BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	
PETITION OF AMEREN ENERGY	)	PCB 09-01
GENERATING COMPANY FOR ADJUSTED	)	(Adjusted Standard – Land)
STANDARDS FROM 35 ILL. ADM. CODE	)	
PARTS 811, 814, AND 815	)	

NOTICE OF FILING

To:

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Illinois Pollution Control Board
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PLEASE TAKE NOTICE that I have today electronically filed with the Office of the Clerk of the Pollution Control Board **AMEREN'S STATEMENT OF AUTHORITY FOR REQUESTED RELIEF,** a copy of which is herewith served upon you.

Ameren Energy Generating Company

Amy Antoniolli

By: Amy Antoniolli

Dated: October 16, 2008

Amy Antoniolli
SCHIFF HARDIN, LLP
6600 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606
312-258-5500

CERTIFICATE OF SERVICE

I, the undersigned, certify that on this 16th day of October, 2008, I have served electronically the attached, **AMEREN'S STATEMENT OF AUTHORITY FOR REQUESTED RELIEF**, upon the Illinois Pollution Control Board and the Illinois Environmental Protection Agency as the parties are identified in the Notice of Filing.

Amy Antoniolli

By: Amy Antoniolli

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PETITION OF AMEREN ENERGY	)	AS 09-01
GENERATING COMPANY FOR ADJUSTED	)	(Adjusted Standard – Land)
STANDARDS FROM 35 ILL. ADM. CODE	)	
PARTS 811, 814, AND 815	)	

AMEREN'S STATEMENT OF AUTHORITY FOR REQUESTED RELIEF

I. INTRODUCTION

On August 11, 2008, Ameren Energy Generating Company ("Ameren" or "the Company"), by and through its attorneys, Schiff Hardin, LLP, and pursuant to Section 28.1 of the Environmental Protection Act, 415 ILSC 5/28.1 (the "Act"), and 35 Ill. Adm. Code 104, petitioned the Illinois Pollution Control Board (the "Board") for adjusted standards from certain solid waste landfill standards set forth in 35 Ill. Adm. Code Parts 811, 814, and 815 as those Parts apply to closure of a former ash impoundment located at the Hutsonville Power Station (the "Facility" or "Station").

On September 16, 2008, the Board accepted Ameren's petition. In the same order, the Board requested both Ameren and the Agency to file within 30 days of the date of the September 16 order, a document addressing three points: (1) the authority for applying the Board's landfill regulations to Pond D; (2) whether any of Ameren's applicable permits address requirements for closure of Pond D; and (3) whether a site-specific rule would perhaps be a more appropriate regulatory relief mechanism through which to define the closure requirements applicable to Pond D.

A. Background

Pond D was constructed as a surface impoundment in 1968. Ameren or its predecessor operated Pond D as a water pollution treatment facility and, while it operated, Pond D received

only coal combustion by-products generated at the Station.[1] Pond D began receiving coal combustion by-products long before September 18, 1990, the effective date of the landfill regulations. 35 Ill. Adm. Code Part 810; Development, Operating and Reporting Requirements for Non-Hazardous Waste Landfills, R88-7 (Aug. 17, 1990). Pond D was permitted as a water pollution treatment facility during most of its life, but no solid waste disposal permit under Section 21(d) of the Act was ever required. 415 ILCS 5/21(d) (2006); 35 Ill. Adm. Code 810.103; *see* In re: Conversion Systems, Inc., PCB AS 93-4, slip op. at 1, fn. 3 (Aug. 26, 1993) ("the definition of landfill in the Board's landfill regulations presently does not include the surface impoundments commonly used by utilities for disposal"). The pond no longer receives coal combustion by-products and has since been dewatered.

Ameren's petition for adjusted standards from the landfill regulations was prepared after years of discussion between Ameren and the Illinois Environmental Protection Agency about the proper vehicle to close Pond D. Ameren and its predecessors have long held that neither the Illinois Environmental Protection Act ("Act") nor the Board's regulations provide explicit authority for how pre-existing ash ponds like Pond D must be regulated at closure. Because these pre-existing ash ponds were designed, developed and operated before the promulgation of the existing landfill standards, application of these standards to these units proves unwieldy and ineffectual, as Ameren has argued in its petition.

Nevertheless, Ameren has pursued relief in the form of an adjusted standard from the landfill regulations, because the Agency believes it the proper mechanism for pursuing closure of Pond D. Ameren, however, agrees that the lack of authority for applying the landfill regulations

[1] For the purposes of this response, Ameren will refer to ash ponds constructed before the effective date of the landfill regulations and receiving only on-site coal combustion wastes as "pre-existing ash ponds."

to these types of units brings into question the appropriateness of a petition for adjusted standards from the landfill regulations. Further, Ameren supports the idea that a site-specific rulemaking amending the water pollution regulations is a more appropriate solution. Ameren contends that a site-specific rulemaking regulating the closure of Pond D should amend the water pollution permit requirements, yet incorporate concepts applicable to in-place closures, such as groundwater monitoring and a closure plan.

Pond D is not unique. Ameren or its affiliated generating companies own seven other facilities in Illinois with ash impoundments - many of which were designed, developed, and operated prior to the promulgation of the landfill regulations - that will require closure upon reaching capacity, currently estimated to be within the next five to seven years. Therefore, the way in which Ameren executes the closure of Pond D will likely serve as an example for the closure of other similarly-situated ash ponds in the future.

In addition to explaining why it believes there is no statutory or regulatory authority for applying the landfill regulations to Pond D, below Ameren outlines what it views as basic generally-applicable requirements for closing pre-existing ash ponds, followed by considerations specific to Pond D.

II. THERE EXISTS NO STATUTORY OR REGULATORY AUTHORITY FOR APPLYING LANDFILL REGULATIONS TO POND D

There is no statutory or regulatory authority requiring that ash ponds must be regulated under the Illinois landfill regulations at closure. Further, Ameren is aware of no Agency-issued guidance requiring such an application of the regulations.

Both the Board and the Agency are creatures of statute and have only the powers given to them by the Act. Granite City Division of Nat. Steel Co. v. IPCB (Granite City Steel), 155 Ill. 2d 149, 171 (1993); *citing* Bio-Medical Laboratories, Inc v. Trainor, 68 Ill 2d 540, 551, 370

N.E.2d 223 (1977). The Act gives the Board the authority to "determine, define and implement the environmental control standards applicable in the State of Illinois and may adopt rules and regulations . . . ." 415 ILCS 5/5 (2006). The Act gives the Agency the "authority to, *inter alia*, enforce the Board regulations and administer permit systems established by the Act or Board regulations." Granite City Steel, at 155; 415 ILCS 5/4 (2006). As discussed in more detail below, the Board has not adopted rules that would regulate pre-existing ash ponds under the landfill regulations.

A. The Landfill Regulations

Whether utility ash ponds would be regulated under the landfill regulations has been unclear since the time the landfill regulations were initially proposed. In the rulemaking establishing the non-hazardous solid waste landfill regulations, the Board's Scientific/Technical Section ("STS") staff, together with consultants, addressed and responded to comments received on each section of the proposal. Nonhazardous Solid Waste Landfill Regulations ("Landfill Regulations"), R88-7, Response to Comments on Proposed Parts 807 through 815 ("STS Response") (Mar. 13, 1990).

In R88-7, the Board was faced with the question of whether to regulate ash ponds under the landfill regulations by specifically including them in the definition of "landfill." Members of Illinois utilities, including Commonwealth Edison, Central Illinois Public Service Co., Central Illinois Light Co., Illinois Power Co., and City Water Light and Power, submitted a public comment asking whether ash ponds would be exempt from the landfill regulations. Landfill Regulations, STS Response at 16-17. In another public comment, the Agency queried why the definition of "land application unit" references 35 Ill. Adm. Code 309. The Agency also asked how a land treatment unit would be distinguished from a landfill under the proposed regulations

and requested that the Board provide a distinction between the two terms. Landfill Regulations, STS Response at 17.

