Table A, prior to determining the lowest TACO exposure value that is the MAC.

Section 1100.605(a)(3) Inorganic Constituents:

As is the case in the TACO regulations, inorganic constituents also require additional considerations with respect to the soil-to-groundwater exposure route. One consideration is that, as with the ionizing organics discussed above, leaching of certain inorganics is also pH-sensitive. A second consideration is that the Section 742.Appendix B, Table A values for soil-to-groundwater are in analytical units that correspond to results from a special leaching analytical test – milligrams per liter (mg/L). In making the comparison among exposure route values to determine the lowest concentration that is the MAC, the comparison must be among values based on the same analytical units. All of the other TACO exposure route values are dry weight values from “totals” tests that are provided in analytical units of milligrams per kilogram (mg/kg). The TACO values in units of mg/L cannot be directly compared the other TACO objectives to determine the lowest chemical-specific value that is the MAC unless the mg/L values are converted to mg/kg. These additional considerations are addressed in subsections 1100.605(a)(3)(A) and (a)(3)(B) below.

Section 1100.605(a)(3)(A) pH-Dependent MAC Determinations:

As described above for the ionizing organic constituents, the potential to contaminate groundwater for inorganic constituents in soil is influenced by soil pH. The TACO rules address pH-sensitive inorganics in the same way they address ionizing organics. Section 742.Appendix B, Table A lists several inorganics and directs the person conducting the remediation to three

options for demonstrating compliance including the use of Section 742. Appendix B, Table C for pH-sensitive constituents. Table C includes pH-specific Class I soil-to-groundwater objectives for many of the inorganic constituents. The same issues discussed above apply to these inorganics – the variability of statewide soil pH values and the uncertain pH of the fill pit environment and its effects on leaching.

Due to the unknown pH conditions of volumes of indeterminate soil placed in fill sites across the state plus the unknown pH conditions directly affecting the fill site location, the Agency once again concludes that the lowest totals concentration over the Appendix B, Table C range of available pH-specific objectives should substitute for the TACO Class I soil-to-groundwater value prior to making comparisons to the TACO ingestion and inhalation objectives. The lowest pH-dependant objective is both protective of public health and will provide a uniform approach for determining the MACs for pH sensitive inorganics. Although it is not the primary reason for proposing this approach, a side-benefit is that the Table C values for soil-to-groundwater are provided in analytical units of mg/kg rather than the mg/L found in Table A for the inorganics. In addition to facilitating MAC selection under Section 1100.605, this approach may make compliance confirmation under Section 1100.610 faster and cheaper than performing leachate testing.

Section 1100.605(a)(3)(B) Multiplier Method:

Seven inorganic constituents are included in TACO Appendix B, Table A but are excluded from the TACO pH-dependant table (boron, chloride, cobalt, fluoride, nitrate as N, silver, and sulfate). Thus, no objectives for this pathway are available in units of milligrams per kilogram



(totals) using the previously described procedure. For these constituents, the TACO Class I soil-to-groundwater leachate concentration was multiplied by 20 liters per kilogram to derive an alternative value for this pathway that is in units of milligrams per kilogram. The factor of 20 corresponds to the dilution factor (20 parts water: 1 part solids) incorporated into the prescribed analytical procedures for determination of the leachable concentration in a soil sample. Twenty times the TACO leachate concentration represents the maximum allowable constituent level that can leach from a soil sample assuming 100% leaching of the constituent. This approach has been adapted from USEPA guidance at [http://www.epa.gov/osw/hazard/testmethods/faq/faq\\_tclp.htm](http://www.epa.gov/osw/hazard/testmethods/faq/faq_tclp.htm). The Agency supports these criteria as practical and protective since complete leaching from soil is highly improbable. Furthermore, for purposes of determining the value that is the MAC, this procedure yields criteria that can be compared to the more common milligrams per kilogram (totals) analytical results used for other Table A exposure routes. These calculated criteria can substitute for the TACO Class I soil-to-groundwater exposure route leachate concentrations for inorganic constituents that are otherwise provided in milligrams per liter and are not included in the TACO Table C pH-dependant table. It should be noted that demonstrations of compliance pursuant to Section 1100.610 still may use the leaching analytical procedures and Table A soil-to-groundwater remediation objectives.

Section 1100.605(a)(4) Detection Limit Criteria:

The lowest TACO Appendix B, Table A values for fifteen constituents are less than their respective acceptable detection limits (ADL). The ADL is the lowest reliably reproducible

analytical result that can be expected from an analytical chemistry method. TACO Appendix B, Table A identifies ADLs when pathway-specific objectives fall below the ADL limit. In such cases, TACO specifies (Section 742.510 (a)(8)) that the calculated objective should be replaced with the ADL. Analytical laboratories frequently report values below the ADL but these results are suspect and regarded as unreliable. While this approach may not be the most protective, it conforms to the methods used in TACO, and it is the only reasonable alternative given the limits of the analytical methods.

Section 1100.605(a)(5) Attenuation Capacity:

Attenuation capacity is an important soil characteristic since the contaminant transport models used in TACO are invalidated when it is exceeded by the sum of the concentrations of the organic contaminants. Attenuation capacity is an estimation of the extent of the natural organic carbon in soil that is available to bind up organic contaminants. Attenuation capacity is typically defined by the analytically derived fraction organic carbon (foc) content of unimpacted soil. TACO employs two default foc values; 0.6% for the upper one meter of soil (surface) and 0.2% below one meter (subsurface). Soil removal during construction and demolition activities is variable and follows no predictable pattern for depth of and extent of the excavated soil. Because the Agency cannot predict a default ratio for the quantities of surface to subsurface soil destined to be hauled to fill operations, we are obliged to erring on the side of protecting human health and to set the default attenuation capacity for all fill soil at the lower subsurface soil value of 0.2% or 2,000 milligrams per kilogram.

Section 1100.605(b) Background Criteria:

When calculated remediation objectives are less than statewide or site-specific background concentrations, TACO allows for the use of background concentrations to satisfy the cleanup objectives. Section 3.160(c)(1) (as amended by P.A. 97-137 (eff. July 14, 2011)) authorizes a similar approach in this proposal. In proposed Section 1100.605(b), the Agency has incorporated the use of TACO's location-adjusted statewide background tables into this rulemaking; however, we reject the use of site-specific background concentrations because it goes counter to our general principle of statewide uniformity. Background values for most inorganic and select organic constituents are provided in Section 742. Appendix A, Tables G and H, respectively.

Using the MAC selection methodology described above, the Agency has identified five inorganic constituents (arsenic, iron, lead, manganese, mercury) for which the MACs are more stringent than the background concentrations such that the background concentrations may become the MAC. See Attachment 2. Inorganic constituents are naturally occurring and ubiquitous in the environment. They are expected to be present at some level in all soil. TACO Table G contains two background values for each inorganic constituent listed; one for highly populated counties and another for the rest of the State. Human activities directly correlate with increases in concentrations of contaminants in modern environmental background conditions. For example, surface soil lead levels are notably higher near busy roadways and airports due to the longtime use of lead as a fuel additive.

Background levels were also used in the MAC determinations for four organic constituents (benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)

anthracene). *See* Attachment 2. TACO Table H contains three background values each for a group of thirteen TACO constituents which are part of the chemical family known as polycyclic aromatic hydrocarbons (PAHs). The four organics listed are PAHs. PAHs are also naturally occurring and ubiquitous in the environment. They are present in tar, coal, and crude oil and they are produced during combustion such as in wildfires and during volcanic activity. However, manmade sources from the mishandling and burning of liquid fuels and coal are much more significant contributors to modern background. Thus the correlation to human population density is also valid for PAHs. TACO Table H contains background values for three locations; the City of Chicago, populated areas in urban counties, and populated areas in non-urban counties. There are no background values for other areas of the State thus the TACO Appendix B, Table A health-based objectives are applicable outside the designated areas.

Section 3.160(c)(1) of the Act directs that, when used, background concentrations should agree with the value appropriate for the location of the fill operation. The use of TACO's location-adjusted tables complies with this directive while minimizing the disparity among facilities that might arise if each facility were to determine a site-specific background value. Although it compromises somewhat the Agency's principle of uniformity, this provision prevents the perception of the dumping of naturally higher levels of contaminants into what are perceived as uncontaminated areas. This approach has been woven into the draft Table of MACs for the five inorganics and four PAHs listed above. *See* Attachment 2. While the overall impact can be argued, the perception of inequity can be strong and should be avoided when possible. The Agency shares the concern of the legislature as expressed in the Act and agrees

with the use of TACO's location-adjusted background tables when determining background-based criteria for fill operations.

Section 1100.605(c) Criteria for Non-TACO Chemicals:

TACO contains objectives for 134 chemicals upon which MAC determinations can be made using the proposed Section 1100.Subpart F methods. This is only a fraction of the estimated 80,000 chemicals in commerce. Section 1100.605(c) compels the Agency to provide remediation objectives for chemicals not included in TACO tables at Sections 742.Appendix B, Tables A, B and C. Consistent with our principle to follow TACO when possible, subsections 1100.605(c)(1) and (c)(2) parrot procedures in TACO for obtaining toxicological values and identifying the default inputs and equations for calculating objectives for non-TACO chemicals. For the TACO program, the Agency has already calculated objectives for over 150 non-TACO chemicals. For this group of additional chemicals, MAC determinations can be readily made using the proposed methodology once the values for the non-TACO chemicals are provided. These values will be posted at the Agency's website in accordance with subsection 1100.605(e) as discussed below.

Section 1100.605(d) Non-numeric Criteria:

TACO contains provisions for non-numeric remedies such as institutional controls, engineered barriers, and pathway exclusions. Section 1100.605(d) of the rule excludes the use of any of these practices. Based on statutory provisions discussed above, the Agency maintains that the definition of "uncontaminated soil" should be determined by the characteristics of the soil itself and not by any external means. In addition, site-specific numeric and non-numeric

standards are contrary to the Agency's principle of uniformity because they would require additional rules, added Agency oversight, and increased compliance activities for fill site operators and would complicate implementation for soil generators, haulers, licensed professional engineers and geologists, and state and local inspectors.