The STS addressed both comments in one response. The STS stated that ash ponds that accumulate solids at the site of treatment are considered land treatment units. The STS opined that if the ash ponds are used for disposal and the disposal threatens groundwater, "then they *may* need to be redefined as a landfill." Landfill Regulations, STS Response at 17 (emphasis added). The STS further stated that the reference to Part 309, the water permitting regulations, was only intended to indicate that these units might require discharge permits, but that it could be deleted from the regulations.

The STS recommended that the Board amend the definitions in one of two ways: (1) include land treatment units ("LTUs") in the definition of landfill and make them subject, at a minimum, to the landfill groundwater protection standards; or (2) explicitly exclude LTUs from the definition of a landfill. The Board's STS recognized "that the original intent and scope of the regulations in R88-7 might be changed if LTUs, used for disposal, are included in the definition for 'landfill' since the standards being proposed pertain only to 'landfills.'" Landfill Regulations, STS Response at 18 (emphasis in original).

The Board ultimately chose not to include ash ponds in the definition of landfill. At the same time, the Board defined "land application unit," which the STS explained included ash ponds, in a way that referenced Part 309, the water pollution permit requirements. Landfill Regulations, STS Response at 17.

B. The Utility Group Amendments

In 1990, six coal-fired electric generating companies in Illinois, the Utility Group,[2] jointly proposed amendments to the landfill regulations that would apply to facilities receiving coal combustion wastes generated by electric utilities. Amendments to the Development, Operating and Reporting Requirements for Non-Hazardous Waste Landfills: 35 Ill. Adm. Code 811 (Utility Group Amendments), R90-25 (Nov. 29. 1990). The proposal would have modified Part 811 to cover industrial solid waste facilities, including ash ponds. The proponents attempted to include existing ash ponds under the amendments, and at one point during its evolution, R90-25 would have applied to all existing as well as new ash ponds, ash landfills, and commercial facilities if those facilities only accepted wastes from electric utilities. *Id.*, May 20, 1991 Tr. at 32, 40.[3] Because the Utility Group Amendments would have applied to all new and existing ash ponds, the proposal differed greatly in scope from the types of units Ameren describes in this response: pre-existing ash ponds.

As the rulemaking progressed, however, the Utility Group recognized that the Board had explicitly excluded surface impoundments from the landfill regulations. Utility Group Amendments, R90-25, Jan. 27, 1992 Tr. at 28 ("That question was asked several times in several ways, and the answer always came back consistently, that is, that the present landfill proposals exempt impoundments, including ash ponds."). Even the Board noted "we decided [in R88-7 that] because of the huge size and interrelationships of all of the various facets of those regulations not to take on anything more at that point . . . ." *Id.*, May 20, 1991 Tr. at 207.

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[2] The Utility Group included Central Illinois Light Company, Central Illinois Public Service, City, Water, Light & Power, Commonwealth Edison, Illinois Power Company, and Electric Energy Company.

[3] Records of rulemaking transcripts will be cited to as "Tr. at __."

The Utility Group Amendments ultimately excluded existing ash ponds from their proposal, finding that "[t]he inclusion of existing ash ponds at closure was just simply unworkable." Utility Group Amendments, R90-25, January 27, 1992 Tr. at 19.

C. The Agency's Policy Cannot Substitute for the Board's Authority to Determine, Define, and Implement the Environmental Control Standards Applicable in Illinois

The Agency itself has changed policy over the years on how it addresses the closure of pre-existing ash ponds. In 1989, Illinois Power Company (now, Dynegy Midwest Generation) and the Agency entered into a consent decree regarding the operation, maintenance, and closure of its ash ponds at the Havana, Hennepin and Wood River power stations. *See* the Illinois Power Consent Decree, attached as Exhibit 1. The compliance program requires closure of the ash ponds in accordance with certain criteria to be handled by the Bureau of Water. *See* Exhibit 1, January 3, 1996 Order Modifying Consent Decree. Since the consent decree was entered, and despite the Board's exclusion of ash ponds from the landfill regulations in 1990, the Agency now maintains that ash ponds must be closed under the landfill regulations.

The Agency's position, indeed whichever position it takes, is an exercise of policy-making that has not had the benefit of statewide participation.

Ameren's petition for adjusted standards is derived from many years of communications with the Agency regarding the closure of Pond D. Documentation of meetings from as early as 2001 show that Ameren and the Agency have met on several occasions to discuss the applicability of the landfill regulations to Pond D and a strategy for pursuing closure of Pond D in the form of adjusted standards from those regulations. *See* Exhibit 2.

The landfill regulations, however, do not easily or obviously apply to the closure of Pond D, as is evident by the magnitude of relief necessary to facilitate closure and the Board's September 16, 2008 order questioning their applicability. Therefore, in the absence of specific

statutory or regulatory authority, Ameren asks the Board to determine the appropriate environmental standards applicable to Pond D.

III. NO APPLICABLE PERMIT PROVIDES CLOSURE REQUIREMENTS FOR POND D

Neither the most recently applicable National Pollutant Discharge Elimination System (NPDES) permit, nor the current 35 Ill. Adm. Code Part 309, Subpart B State Operating Permit provide instruction on how to close Pond D. *See* Exhibits 3 and 4, respectively.

IV. A SITE-SPECIFIC RULEMAKING IS A MORE APPROPRIATE FORM OF REGULATORY RELIEF FOR POND D

A. A Site-Specific Rulemaking for the Closure of Pond D Should Amend the Part 309 Water Pollution Permit Requirements

As mentioned above, Pond D has been constructed, operated, and managed subject to both an NPDES and Subpart B permits for much of its lifetime. Accordingly, Ameren believes a site-specific rulemaking for the closure of Pond D would logically amend Part 309 of the Water Pollution regulations regarding permits. The Illinois Power Consent Decree shows the Agency's Bureau of Water has accepted authority to close pre-existing ash ponds in the past. Exhibit 1.

In addition, other states, for example North Carolina and Ohio, prescribe the closure of ash ponds under the State's water pollution regulations. In North Carolina, impoundments are excluded from State solid waste regulations and are instead administered by the Division of Water Quality and governed by water quality regulations. *See* the North Carolina General Statutes, G.S. 143-215.1, attached as Exhibit 5. As of 2006, the North Carolina water quality regulations now have specific design, operating, groundwater monitoring, and closure requirements for ash ponds. *See* the North Carolina regulations, 15A NCAC 2T Section .1100, attached as Exhibit 6. Guidance regarding the closure of surface impoundments states that the

Department of Environment & Natural Resources requires field information, including a waste characterization through sampling, and a closure plan prior to closure. *See* Exhibit 7.

Ohio exempts ash from the burning of primarily coal from solid waste regulation. *See* the Ohio Administrative Code, OAC 3745-27-01(S)(23), included in Exhibit 8. Currently in Ohio, the creation and closure of ash ponds is regulated through a permit to install with the Division of Surface Water. *See* relevant sections of the Ohio Revised Code and Administrative Code included in Exhibit 8. During their operation, the ponds are regulated with an NPDES permit for their outfall, where applicable.

B. General Requirements for the Closure of Pre-Existing Ash Ponds

All pre-existing ash ponds share certain qualities that must be addressed in closure requirements. This section IV.B sets forth a general outline of rules specifying methodology and technical criteria essential to appropriately close such units in a way that protects human health and the environment. Then, in section IV.C below, Ameren discusses additional criteria that might apply specifically to the closure of Hutsonville's Pond D.