Section 1100.605(e) Provision of a MAC Table:

Section 1100.605(e) provides that the Agency will maintain internet-based electronic tables of MACs determined in accordance with the proposed methodology for all TACO constituents plus remediation objectives for non-TACO chemicals as they are developed in accordance with subsection 1100.605(c). The Agency foresees the MAC values as being dynamic and changing to reflect revisions to TACO as they occur. By not placing a table of MAC values into the rule, the Agency anticipates timely responses to TACO revisions and will avoid the unnecessary use of Agency, Board and stakeholder resources required to amend this rule.

#### IV. Section 1100.610 Compliance Evaluation; Performance and Documentation of Soil Sampling and Chemical Analysis

Section 1100.610 (a) Sampling Plans:

Proposed Section 1100.610 provides direction for evaluating compliance of any particular quantity of soil with the applicable MACs as determined pursuant to Section 1100.605. Not all soils are subject to evaluation and certification by licensed professional engineers and geologists, but for soils that are from "potentially impacted properties," the first problem is determining what chemical constituents, if any, must be analyzed. The second problem is developing a representative sampling plan. After considerable discussion, the Illinois EPA's position is that a one-size-fits-all protocol producing consistently reliable results is

impractical considering the multitude of sites, activities and circumstances in which soil may be generated and managed prior to placement in fill operations. Therefore, proposed Section 1100.610(a) provides that licensed professional engineers and geologists must make these determinations on a site-specific basis. Section 1100.205(a)(1)(B) requires that the licensed professional engineers and geologists provide certification of their findings.

Section 1100.610(b) Comparison of Site Values to MACs:

When a site is determined to be a “potentially impacted property” and a licensed professional engineer or licensed professional geologist has determined that sampling and analysis are necessary to determine the concentrations of contaminants in the soil, a comparison of the analytical results to the numeric criteria is necessary. Simply stated, Section 1100.610(b) requires that compliance be achieved by comparing site soil concentrations to MAC values as determined using Section 1100.605. Subsections 1100.610(b)(1), (b)(2) and (b)(3) expand on compliance when the special considerations discussed under subsections 1100.605(a)(2) through (b) have come into play.

Subsection 1100.610(b)(1) directs that compliance confirmation for organic or inorganic constituents that possess background-based MAC criteria must compare the applicable background values that are the MACs with the total soil concentrations reported in the laboratory analyses. The background tables at Section 742.Appendix A, Tables G and H are in analytical units of mg/kg, so the comparison should be straight-forward. At this point, it must be noted that the proposed Section 1100.610(b)(1) submitted to the Board contains an error that will be corrected in a future errata sheet. The PAHs for which the background values will

become the MACs are misidentified as “ionizing” organic constituents. The word “ionizing” should be stricken.

Subsection 1100.610(b)(2) specifies that, for ionizing organic constituents that are contained in TACO Appendix B, Table C, the site analytical concentrations should be compared to the lowest pH-dependant concentration in Table C. Because the Table C values are in mg/kg, this also assures that the values are comparable.

Subsection 1100.610(b)(3) is specific to the soil component of the Class I groundwater ingestion pathway compliance comparisons for inorganic constituents. It contains three subsections. Subsection 1100.610(b)(3)(A) states the need to compare site analytical results to the lowest TACO Appendix B, Table C value when the Table C value is the MAC. Because the Table C values are in mg/kg, this assures that the units of measure for both values are the same and comparable.

Subsection 1100.610(b)(3)(B) directs that, for inorganics not included in the TACO pH-dependant table, site analytical results should be compared to the twenty times criteria. The twenty times multiplier converts the TACO leachate objective to milligram per kilogram units so that direct comparisons can be performed. As mentioned in my testimony at Section 1100.605(a)(3)(B), the seven inorganics that fall into this category are boron, chloride, cobalt, fluoride, nitrate as N, silver, and sulfate).

Subsection 1100.610(b)(3)(C) adds a compliance option for inorganic constituents based upon use of soil leaching tests where the MAC is based on the corresponding Class I soil to groundwater exposure route value. Site soils with inorganic constituents that fail the lowest



pH-dependant or twenty times criterion may be further evaluated to establish compliance. This subsection allows for the SW-846 Toxicity Characteristic Leaching Procedure (TCLP) or Synthetic Precipitation Leaching Procedure (SPLP) methods to be performed upon site soils. The results of this analysis should be compared directly to the TACO Appendix B, Table A Class I soil-to-groundwater exposure route. Both values will be in units of milligrams per liter and they will be comparable. Site values that are less than or equal to the TACO objective will be judged to be in compliance. This is a reasonable and protective option for establishing compliance. The leaching tests provide results that directly measure the quantity of a constituent that can detach from soil and move into the aqueous phase. Since these results will be site-specific they will be a truer measure of leachability. Leach tests are not required to confirm compliance with MAC criteria, but there may be circumstances when the PE or PG would find them advantageous. The Agency believes that all three of the soil component of the groundwater ingestion route compliance methods for inorganics are equally protective of human health.