1) Scope of Regulation and Definition of Ash Pond – A definition of the facilities (i.e. wastewater ponds) subject to closure under this regulation that includes both the date of construction and a closure deadline. The definition may include a discussion of how the units were permitted and managed during their lifetime.

2) Groundwater Quality Standards – The rule would require compliance with the Part 620 Groundwater Quality Standards at the edge of the zone of attenuation.

3) Zone of Attenuation (ZOA) – The rule should establish a ZOA at the edge of which the ash pond should meet applicable groundwater quality standards. Within the ZOA, a violation of a groundwater quality standard, detected by groundwater monitoring and confirmed by a statistical analysis, would lead to remediation in the event it threatened drinking water or caused or threatened a violation of a groundwater quality standard at the edge of the ZOA.

4) Closure Plan – A closure plan would be submitted to the Agency for approval. The closure would include the following:

a) *Final Cover System* – The pond shall be covered by a final cover consisting of a low-permeability layer overlain by a final protective layer constructed in accordance with specific requirements, or an alternative cover if closure modeling can demonstrate that it is capable of meeting groundwater quality standards. This section might include criteria on protective layer thickness, final slopes, and stabilization.

b) *Hydrogeologic Site Investigation* – An investigation must be conducted to develop hydrogeologic information for the following uses:

i) Characterize whether or not there are groundwater impacts attributable to the facility;

ii) Provide information to establish a groundwater monitoring system; and

iii) Provide information to perform closure modeling, if necessary.

c) *Closure Modeling* – If groundwater quality impacts are attributable to the facility, perform modeling to test the effectiveness of closure alternatives on downgradient groundwater quality. If closure and capping alone is not sufficient to achieve groundwater quality standards, then this modeling will also be used to evaluate remedial options beyond dewatering and capping.

d) *Groundwater Monitoring Program* – Requirements as to the design, construction and operation of a groundwater monitoring program.

e) *Impact Abatement and Corrective Action Plan* – As may be required based on the Closure Modeling. A Corrective Action Plan may include a groundwater management zone similar to the Part 620 regulations to achieve compliance.

5) Reporting Requirements – As may be required.

6) Post Closure Obligations – Regulations regarding removal of ancillary equipment, structures, and wastes, and criteria for maintenance and inspection of the final cover system.

C. Requirements Specific to the Closure of Pond D

A site-specific regulation must take into consideration the unique aspects of Pond D, many of which have been set forth in the Petition for Adjusted Standards. A site-specific rule applicable to Pond D would include the cover system as set forth in the Petition, Exhibit 10, and the groundwater monitoring plan as provided in the Petition, Exhibit 11. Further, the rule should define a temporary zone of attenuation appropriate for a pre-existing pond such as Pond D. The

site-specific rule could also require submittal of a closure plan to the Agency that shows how Ameren will meet groundwater quality standards at the edge of the temporary zone of attenuation. The petition contains several technically unique aspects that could easily be adapted into a site-specific rule.

V. CONCLUSION

As the regulations show, and prior rulemaking testimony supports, there is no statutory or regulatory authority for applying the landfill regulations to Pond D. The Agency's opinion is the only authority for applying the landfill regulations to Pond D at closure. Ameren respectfully disagrees that pursuing adjusted standards from the landfill regulations is the proper form of relief and instead asks the Board to determine whether seeking a site-specific rulemaking from the water pollution permit requirements is a more appropriate solution. Ameren believes that unique circumstances apply to pre-existing ash ponds like Pond D that were constructed and operated well before the existence of the landfill regulations. Pond D is an unlined on-site utility ash pond used to treat exclusively coal combustion waste during its lifetime. The requirements for its in-place closure should logically fall under the water pollution regulations with specific references to certain regulations governing the closure of waste disposal sites such as groundwater monitoring and an appropriate closure plan.

Accordingly, for the reasons set forth above, Petitioner AMEREN ENERGY GENERATING COMPANY, respectfully requests the Board to find that a site-specific regulation amending the water pollution regulations is the appropriate form of relief for the closure of Pond D.

Respectfully submitted,

AMEREN ENERGY GENERATING COMPANY,

by: Amy Antoniolli
One of Its Attorneys

Dated: October 16, 2008

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EXHIBIT LIST

1. Exhibit 1-Illinois Power Consent Decree
2. Exhibit 2-Records of Meetings with IEPA
3. Exhibit 3-NPDES Permit
4. Exhibit 4-Subpart B Permit
5. Exhibit 5-North Carolina General Statute: G.S. 143-215.1
6. Exhibit 6-North Carolina Administrative Code: 15A NCAC 2T .1100
7. Exhibit 7-North Carolina Guidance
8. Exhibit 8-Relevant Sections of Ohio Revised Code and Ohio Administrative Code

Exhibit 1

Illinois Power Consent Decree

IN THE CIRCUIT COURT OF THE EIGHTH JUDICIAL CIRCUIT
MASON COUNTY, ILLINOIS

PEOPLE OF THE STATE OF ILLINOIS,

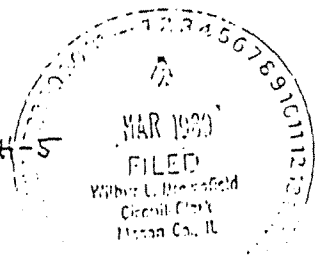
Plaintiff,

-vs-

ILLINOIS POWER COMPANY,
an Illinois corporation,

Defendant.

No. 89-CH-5



CONSENT ORDER

Plaintiffs, PEOPLE OF THE STATE OF ILLINOIS by their attorney, Neil F. Hartigan, Attorney General of the State of Illinois, and defendant, Illinois Power Company (hereinafter referred to as "IP"), an Illinois corporation, have agreed to the making of this Consent Order. The stipulated facts herein shall be the findings of fact by this Court.

I.

STIPULATION OF USE AND AUTHORIZATION

The parties stipulate that this Consent Order is entered into for the purposes of settlement only and that neither the fact that a party has entered into this Consent Order nor any of the facts stipulated herein shall be used for any purpose in this or any other proceeding except to enforce the terms hereof by the parties to this agreement. The undersigned representative for each party certifies that he is fully authorized by the party whom he represents to enter into the terms and conditions of this Consent Order and to legally bind the party he represents to the Consent Order.

II.

STATEMENT OF FACTS

A. PARTIES

1. Neil F. Hartigan, the Attorney General of the State of Illinois, on behalf of the People of the State of Illinois and the Illinois Environmental Protection Agency (hereinafter referred to as the "Agency"), brings this action pursuant to the statutory authority vested in him under Section 42(e) of the Illinois Environmental Protection Act (hereinafter referred to as the "Act"), Ill. Rev. Stat. 1987, ch. 111 1/2, para. 1042(e).

2. The Agency is an agency of the State of Illinois created pursuant to Section 4 of the Act, Ill. Rev. Stat. 1987, ch. 111 1/2, para. 1004, and is charged, inter alia, with the duty of enforcing the Act and issuing National Pollutant Discharge Elimination System ("NPDES") Permits.

3. Defendant, IP, at all times pertinent hereto, has been and is now an Illinois corporation duly licensed to transact business in the State of Illinois, and is transacting business in Mason County, Illinois.

B. FACILITIES DESCRIPTION

IP, at all times pertinent hereto, has owned and operated certain coal-fired steam electric generating stations which, inter alia, are located at or near Havana, Illinois, in Mason County; Hennepin, Illinois, in Putnam County; and East Alton, Illinois, in Madison County.

1. Havana Power Station

a. The Havana Power Station (hereinafter referred to as "Havana") is a 645 net megawatt coal and oil-fired steam electric generating station which discharges wastewater into the Illinois River. Havana's discharges include certain regulated discharges from the ash treatment system; these outfalls are commonly identified as:

Discharge Name	Outfall No.
North Ash Pond	002
South Ash Pond	003

Other regulated discharges at Havana include:

Discharge Name	Outfall No.
Cooling Condenser Water	001
Units 1-5 Roof Drainage	001(b)
Cooling Tower Blowdown	002(a)
Chemical Metal Cleaning Waste Treatment System Effluent	002(b)
Sewage Treatment Plant Effluent	004

b. Pursuant to NPDES program authority, the Agency issued NPDES Permit IL0001571 to Havana. The Permit requires that discharges from all above-referenced ash ponds meet the following effluent limitations for the parameters listed below:

Parameter	Limitation	Time Period
pH	6-9 units	at all times
Total Suspended Solids	15 mg/l	30 day average
	30 mg/l	daily maximum
Oil & Grease	15 mg/l	30 day average
	20 mg/l	daily maximum

c. In addition to the effluent limitations above, the ash ponds at Havana must not cause a violation of certain General Use Water Quality Standards listed at 35 Ill. Adm. Code 302.208.

d. Data from existing groundwater monitoring wells at Havana indicate that the groundwater in the vicinity of the existing ash ponds contains levels of contaminants which exceed the current General Use Water Quality Standards for such parameters as Boron, Mercury, Iron, Ammonia and pH.

2. Hennepin Power Station

a. The Hennepin Power Station (hereinafter referred to as "Hennepin") is a 280 net megawatt coal-fired steam electric generating station

which discharges wastewater into the Illinois River. Hennepin's discharges include certain regulated discharges from the ash treatment system; these outfalls are commonly identified as:

Discharge Name	Outfall No.
Ash Pond No. 1	002
Ash Pond Nos. 2 and 4	003
Ash Pond No. 3	005

Other regulated discharges at Hennepin include:

Discharge Name	Outfall No.
Cooling Condenser Water	001
Boiler Blowdown	001(a)
Intake Screen Backwash	001(b)
Roof Drain Discharge	001(c)
Ash Sluice Line Drain	004
Chemical Metal Cleaning Waste Treatment System Effluent	005(a)

b. Pursuant to NPDES program authority, the Agency issued NPDES Permit IL0001554 to Hennepin. The Permit requires that discharges from the above-referenced ash ponds meet the following effluent limitations for the parameters listed below:

Parameter	Limitation	Time Period
pH	6-9 units	at all times
Total Suspended Solids	15 mg/l	30 day average
	30 mg/l	daily maximum
Oil & Grease	15 mg/l	30 day average
	20 mg/l	daily maximum

c. In addition to the effluent limitations above, the ash ponds at Hennepin must not cause violation of General Use Water Quality Standards listed at 35 Ill. Adm. Code 302.208.

d. Data from existing groundwater monitoring wells at Hennepin indicate that the groundwater in the vicinity of the existing ash ponds contains levels of contaminants which exceed the current General Use Water Quality Standards for such parameters as Boron, Iron, Sulfate, Total Dissolved Solids and pH.

3. Wood River Power Station

a. The Wood River Power Station (hereinafter referred to as "Wood River") is a 570 net megawatt coal and oil-fired steam electric generating station which discharges wastewater into the Mississippi River and into an unnamed tributary of Wood River Creek. Wood River's discharges include a regulated discharge from the West Ash Pond which discharges wastewater via Outfall No. 002 into the unnamed tributary of Wood River Creek. Other regulated discharges at Wood River include:

Discharge Name	Outfall No.
Cooling Condenser Water	001
Intake Screen Backwash	001(a)
Chemical Metal Cleaning Waste Treatment System Effluent	002(a)

b. Pursuant to NPDES program authority, the Agency issued NPDES Permit IL0000701 to Wood River. The Permit requires that discharges from the above-referenced ash pond system meet the following effluent limitations for the parameters listed below:

Parameter	Limitation	Time Period
pH	6-9 units	at all times
Total Suspended Solids	30 mg/l	30 day average
	50 mg/l	daily maximum
Oil & Grease	15 mg/l	30 day average
	20 mg/l	daily maximum

c. In addition to the effluent limitations above, the ash ponds at Wood River must not cause a violation of certain General Use Water Quality Standards listed at 35 Ill. Adm. Code 302.208.

d. The Agency does not have data concerning the condition of groundwater at Wood River.

C. INTERIM COMPLIANCE MEASURES AND ALTERNATIVE ASH DISPOSAL FACILITY CONSTRUCTION PROJECTS

1. To address potential present and prospective instances of noncompliance at Havana, Hennepin and Wood River, IP has committed to a compliance program involving each of the three stations. The compliance program includes interim measures to maintain compliance with the effluent limitations of each NPDES Permit. Namely, IP has requested authorization to increase the disposal capacity within the existing ash ponds at each station while proceeding with the design and construction of new ash disposal facilities at each station to control the impact of contaminants on groundwater.

2. IP commits to develop alternative ash disposal facilities to mitigate the transport of leachate from such facilities into the groundwater system. IP shall demonstrate that the designs of the alternative ash disposal facilities are sufficient to prevent leachate from entering the groundwater at concentrations which exceed all applicable standards. IP shall design a performance monitoring system at each facility to detect any leachate migration. The design shall include specifications and validations of the following:

a. Performance monitoring points
b. Sampling frequency
c. Constituents of concern

IP shall report such results to the Agency as required by permits.

3. IP hereby commits to proceed with the planning, design and construction of new ash disposal facilities for Havana, Hennepin and Wood River in accordance with the objectives in Paragraph II.C.2 above. Construction shall be in accordance with the corresponding fixed-date schedule of Paragraph VII.A.3.

III.

APPLICABILITY

This Consent Decree shall apply to and be binding upon the State, the Agency, IP, IP's officers, agents, and employees as well as the successors and assigns of IP's officers, agents, and employees. IP shall not raise as a defense to any action to enforce this Consent Decree the failure of any of its officers, agents or employees to take such action as shall be required to comply with the provisions of this Consent Decree.

IV.

COMPLIANCE WITH OTHER LAWS AND REGULATIONS

This Consent Decree in no way affects the responsibility of IP to comply with any other federal, state or local regulations, including but not limited to the Act, Ill. Rev. Stat. 1987, ch. 111 1/2, para. 1001 et seq. and the Illinois Pollution Control Board's Rules and Regulations, 35 Ill. Adm. Code Subtitles A through H, except as specifically provided in this Consent Decree.

V.

VENUE

The parties agree that the venue for any action commenced in Circuit Court for the purposes of interpretation, implementation and enforcement of the terms and conditions of this Consent Decree shall be in Mason County.

VI.

SEVERABILITY

The parties intend that the provisions of this Consent Decree shall be severable and should any provisions be declared by a court of competent jurisdiction to be inconsistent with state or federal law, and therefore

unenforceable, the remaining clauses shall remain in full force and effect. In the event that any provisions of this Consent Decree and plans implemented hereunder and attachments hereto are declared inconsistent with the provisions of the Act, the provisions of the Act shall be controlling.

VII.