Section 1100.610(c) Alternative Analytical Methods:

Some TACO chemicals are not included in the prescribed analytical test methods (USEPA SW-846). Section 1100.610(c) allows for the use of alternative analytical methods to prove compliance for these constituents. Because the detection limits of alternative methods are unknown, Section 1100.610(c) includes an encouragement to select methods that will detect concentrations of constituents at or below their respective MAC values. USEPA SW-846 analytical methods are the standard for environmental investigations, and they are the

required procedures when prescribed. The use of alternative methods for non-SW-846 constituents is consistent with TACO and necessary to assure compliance.

Section 1100.610(d) Averaging of Results:

Section 1100.610(d) disallows averaging of site soil analytical results. TACO allows averaging under some circumstances but not for all pathways and all receptors. MAC values are drawn from various TACO endpoints including those that prohibit averaging. Additionally, upon deposition at the fill location, the receptor and pathway classification may change to one that prohibits averaging. Because of the inherent alteration of the receptor/pathway designations of soils that have been excavated, mixed, moved, and redeposited, no averaging of analytical results can be allowed.

Section 1100.610(e) Laboratory Accreditation and Documentation:

Section 1100.610(e) requires that all quantitative soil sample analyses be performed by an accredited laboratory in accordance with 35 Ill. Adm. Code 186. Documentation of analyses results must include chain-of-custody records, a copy of the laboratory analyses, the accreditation status of the laboratory, and certification by an authorized agent of the laboratory that the analyses were performed in accordance with the rules for accreditation and within the scope of the accreditation. The need to use approved laboratories and to document the results assures the quality of the information used by the licensed Professional Engineer or licensed Professional Geologist is adequate to judge soils as being in compliance or not in compliance. The accuracy of the analytical data is essential to the protection of public health and the environment.

This concludes my testimony. Thank you.

ATTACHMENT 1

*Curriculum Vitae for*  
**LESLIE D. MORROW**

**Illinois Environmental Protection Agency  
1021 North Grand Avenue East, P.O. 19276  
Springfield, Illinois 62974-9276**

**EDUCATION**

Bachelor of Arts - 1971 Biology major (pre-medicine), chemistry minor  
Millikin University, Decatur, IL

Graduate Courses - Environmental Studies  
Sangamon State University, Springfield, IL

**RELEVANT WORK EXPERIENCE**

**1988 to present**     *Environmental Toxicologist in the Toxicity Assessment Unit/ Director's Office of the Illinois Environmental Protection Agency.* My duties include preparing and evaluating human health and environmental risk assessments which estimate the potential harm caused by contaminated soil, air, surface water, and groundwater. I perform open literature reviews and detailed toxicological evaluations of chemicals or chemical mixtures to obtain information regarding the "safe" exposure concentrations for humans, plants, and animals. I assist in regulatory initiatives when there is a need for toxicology expertise. I provide expert testimony in court and before the Illinois Pollution Control Board.

**1973 to 1988**     *Research Toxicologist.* I conducted contract animal toxicology studies for the pharmaceutical and chemical industries and for the federal government.

**Summary of  
Maximum Allowable Concentrations of Chemical Constituents  
In Uncontaminated Soil Used as Fill Material  
At Regulated Fill Operations  
(35 Ill. Adm. Code 1100.Subpart F (Proposed))**

Chemical Name	Maximum Allowable Concentration <sup>a</sup>
Acenaphthene	570 <sup>b</sup> mg/kg
Acetone	25 <sup>b</sup> mg/kg
Alachlor	0.04 <sup>b</sup> mg/kg
Aldicarb	0.013 <sup>b,1</sup> mg/kg
Aldrin	0.94 <sup>c</sup> mg/kg
Anthracene	12,000 <sup>b</sup> mg/kg
Antimony	5 <sup>d</sup> mg/kg
Arsenic:	
within a MSA county	13.0 <sup>e</sup> mg/kg
within a non-MSA county	11.3 <sup>e</sup> mg/kg
Atrazine	0.066 <sup>b</sup> mg/kg
Barium	260 <sup>d</sup> mg/kg
Benzene	0.03 <sup>b</sup> mg/kg
Benzo(a)anthracene:	
within Chicago corporate limits	1.1 <sup>f</sup> mg/kg
within a populated area in a MSA excluding Chicago	1.8 <sup>f</sup> mg/kg
within a populated area in a non-MSA county or outside a populated area	0.9 <sup>g</sup> mg/kg
Benzo(b)fluoranthene:	
within Chicago corporate limits	1.5 <sup>f</sup> mg/kg
within a populated area in a MSA excluding Chicago	2.1 <sup>f</sup> mg/kg
within a populated area in a non-MSA county or outside a populated area	0.9 <sup>g</sup> mg/kg
Benzo(k)fluoranthene	9 <sup>g</sup> mg/kg

Chemical Name	Maximum Allowable Concentration <sup>a</sup>
Benzoic Acid	400 <sup>d</sup> mg/kg
Benzo(a)pyrene:	
within Chicago corporate limits	1.3 <sup>f</sup> mg/kg
within a populated area in a MSA excluding Chicago	2.1 <sup>f</sup> mg/kg
within a populated area in a non-MSA county	0.98 <sup>f</sup> mg/kg
outside a populated area	0.09 <sup>g</sup> mg/kg
Beryllium	1.1 <sup>d</sup> mg/kg
Bis(2-chloroethyl)ether	0.66 <sup>c</sup> mg/kg
Bis(2-ethylhexyl)phthalate	46 <sup>g</sup> mg/kg
Boron	40 <sup>h</sup> mg/kg
Bromodichloromethane (Dichlorobromomethane)	0.6 <sup>b</sup> mg/kg
Bromoform	0.8 <sup>b</sup> mg/kg
Butanol	17 <sup>b</sup> mg/kg
Butyl benzyl phthalate	930 <sup>i</sup> mg/kg
Cadmium	1.0 <sup>d</sup> mg/kg
Calcium	
Carbazole	0.6 <sup>b</sup> mg/kg
Carbofuran	0.22 <sup>b,i</sup> mg/kg
Carbon disulfide	9 <sup>g</sup> mg/kg
Carbon tetrachloride	0.07 <sup>b</sup> mg/kg
Chlordane	1.8 <sup>g</sup> mg/kg
Chloride	4,000 <sup>h</sup> mg/kg
4-Chloroaniline ( <i>p</i> -Chloroaniline)	0.7 <sup>b</sup> mg/kg
Chlorobenzene (Monochlorobenzene)	1 <sup>b</sup> mg/kg
Chlorodibromomethane (Dibromochloromethane)	0.4 <sup>b</sup> mg/kg
Chloroform	0.3 <sup>g</sup> mg/kg
2-Chlorophenol	1.5 <sup>d</sup> mg/kg
Chromium, total	21 <sup>d</sup> mg/kg
Chrysene	88 <sup>g</sup> mg/kg
Cobalt	20 <sup>h</sup> mg/kg
Copper	330 <sup>d</sup> mg/kg

Chemical Name	Maximum Allowable Concentration <sup>a</sup>
Cyanide	40 <sup>d</sup> mg/kg
2,4-D	1.5 <sup>b</sup> mg/kg
Dalapon	0.85 <sup>b</sup> mg/kg
DDD	3 <sup>g</sup> mg/kg
DDE	2 <sup>g</sup> mg/kg
DDT	2 <sup>g</sup> mg/kg
Dibenzo( <i>a,h</i> )anthracene:	
within Chicago corporate limits	0.20 <sup>f</sup> mg/kg
within a populated area in a MSA excluding Chicago	0.42 <sup>f</sup> mg/kg
within a populated area in a non-MSA county	0.15 <sup>f</sup> mg/kg
outside a populated area	0.09 <sup>g</sup> mg/kg
1,2-Dibromo-3-chloropropane	0.002 <sup>b</sup> mg/kg
1,2-Dibromoethane (Ethylene dibromide)	0.005 <sup>c</sup> mg/kg
Di- <i>n</i> -butyl phthalate	2,300 mg/kg
1,2-Dichlorobenzene ( <i>o</i> -Dichlorobenzene)	17 <sup>b</sup> mg/kg
1,4-Dichlorobenzene ( <i>p</i> -Dichlorobenzene)	2 <sup>b</sup> mg/kg
3,3'-Dichlorobenzidine	1.3 <sup>c</sup> mg/kg
1,1-Dichloroethane	23 <sup>b</sup> mg/kg
1,2-Dichloroethane (Ethylene dichloride)	0.02 <sup>b</sup> mg/kg
1,1-Dichloroethylene	0.06 <sup>b</sup> mg/kg
<i>cis</i> -1,2-Dichloroethylene	0.4 <sup>b</sup> mg/kg
<i>trans</i> -1,2-Dichloroethylene	0.7 <sup>b</sup> mg/kg
2,4-Dichlorophenol	0.48 <sup>d</sup> mg/kg
1,2-Dichloropropane	0.03 <sup>b</sup> mg/kg
1,3-Dichloropropene (1,3-Dichloropropylene, <i>cis</i> + <i>trans</i> )	0.005 <sup>c</sup> mg/kg
Dieldrin	0.603 <sup>c</sup> mg/kg
Diethyl phthalate	470 <sup>b</sup> mg/kg
2,4-Dimethylphenol	9 <sup>b</sup> mg/kg
2,4-Dinitrophenol	3.3 <sup>c</sup> mg/kg
2,4-Dinitrotoluene	0.25 <sup>c</sup> mg/kg
2,6-Dinitrotoluene	0.26 <sup>c</sup> mg/kg