FINAL JUDGMENT ORDER

This Court having jurisdiction over the parties and subject matter, the parties having appeared, due notice having been given or waived, the Court having considered the stipulated facts and being advised in the premises, the Court finds the following relief appropriate:

IT IS HEREBY ORDERED, ADJUDGED AND DECREED:

A. COMPLIANCE PROGRAM

1. Existing Ash Ponds. IP shall construct improvements to its ash ponds at Havana, Hennepin and Wood River to improve their performance as wastewater clarification basins and increase existing ash disposal capacity. IP shall at all times properly operate and maintain its ash ponds. Compliance with the terms of this Consent Decree shall not affect IP's obligations to meet the requirements of its NPDES Permits and nothing herein shall be construed to limit the ability of the Agency to enforce the terms of the NPDES Permits through an appropriate enforcement action. IP shall construct the improvements at each facility in accordance with the following schedules:

(1) At Havana:

Action	Completion Date
(a) Raise perimeter berms around the primary ash compartment of South Ash Pond as required, but no more than 10 feet;	December 31, 1991

(b) Discharge of fly ash and bottom ash transport waters to secondary compartment of South Ash Pond and, if required to maintain NPDES compliance, raise outfall in second and third compartment of South Ash Pond;	December 31, 1993
(c) Closure of South Ash Pond.*	December 31, 1995

(2) At Hennepin:

Action	Completion Date
(a) Remove interior berms of Ash Pond No. 1 and consolidate with Ash Pond No. 3;	December 31, 1991
(b) Regrade interior of consolidated areas to uniform bottom elevation;	December 31, 1991
(c) Close Outfall No. 002;	December 31, 1991
(d) Increase berm level for Ash Ponds Nos. 1 and 3 by 5 feet;	December 31, 1991
(e) Return Ash Pond No. 4 to service;	December 31, 1989
(f) Increase berm elevation of Ash Pond No. 2 as required but by no more than 15 feet;	December 31, 1991
(g) Closure of Ash Ponds No. 1, 2, 3, and 4.*	December 31, 1998

(3) At Wood River:

Action	Completion Date
(a) Raise berms around the primary ash compartment of West Ash Pond by 9 feet.	December 31, 1994
(b) Closure of West Ash Pond.*	December 31, 2000

* Closure of the ash ponds shall be accomplished in accordance with the following criteria:

(1) A final cover of one foot of clay material and the establishment of a layer of topsoil and a vegetative cover to protect the final cover and to promote drainage without erosion; or

(2) In compliance with any then applicable Pollution Control Board regulations pertaining to the closure of surface impoundments.

IP may request a modification of the closure criteria contained in (i) above or an extension of the dates for closure of existing ash ponds. If IP demonstrates to the Agency that such modification of the closure criteria or extension of the dates for closure of the existing ash ponds will not result in a violation of the Act or regulations promulgated thereunder, the Agency may agree in writing to modify or suspend such criteria and/or time schedules.

2. Contingent Penalties. If any ash pond effluent limitation for parameters of total suspended solids or oil and grease as delineated in the NPDES Permits of Havana, Hennepin or Wood River is exceeded for any month between and including the commencement of construction month and the completion of construction month, for the construction projects described in Paragraph VII.A.1. of this Consent Decree, IP shall pay a penalty of $3,000.00 per month for each facility where one or more such violations occur. The "commencement of construction month" and the "completion of construction month" shall be the months during which those events actually occur. Compliance with the applicable effluent limitation shall be determined by the monthly average concentration results for each effluent parameter as indicated by the monthly Discharge Monitoring Reports of each facility. The penalties shall be paid to the Environmental Protection Trust Fund within 30 days of the due date of the monthly Discharge Monitoring Report indicating the noncompliance to the following address:

Illinois Environmental Protection Agency
Fiscal Services Section
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

3. New Facilities. IP shall take action as detailed below to plan and design new ash disposal facilities at Havana, Hennepin and Wood River to prevent introduction of contaminants into groundwater at levels which would exceed applicable limits. IP shall submit plans and specifications and construct such new facilities in accordance with the following schedules:

(1) At Havana:

Action	Completion Date
(a) Submit Plans and Specifications	September 30, 1991
(b) Commence Construction	May 31, 1992
(c) Complete Construction	December 31, 1993

(2) At Hennepin:

Action	Completion Date
(a) Submit Plans and Specifications	September 30, 1994
(b) Commence Construction	May 31, 1995
(c) Complete Construction	December 31, 1996

(3) At Wood River:

Action	Completion Date
(a) Submit Plans and Specifications	September 30, 1996
(b) Commence Construction	May 31, 1997
(c) Complete Construction	December 31, 1998

4. Stipulated Penalties.

a. IP shall pay stipulated penalties for each of the following violations of the Consent Decree. These stipulated penalties shall apply separately to the Havana, Hennepin, and Wood River facilities:

For each day that commencement of construction of a new facility is delayed beyond the time for commencement of that facility as provided in Paragraph VII.A.3., IP shall pay the following penalty for that facility:

Days 1-30	$ 500
After 30 days	$1,000

For each day that completion of construction of a new facility is delayed beyond the time for completion of that facility as set forth in Paragraph VII.A.3., IP shall pay the following penalty for that facility:

Days 1-30	$1,000
After 30 days	$2,500

All penalties begin to accrue on the day following the day on which performance of the action is due and continue to accrue through the day the action is completed.

b. Stipulated penalties as set forth above shall be paid within 30 days after the date they become due to the Environmental Protection Trust Fund to the address specified in Paragraph VII.A.2. above. The name and number of the case shall appear on the certified check.

5. The contingent and stipulated penalties set forth above shall be enforceable by the Agency and shall be in addition to and shall not preclude the use of any other remedies or sanctions which may be available to the Agency by reason of the noncompliance of IP or its facilities with the provisions of this Consent Decree.

B. PROGRESS REPORTS:

Beginning on January 31, 1989, and continuing through completion of all construction activities, IP shall make written progress reports to the Agency on a quarterly basis, with the due dates for such reports being January 31, April 30, July 31, and October 31 for the preceeding quarter. Such reports shall be submitted to the Agency as follows:

Compliance Assurance Section
Illinois Environmental Protection Agency
Division of Water Pollution Control
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

C. FORCE MAJEURE

1. Any failure by IP to comply with the requirements of this Consent Decree shall not be a violation of this Consent Decree if such failure is the result of actions by persons or events beyond the reasonable control of IP.

2. Should IP be unable to complete any part or all of the work in accordance with the timetable in Paragraph VII.A. or otherwise to comply with any provision of this Consent Decree as a result of any circumstances not within the reasonable control of IP, IP shall notify the Agency as soon as practicable but no later than thirty (30) calendar days of becoming aware of such delay or other noncompliance. Such notification shall be in writing and shall include a precise description of the circumstances, the measures to be taken to prevent or minimize the delay and the revised timetable to reflect the anticipated delay.

3. Notice shall be directed to the individuals or successors at the addresses specified below:

DWPC Senior Attorney
Enforcement Programs
Illinois Environmental Protection Agency
2200 Churchill Road
P.O. Box 19276
Springfield, Illinois 62794-9276

4. If the Agency and IP agree that the delay or noncompliance is due to circumstances beyond the reasonable control of IP, the parties may petition the Court to extend the time for performance hereunder for a period equal to the period of delay resulting from such circumstances.

5. If the Agency and IP cannot agree whether the reasons for the delay or noncompliance were beyond the reasonable control of IP, the matter shall be resolved by the Court. IP shall have the burden of going forward and proving that the circumstances alleged to be causing the delay or noncompliance were beyond its reasonable control.

6. The Agency recognizes that during the pendency of this Consent Decree, the Pollution Control Board may promulgate regulations containing contaminant standards for groundwater. If the Agency and IP agree that complying with such groundwater standards would require an extension of the construction schedules contained in Paragraph VII.A.3. of this Consent Decree, the parties shall petition the Court as provided in Paragraph VII.C.4. above. If the Agency and IP do not agree that complying with such groundwater standards would require an extension of the construction schedules, the matter shall be resolved by the Court as provided in Paragraph VII.C.5. above. The Agency and IP agree that any extension of time obtained pursuant to this Paragraph VII. C. shall not include the time during which an appeal of any groundwater standard is pending.