Chemical Name	Maximum Allowable Concentration <sup>a</sup>
Dinoseb	0.25 <sup>d</sup> mg/kg
Di- <i>n</i> -octyl phthalate	1,600 <sup>g</sup> mg/kg
Endosulfan	18 <sup>b</sup> mg/kg
Endothall	0.4 <sup>b,i</sup> mg/kg
Endrin	1 <sup>b</sup> mg/kg
Ethylbenzene	13 <sup>b</sup> mg/kg
Fluoranthene	3,100 <sup>g</sup> mg/kg
Fluorene	560 <sup>b</sup> mg/kg
Fluoride	80 <sup>h</sup> mg/kg
Heptachlor	0.871 <sup>c</sup> mg/kg
Heptachlor epoxide	1.005 <sup>c</sup> mg/kg
Hexachlorobenzene	0.4 <sup>g</sup> mg/kg
<i>Alpha</i> -HCH ( <i>alpha</i> -BHC)	0.0074 <sup>c</sup> mg/kg
<i>Gamma</i> -HCH (Lindane)	0.009 <sup>b</sup> mg/kg
Hexachlorocyclopentadiene	1.1 <sup>g</sup> mg/kg
Hexachloroethane	0.5 <sup>b</sup> mg/kg
Indeno(1,2,3- <i>c,d</i> )pyrene:	
within a populated area in a MSA excluding Chicago	1.6 <sup>f</sup> mg/kg
within Chicago corporate limits or within a populated area in a non-MSA county or outside a populated area	0.9 <sup>g</sup> mg/kg
Iron:	
within a MSA county	15,900 <sup>e</sup> mg/kg
within a non-MSA county	15,000 <sup>e</sup> mg/kg
Isophorone	8 <sup>b</sup> mg/kg
Lead:	
within a MSA county	36 <sup>f</sup> mg/kg
within a non-MSA county	23 <sup>d</sup> mg/kg
Magnesium	325,000 <sup>g</sup> mg/kg
Manganese:	
within a MSA county	636 <sup>e</sup> mg/kg
within a non-MSA county	630 <sup>e</sup> mg/kg



Chemical Name	Maximum Allowable Concentration <sup>a</sup>
Mercury:	
within a MSA county	0.06 <sup>e</sup> mg/kg
within a non-MSA county	0.05 <sup>e</sup> mg/kg
Methoxychlor	160 <sup>b</sup> mg/kg
Methyl bromide (Bromomethane)	0.2 <sup>b</sup> mg/kg
Methyl tertiary-butyl ether	0.32 <sup>b</sup> mg/kg
Methylene chloride (Dichloromethane)	0.02 <sup>b</sup> mg/kg
2-Methylphenol ( <i>o</i> -Cresol)	15 <sup>b</sup> mg/kg
Naphthalene	1.8 <sup>b</sup> mg/kg
Nickel	20 <sup>d</sup> mg/kg
Nitrate as N	200 <sup>h</sup> mg/kg
Nitrobenzene	0.26 <sup>c</sup> mg/kg
<i>N</i> -Nitrosodiphenylamine	1 <sup>b</sup> mg/kg
<i>N</i> -Nitrosodi- <i>n</i> -propylamine	0.0018 <sup>c</sup> mg/kg
Pentachlorophenol	0.02 <sup>d</sup> mg/kg
Phenol	100 <sup>b</sup> mg/kg
Phosphorus	... <sup>j</sup>
Picloram	2 <sup>b</sup> mg/kg
Polychlorinated biphenyls (PCBs)	1 <sup>k</sup> mg/kg
Potassium	... <sup>j</sup>
Pyrene	2,300 <sup>b</sup> mg/kg
Selenium	1.3 <sup>d</sup> mg/kg
Silver	1 <sup>h</sup> mg/kg
Sodium	... <sup>j</sup>
Simazine	0.04 <sup>b</sup> mg/kg
Sulfate	8,000 <sup>h</sup> mg/kg
Styrene	4 <sup>b</sup> mg/kg
Tetrachloroethylene (Perchloroethylene)	0.06 <sup>b</sup> mg/kg
Thallium	1.6 <sup>d</sup> mg/kg
Toluene	12 <sup>b</sup> mg/kg
Toxaphene	0.6 <sup>b</sup> mg/kg

Chemical Name	Maximum Allowable Concentration <sup>a</sup>
2,4,5-TP (Silvex)	11 <sup>d</sup> mg/kg
1,2,4-Trichlorobenzene	5 <sup>b</sup> mg/kg
1,1,1-Trichloroethane	2 <sup>b</sup> mg/kg
1,1,2-Trichloroethane	0.02 <sup>b</sup> mg/kg
Trichloroethylene	0.06 <sup>b</sup> mg/kg
2,4,5-Trichlorophenol	26 <sup>d</sup> mg/kg
2,4,6-Trichlorophenol	0.66 <sup>c</sup> mg/kg
Vanadium	550 <sup>e</sup> mg/kg
Vinyl acetate	10 <sup>g</sup> mg/kg
Vinyl chloride	0.01 <sup>b</sup> mg/kg
m-Xylene	6.4 <sup>h</sup> mg/kg
o-Xylene	6.5 <sup>h</sup> mg/kg
p-Xylene	5.9 <sup>h</sup> mg/kg
Xylenes (total)	5.6 <sup>h</sup> mg/kg
Zinc	1,000 <sup>d</sup> mg/kg

<sup>a</sup> = Concentrations are the results after using methods described in 35 IAC 1100.Subpart F for determining the Maximum Allowable Concentrations of chemical constituents in uncontaminated soils used as fill material at regulated fill operations.