7. The provisions of this Paragraph VII.C. shall govern delays in obtaining permits required for any construction required by this Consent Decree, other than permits issued by the Agency in a timely manner.

8. The Agency shall be precluded from invoking the contingent and stipulated penalty provisions of Paragraphs VII.A.2. and VII.A.4. to the extent that such delay or noncompliance is caused by circumstances described in this Paragraph VII. C.

D. JURISDICTION

This Court shall retain jurisdiction of this matter for the purpose of amending, interpreting, implementing and enforcing the terms and conditions of this Consent Decree and for the purpose of adjudicating all matters of dispute between the parties. This Consent Decree shall terminate one year after the date of completion of construction, provided that IP has satisfied the terms and conditions of this Consent Decree.

WHEREFORE the parties, by their representatives, enter into this Consent Order and submit it to the Court that it may be approved and entered.

PEOPLE OF THE STATE OF ILLINOIS

DATE: 2-16-89

BY: _____
Shawn W. Denney
First Assistant Attorney General

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

DATE: 2/17/89

BY: _____
Joseph E. Svoboda, Manager
Enforcement Programs

ILLINOIS POWER COMPANY

DATE: 2/22/89

BY: _____
Porter J. Homeldorff
Vice President

APPROVED AND SO ORDERED THIS 2nd DAY OF March, 1989.

_____
JUDGE

JB:mab/2158j/spl-15

IN THE CIRCUIT COURT OF THE EIGHTH JUDICIAL CIRCUIT
MASON COUNTY, ILLINOIS

PEOPLE OF THE STATE OF ILLINOIS, Plaintiff, -vs- ILLINOIS POWER COMPANY, an Illinois corporation, Defendant.	)	No. 89-CH-5

FILED

FEB 25 1993

BRENDA K. MILLER
CIRCUIT CLERK
MASON CO., IL

ORDER MODIFYING CONSENT ORDER

This matter being presented to the court upon the Joint Motion To Modify Consent Order filed by the parties, and the court having read and considered the joint motion and being fully advised in the premises, the court finds:

1. This court previously entered a Consent Order in this matter on March 2, 1989 ("the Consent Order");

2. This court has jurisdiction over the parties and the subject matter;

3. Good cause exists for entry of this Order; and

4. No reason exists why this Order should not be entered instanter.

IT IS THEREFORE ORDERED:

A. Paragraph VII.A.1.(1)(c) of the Consent Order is modified as follows:

"(c) Closure of South Ash Pond."

shall now read

"(c) Closure of the Primary Cell of South Ash Pond."

B. Paragraph VII.A.1.(3)(a) of the Consent Order is

modified as follows:

"(a) Raise berms around the primary ash compartment of West Ash Pond by 9 feet."

shall now read

"(a) Raise berms around a portion of the primary ash compartment of West Ash Pond by 17 feet."

C. Except as otherwise specifically modified by the terms hereof, the Consent Order entered March 2, 1989, is hereby ratified and confirmed.

ENTERED: February 24, 1993

JUDGE

CERTIFICATE OF SERVICE

I hereby certify that I did on the 23rd day of February, 1993, send by First Class Mail, with postage thereon fully prepaid, by depositing in a United States Post Office Box in Springfield, Illinois, one true and correct copy of the following instrument(s) entitled JOINT MOTION TO MODIFY CONSENT ORDER and ORDER MODIFYING CONSENT ORDER

TO: Mr. Gabriel M. Rodriguez
Schiff Hardin & Waite
7200 Sears Tower
Chicago, IL 60606-6473

FILED

BRENDA K. MILLER
CIRCUIT CLERK
MACON CO., IL

JOHN J. KIM
Assistant Attorney General
Environmental Control Division

200/122/33r/1

IN THE CIRCUIT COURT FOR THE EIGHTH JUDICIAL CIRCUIT

MASON COUNTY, ILLINOIS

FILED

JAN 03 1996

BRENDA K. MILLER

PEOPLE OF THE STATE OF ILLINOIS, Plaintiff,	)	
v.	)	NO. 89 CH 5
ILLINOIS POWER COMPANY, an Illinois corporation, Defendant.	)	

ORDER MODIFYING CONSENT ORDER

This matter being presented to the Court upon the Joint Motion to Modify Consent Order filed by the parties, and the Court having read and considered the Joint Motion and being fully advised in the premises, the Court finds:

1. This Court previously entered a Consent Order in this matter on March 2, 1989 which was subsequently modified on February 24, 1993 ("the Consent Order");

2. This Court has jurisdiction over the parties and the subject matter;

3. Good cause exists for entry of this Order; and

4. No reason exists why this Order should not be entered instanter.

IT IS THEREFORE ORDERED:

A. Footnote at bottom of page 9 of Consent Order is modified to read as follows:

* Closure of the ash ponds shall be accomplished in accordance with the following criteria:

(1) A final cover of one foot of clay material and the establishment of a layer of topsoil and a vegetative cover to protect the final cover and to promote drainage without erosion; or

(2) In compliance with any then applicable Pollution Control Board regulations pertaining to the closure of surface impoundments; or

(3) IP will submit a Closure Work Plan, specific to Havana, Hennepin or Wood River, to the IEPA Bureau of Water, requesting a groundwater management zone ("GMZ") if groundwater monitoring at Havana, Hennepin or Wood River indicates noncompliance pursuant to 35 Ill. Adm. Code, Part 620, Subparts B and D. The work plan(s) will contain specific tasks which are to be performed to demonstrate closure. For the purpose of this consent decree, if a GMZ is required by the IEPA, closure shall be considered complete upon approval and successful completion of the work plan. If no GMZ is required, the closure dates in the consent decree shall prevail. The GMZ will continue according to the work plan until such time that IP and the IEPA agree that: (a) threats to public health and the environment have been adequately minimized; (b) exceedances of Part 620, Subpart D have been minimized to the extent practical; and (c) beneficial use of the groundwater has been assured with regard to the contaminants for which the GMZ is obtained. Modifications to the GMZ work plan will not require amendment of the consent decree, but rather may be made by letter if agreed between the parties.

B. Except as otherwise specifically modified by the terms hereof, the Consent Order entered on March 2, 1989 and subsequently modified on February 24, 1993, is hereby ratified and confirmed.

ENTERED: January 3, 1996

JUDGE

IN THE CIRCUIT COURT FOR THE EIGHTH JUDICIAL CIRCUIT

MASON COUNTY, ILLINOIS

PEOPLE OF THE STATE OF ILLINOIS, Plaintiff, vs. ILLINOIS POWER COMPANY, an Illinois corporation, Defendant.	))))))))))	No. 89-CH-5

FILED

AUG 30 1996

BRENDA K. MILLER
CLERK

ORDER MODIFYING CONSENT ORDER

This matter being presented to the Court upon the Joint Motion to Modify Consent Order filed by the parties, and the Court having read and considered the Joint Motion and being fully advised in the premises, the Court finds:

1. This Court previously entered a Consent Order in this matter on March 2, 1989 which was subsequently modified on February 24, 1993 and January 3, 1996 ("the Consent Order");

2. This Court has jurisdiction over the parties and the subject matter;

3. Good cause exists for entry of this Order; and

4. No reason exists why this Order should not be entered instanter.

IT IS THEREFORE ORDERED:

A. Section VII.A.2 be modified to read as follows:

Contingent Penalties. If any ash pond effluent limitation for parameters of total suspended solids or oil and grease as delineated in the NPDES Permits of Havana, Hennepin or Wood River is exceeded for any month between and including the commencement of construction month and the completion of construction month, for the construction projects described in Paragraphs VII.A.1. of this Consent Decree, IP shall pay a

penalty of $3,000.00 per month for each facility where one or more such violations occur. The "commencement of construction month" and the "completion of construction month" shall be the months during which those events actually occur. Compliance with the applicable effluent limitation shall be determined by the monthly average concentration results for each effluent parameter as indicated by the monthly Discharge Monitoring Reports of each facility. The penalties shall be paid to the Environmental Protection Trust Fund within 30 days of the due date of the monthly Discharge Monitoring Report indicating the noncompliance to the following address:

Illinois Environmental Protection Agency
Fiscal Services Section
2200 Churchill Road, P.O. Box 19276
Springfield, Illinois 62794-9276

The contingent penalties described in this Paragraph are applicable only to violations caused by activities directly related to the closure of existing ash ponds. Such contingent penalties are not applicable to activities unrelated to the closure of the existing ash ponds, such as construction and operation of new ash disposal facilities at Havana, Hennepin, and Wood River, as described in Paragraph VII.A.3 below. Deadlines for activities described in Paragraph VII.A.3 are, however, subject to the stipulated penalty provisions of Paragraph VII.A.4.