<sup>b</sup> = Value is the TACO Class I Soil Component of the Groundwater Ingestion Exposure Route concentration (35 IAC 742.Appendix B, Tables A and B).

<sup>c</sup> = Value is the TACO-defined Acceptable Detection Limit (ADL) for the chemical in soil.

<sup>d</sup> = Value is the lowest TACO Class I concentration from the pH-Specific Soil Remediation Objectives table for Inorganic and Ionizing Organic Chemicals for the Soil Component of the Groundwater Ingestion Route (35 IAC 742.Appendix B, Table C).

<sup>e</sup> = Value is the location-specific allowable concentration based upon TACO-defined background values for inorganic chemicals (35 IAC 742.Appendix A, Table G). The location of the fill site determines the allowable concentration. Two background locations are defined; one for counties that are designated as Metropolitan Statistical Areas (MSA) (see Board Note, 35 IAC 742.Appendix A, Table G), the other for counties designated as a non-MSA.

<sup>f</sup> = Value is the location-specific allowable concentration based upon TACO-defined background values for polynuclear aromatic hydrocarbon chemicals (35 IAC 742.Appendix A, Table H). The location of the fill site determines the allowable concentration. Three background locations are defined; one for areas within the corporate limits of the City of Chicago, another for populated areas (defined at 35 IAC

742.200) in counties that are designated as Metropolitan Statistical Areas (MSA) (see Board Note, 35 IAC 742.Appendix A, Table G) excluding the City of Chicago, and the third for populated areas within non-MSA counties. No background concentrations have been defined for locations outside of populated areas; therefore, the maximum allowable concentrations in these locations are determined using 35 IAC 1100.Subpart F.

<sup>g</sup> = Value is the lowest TACO Soil Remediation Objective by the ingestion or inhalation routes of exposure for the Residential and Construction Worker receptors (35 IAC 742.Appendix B, Tables A and B). Definitions for "MSA" and "populated area" are presented in 35 IAC 742.Appendix B, Table H and 35 IAC 742.200, respectively.

<sup>h</sup> = Value is the TACO Class I Soil Component of the Groundwater Ingestion Exposure Route value multiplied by 20.

<sup>i</sup> = Soil saturation concentration (C<sub>sat</sub>).

<sup>j</sup> = No value could be determined.

<sup>k</sup> = Value for PCBs is the highest allowable concentration requiring no controls based on USEPA TSCA (40 CFR 761) policy.

<sup>l</sup> = SW-846 methods may not support analytical detection at the concentration specified. Modified or alternative methods may be required to achieve the lowest practical detection level possible.

P:\CCDD\TACOCalc\SumUnconSoilandBkgnd.docx

RECEIVED  
CLERK'S OFFICE

SEP 02 2011

STATE OF ILLINOIS  
Pollution Control Board

ORIGINAL

STATE OF ILLINOIS )  
 )  
COUNTY OF SANGAMON )

**PROOF OF SERVICE**

I, the undersigned, on oath state that I have served the attached Prefiled  
Testimony of Douglas W. Clay, Stephen F. Nightingale, Paul M. Purselove, and Leslie  
D. Morrow of the Illinois Environmental Protection Agency upon the persons to whom  
they are directed by placing a copy of each in an envelope addressed to:

John T. Therriault, Clerk  
Illinois Pollution Control Board  
James R. Thompson Center  
Suite 11-500  
100 West Randolph  
Chicago, Illinois 60601  
**(UPS – Next Day)**

Mitchell Cohen  
Chief Legal Counsel  
Illinois Dept. of Natural Resources  
One Natural Resources Way  
Springfield, Illinois 62702-1271  
**(First Class Mail)**

Matthew J. Dunn, Chief  
Environmental Enforcement/Asbestos  
Litigation Division  
Illinois Attorney General's Office  
69 West Washington St., 18<sup>th</sup> Floor  
Chicago, Illinois 60602  
**(First Class Mail)**

Marie E. Tipsord  
Hearing Office  
Illinois Pollution Control Board  
James R. Thompson Center  
100 West Randolph, Suite 11-500  
Chicago, Illinois 60601  
**(UPS – Next Day)**

**(Attached Service List – First Class Mail)**

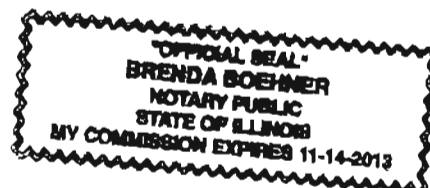
and sending or mailing them, as applicable, from Springfield, Illinois on September 1,  
2011, with sufficient postage affixed as indicated above.

Mark Wight

SUBSCRIBED AND SWORN TO BEFORE ME

This 1<sup>st</sup> day of September, 2011.

Brenda Boehmer  
Notary Public



		MAILBOX RULE DOES NOT pply	
8/4/2011	Order	Order of the Board by G. T. Girard; Accept for Hearing; Grant Motion to Waive Copy Requirements	
8/4/2011	DCEO / Sec. of State	*Letter to DCEO Director Ribbley Requesting an Economic Impact Study	
7/29/2011	Initial Filing	Agency's Motion for Acceptance; Appearances of Attorneys, Certification of Origination, List of Studies and Reports Used in Regulatory Development, Motion to Waive Filing Requirements, Statement of Reasons, and the Proposed Amendments	

<b>Service List</b>
---------------------

<u>Party Name</u>	<u>Address</u>	<u>City/State/Zip</u>	<u>Phone/Fax</u>
<b>Office of the Attorney General</b> <b>Interested Party</b>  <ul style="list-style-type: none"> <li>Matthew J. Dunn</li> <li>Stephen Sylvester - Asst. Attny. Genl.</li> </ul>	69 West Washington Street, Suite 1800	Chicago IL 60602	312-814-2634 312-814-2347
<b>Brown, Hay &amp; Stephens LLP</b> <b>Interested Party</b>  <ul style="list-style-type: none"> <li>Claire A. Manning</li> </ul>	700 First Mercantile Bank Building  205 South Fifth St., P.O. Box 2459	Springfield IL 62705-2459	217/544-8491 217/241-3111
<b>IEPA</b> <b>Petitioner</b>  <ul style="list-style-type: none"> <li>Kimberly A. Geving - Assistant Counsel</li> <li>Mark Wight - Assistant Counsel</li> <li>Stephanie Flowers - Assistant Counsel</li> </ul>	1021 North Grand Avenue East P.O. Box 19276	Springfield IL 62794-9276	217/782-5544 217/782-9807
<b>Illinois Association of Aggregate Producers</b> <b>Interested Party</b>  <ul style="list-style-type: none"> <li>John Henrickson - Executive Director</li> </ul>	1115 S. Second Street	Springfield IL 62704	217/241-1639
<b>Illinois Department of Natural Resources</b> <b>Interested Party</b>	One Natural Resources Way	Springfield IL 62702-1271	217/782-1809 217/524-

<ul style="list-style-type: none"> <li>• Mitchell Cohen - General Counsel</li> </ul>			9640
<b>IDOT Interested Party</b> <ul style="list-style-type: none"> <li>• Steven Gobelman - Geologic/Waste Assessment Specialist</li> </ul>	2300 S Dirksen Parkway	Springfield IL 62764	217/785-4246
<b>City of Chicago - Mayor's Office of Intergovernmental Affairs Interested Party</b> <ul style="list-style-type: none"> <li>• Tiffany Chappell</li> </ul>	121 N. LaSalle Street City Hall - Room 406	Chicago IL 60602	312/744-2597

Total number of participants: 7

<b>Notice List</b>			
<b>Party Name</b>	<b>Address</b>	<b>City/State/Zip</b>	<b>Phone/Fax</b>
<b>Pedersen &amp; Houpt Interested Party</b> <ul style="list-style-type: none"> <li>• Donald J. Moran</li> </ul>	161 North Clark Street Suite 3100	Chicago IL 60601-3224	312/261-2149 312/261-1149
<b>Sierra Club Interested Party</b> <ul style="list-style-type: none"> <li>• Cynthia Skrukrud</li> </ul>	70 E. Lake Street, Suite 1500	Chicago IL 60601-7447	
<b>Andrews Environmental Engineering Interested Party</b> <ul style="list-style-type: none"> <li>• Kenneth W. Liss</li> </ul>	3300 Ginger Creek Drive	Springfield IL 62711	
<b>Stantec Interested Party</b> <ul style="list-style-type: none"> <li>• *</li> </ul>	3223 S Meadowbrook Rd	Springfield IL 62711	217/698-7247
<b>CICI Interested Party</b> <ul style="list-style-type: none"> <li>• Lisa Frede</li> </ul>	1400 E. Touhy Ave, Suite 110	Des Plaines IL 60018	847-544-5995
<b>Illinois Department of Transportation Interested Party</b> <ul style="list-style-type: none"> <li>• Ellen Schanzle Haskins</li> </ul>	2300 S. Dirksen Parkway Room 302	Springfield IL 62764	
<b>Illinois Society of Professional Engineers Interested Party</b> <ul style="list-style-type: none"> <li>• Kim Robinson</li> </ul>	100 East Washington	Springfield IL 62704	217-544-7424 217-525-6545
<b>Doris Susan McDonald Interested Party</b>	30 N. La Salle St. Ste. 900	Chicago IL 60602	312/742-0306