B. Except as otherwise specifically modified by the terms hereof, the Consent Order entered on March 2, 1989 and subsequently modified on February 24, 1993, and January 3, 1996 is hereby ratified and confirmed.

ENTERED: Aug 30, 1996

JUDGE

Exhibit 2

Records of Meetings with IEPA

ILLINOIS EPA

Meeting Sign-in

Bureau of Land
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794

Maple	785-8731
Hickory	524-9976
Red Bud	524-9977
Walnut	557-1339
White Oak	785-8730

Meeting Date: 10/27/99 **Meeting Name:** Ameren / Hutsonville Power Plant

Participant Name	Representing	Telephone/FAX Number
Chris Liebmann	IEPA/BOL/Permits/SW	217/524-3294
GWENATH THOMPSON	IEPA/BOL/Permit/GAU	217/524-3866
CARL KAMP	IEPA/BOW/PWS/Ckl	217/785/4787
Bill Buscher	" " "	" " "
Gary Clinia	IEPA/BOL/Permits	217/524-3294
Michael Bollinger	Ameren Services	314/554-3652
John Pozzo	"	314/554-2280

Ameren Energy Generating Company
Hutsonville Power Station

Draft Meeting Agenda
July 25, 2001
1:30 PM

1) Station operations status report
2) Relief to be sought in our Petition for Adjusted Standards:
   a) Final cap & cover requirements
   b) Leachate collection and management criteria
   c) Groundwater monitoring provisions
   d) Other requirements
3) Request for a Groundwater Management Zone
4) Schedule

Ameren / CIPS – Hutsonville
Groundwater Adjusted Standard Meeting
July 25, 2001

Name	Affiliation	Telephone #
Chuck Gunnarson	IEPA - Div. of Legal Counsel	(217) 782-5544
Bill Buscher	" PWS - GW	" 785-4787
CARL KAMP	" PWS - GW	" "
BETH PITROLO	AGO	217/782-9031
Debbie Williams	IEPA - DLC	
Robert S. Butler	Ameren Energy Gen.	618-563-1351
STEVE MILLER	AMEREN ENERGY GEN.	618-563-1352
[illegible] B [illegible]	Ameren Services Co.	314-554-3183
Jacquely R Bush	AmerenEnergy Gen	618-563-1374
Michael Bollinger	Ameren Services	314-554-3652
Bruce Hensel	NRT	262-523-9000

Ameren Energy Generating Company
Hutsonville Power Station

Ash Pond Closure Project
Meeting Agenda
Wednesday, September 26, 2001
1:30 - 3:30 PM

1) Station operations status report
2) Relief to be sought in our Petition for Adjusted Standards
   a) Final cap and cover requirements
   b) Leachate collection and management criteria
   c) Groundwater monitoring provisions
   d) Other requirements
3) Use of ash to achieve final profile and grades
4) Request for a Groundwater Management Zone
5) Schedule

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

IL 532-0357
ADM 39
054-002

Subject Ameren - Hutsonsville Meeting

Data

Reviewed by Date 9/26/2001

PERSON	ORGANIZATION	PHONE
Chris Liebman	Ill. EPA / BOL / Permits / SW Unit	217/524-3294
Bill Buscher	Ill. EPA / BOW / Groundwater / HC Unit	217-785-4782
Robert Bother	Ameren Energy Gen.	618-562-1251
Jacquelyn Bush	Ameren Energy Gen.	618-563-1374
Michael Ballinger	Ameren Services	314-554-3652
Bruce Hensel	Natural Resource Technology	262-523-9000
Steve Miller	Ameren Energy Gen.	618-563-1352
Kyle N. Davis	Illinois EPA - LEPAC Counsel	217-782-5544
Gwenith Thompson	IEPA / Permits / CAAA	217-524-3300
Carl Kamp	IEPA / BOW / GW	217-785-4787
Kevin B Rhoades	Ameren - Legal Counsel	314-554-3183

AMEREN HUTSENVILLE 9/27/05 Meeting

Joyce Munie	IEPA/BOL/PERMIT	217/524-3300
David Riesen	McGuire Woods	312/849-8249
Bill Buscher	IEPA/BOW/GW	217/524/7923
Chris Bergmann	IEPA/BOL/Permits/SWU	217/558-0147
~~JOHN POZZO~~	~~AMEREN~~	~~524-5521-2220~~
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~
GWENYTH THOMPSON	IEPA/BOL/Perm/GAU	217/524-3866
STEVE MILLER	AEG - HUTSENVILLE - Mgr	618-563-1351
Chris Liebman	IEPA/BOL/Permits/SWU	217/524-3294
Michael Bollinger	Ameren ESH	314 554 3652
CARL KAMP	~~IEPA~~/BOW/PWS/GW	217/524/7921
KYLE DAVIS	ILLINOIS EPA/COUNSEL	217-782-5544
Bruce Hensel	Natural Resource Technology	262-522-1196

Exhibit 3

NPDES Permit

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276

THOMAS V. SKINNER, DIRECTOR

217/782-0610

April 6, 1999

Central Illinois Public Service Company
607 East Adams
Springfield, Illinois 62739

Re: Central Illinois Public Service Company
Ameren CIPS - Hutsonville Power Station
NPDES Permit No. IL0004120
Final Permit

Gentlemen:

Attached is the final NPDES Permit for your discharge. The Permit as issued covers discharge limitations, monitoring, and reporting requirements. The failure of you to meet any portion of the Permit could result in civil and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the Permit as they relate specifically to your discharge.

The following changes have been made after 30 day public notice:

1. The storm water monitoring requirements contained in Special Condition 7 have been modified.
2. Language in Special Condition 8 has been clarified.
3. Outfalls 001A, 002A and 002B have been renamed outfalls A01, A02 and B02 in the final permit to conform to the data entry requirements for USEPA's permit compliance system.

The Permit as issued is effective as of the date indicated on the first page of the Permit. You have the right to appeal any condition of the Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

To assist you in meeting the self-monitoring and reporting requirements of your reissued NPDES permit, a supply of preprinted Discharge Monitoring Report (DMR) forms for your facility is being prepared. These forms will be sent to you prior to the initiation of DMR reporting under the reissued permit. Additional information and instructions will accompany the preprinted DMRs upon their arrival.

Should you have questions concerning the Permit, please contact Gary C. Wolf, P.E. at the telephone number indicated above.

Very truly yours,

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:SFN:GCW:98041703.grm

Attachment: Final Permit

cc: Records
Compliance Assurance Section
Champaign Region

NPDES Permit No. IL0004120

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date: April 30, 2004

Issue Date: April 6, 1999
Effective Date: May 1, 1999

Name and Address of Permittee:

Central Illinois Public Service Company
607 East Adams
Springfield, Illinois 62739

Facility Name and Address:

Ameren CIPS - Hutsonville Power Station
1000 North Pleasant, P.O. Box 216
Hutsonville, Illinois 62433
(Crawford County)

Discharge Number and Name:	Receiving Waters:
001 - Condenser Cooling Water	Wabash River
A01 - Intake Screen Backwash	Wabash River
002 - Ash Pond Discharge	Wabash River
A02 - Sewage Treatment Plant Discharge	Wabash River
B02 - Chemical Metal Cleaning Wastewater	Wabash River
003 - Storm Water from Access Roads used for Coal Delivery	Unnamed creek tributary to the Wabash River

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Thomas G. McSwiggin, P.E.
Manager, Permit Section
Division of Water Pollution Control

TGM:GCW:98041703.grm

NPDES Permit No. IL0004120

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 001 - Condenser Cooling Water

This discharge consists of:	Approximate Flow:
1. Main Condenser Cooling Water	70.0 MGD
2. Intake Screen Backwash	0.2 MGD
3. Fans & Air Coolers	0.02 MGD
4. Turbine Oil & Hydrogen Gas Coolers	0.02 MGD
5. Fire Protection Water	0.1 MGD
6. Roof Drains**	Intermittent

Flow					Daily	Report Daily Average & Daily Maximum
Total Residual Chlorine*		–	0.2		2/Month	Grab
Temperature	See Special Condition 6				Daily	Continuous

*See Special Condition 4 & 5.
**See Special Condition 7 & 15.

Outfalls: A01 - Intake Screen Backwash
See Special Condition 8.

Approximate Flow: 0.2MGD

NPDES Permit No. IL0004120

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE

1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:

Outfall(s): 002 -Ash Pond Discharge

This discharge consists of:	Approximate Flow:
1. Bottom Ash and Fly Ash Sluice Water	1.25 MGD
2. Boiler Blowdown	0.002 MGD
3. Miscellaneous Cooling Water	0.216 MGD
4. Water Treatment Filter Backwash	0.02 MGD
5. Demineralizer Regenerant Waste	0.004 MGD
6. Water Softener Blowdown	0.02 MGD
7. Coal Pile Runoff	Intermittent
8. Sewage Treatment Plant Effluent	0.002 MGD
9. Air Heater Wash	Intermittent
10. Plant Floor Drains and Sump Discharges	0.04 MGD
11. Ash Hopper Overflow	0.2 MGD
12. Pyrites from the Coal Pulverizer	0.005 MGD
13. Roof Drains***	Intermittent
14. Deep Well Rehabilitation Wastewater	Intermittent
15. Chemical Metal Cleaning Wastewater Treatment Tank Discharge	0.3 MGD/4 Yr.
16. Stormwater Runoff***	Intermittent

Flow					1/Week	Measure When Monitoring
pH	See Special Condition 2				1/Week	Grab
Total Suspended Solids		30.0		100.0	1/Week	8-Hr. Composite
Oil & Grease		15.0		20.0	1/Year	Grab
Boron		-		10.0	1/Month	8 Hr.Composite

***See Special Condition 16

NPDES Permit No. IL0004120

Effluent Limitations and Monitoring

PARAMETER	LOAD LIMITS lbs/day DAF (DMF) 30 DAY AVERAGE	LOAD LIMITS lbs/day DAF (DMF) DAILY MAXIMUM	CONCENTRATION LIMITS mg/l 30 DAY AVERAGE	CONCENTRATION LIMITS mg/l DAILY MAXIMUM	SAMPLE FREQUENCY	SAMPLE TYPE
1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows:						
Outfall(s): A02 - Sewage Treatment Plant Discharge				Approximate Flow: 0.002 MGD		
Flow					1/Month	Measure When Monitoring
BOD_5	2.5	5.0	30.0	60.0	1/Month	8-Hr Composite
Total Suspended Solids	2.5	5.0	30.0	60.0	1/Month	8-Hr. Composite
Total Residual Chlorine****					Daily	Grab
****See Special Condition 10.						
Outfall(s): B02 - Chemical Metal Cleaning Wastewater						
Flow					Daily When Discharging	24 Hr. Total
Iron (total)			1.0	1.0	Daily When Discharging	8-Hr. Composite
Copper (total)			1.0	1.0	Daily When Discharging	8-Hr. Composite
Outfall(s): 003 - Storm Water From Access Roads Used For Coal Delivery						
See Special Condition No. 15						

SPECIAL CONDITIONS

SPECIAL CONDITION 1. Flow (MGD) shall be measured as monthly average and daily maximum on DMR form.

SPECIAL CONDITION 2. The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 4. Chlorine may not be discharged from each unit's main cooling condensers for more than two hours in any one day. A minimum of three grab samples shall be taken at approximately five minute intervals in the discharge tunnel during the respective chlorination period of each unit allowing for lag time between the initiation of chlorination and the point of sampling before the first of the grab samples is taken. The individual values for each set of samples shall be reported including the unit sampled, the time of chlorination, the times samples were collected, the duration of the chlorine dosing period plus the amount of chlorine applied. Continuous analyzers may be substituted for the above grab sampling method.

SPECIAL CONDITION 5. Total residual chlorine limit is an instantaneous maximum limit which shall not be exceeded at any time.

SPECIAL CONDITION 6. Discharge of wastewater from this facility must not alone or in combination with other sources cause the receiving stream to violate the following thermal limitations at the edge of the mixing zone which is defined by Section 302.211, Illinois Administration Code, Title 35, Chapter 1, Subtitle C, as amended:

A. Maximum temperature rise above natural temperature must not exceed 5°F (2.8°C).

B. Water temperature at representative locations in the main river shall not exceed the maximum limits in the following table during more than one (1) percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature at such locations exceed the maximum limits in the following table by more than 3°F (1.7°C). (Main river temperatures are temperatures of those portions of the river essentially similar to and following the same thermal regime as the temperatures of the main flow of the river.)

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
°F	50	50	60	70	80	90	90	90	90	78	70	57
°C	10	10	16	21	27	32	32	32	32	26	21	14

C. The monthly maximum value shall be reported on the DMR form.

SPECIAL CONDITION 7. For a one year period from the effective date of this permit, storm water discharge from roof drains which discharge to outfall 001 shall be monitored for total iron once per calendar year quarter during qualifying storm events. A qualifying storm event is defined as an event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Samples shall be collected from four to six roof drain locations for each storm event sampled. During the one year sample period, each roof drain location shall be sampled at least once.

Samples shall be taken from each location during the first thirty minutes (or as soon thereafter as practicable) of the discharge. These samples shall then be composited and the composite sample analyzed for total iron. Each sample shall be at least 100 milliliters.

In addition, samples shall be taken from each location each hour of the discharge, or for the first three hours of the event. These samples shall then be composited and the composite sample analyzed for total iron. Each sample shall be at least 100 milliliters.

Samples shall be analyzed using test methods promulgated in 40 CR 136. For each qualifying event, permittee shall record flow measurements or estimates of flow rate, the total amount of discharge for the storm event sampled, and the method of flow measurement or estimation. Permittee shall also record the duration of storm event sampled, rainfall measurements, or estimates of the storm event which generated the sampled runoff and the duration between the storm event sampled and the end of the previously measurable greater than 0.1 inch rainfall storm event.

A diagram shall be submitted with the sample results showing the roofs of the plant buildings, location of each drain, and which drains were sampled. Each roof drain shall be assigned a name.

SPECIAL CONDITIONS

Monitoring results and other information required under this condition shall be submitted to the Agency as an attachment to the DMR form.

If monitoring results show discharge concentrations exceed the effluent standards set forth in 35 Ill. Adm. Code 304.124(a), the permittee shall amend the Storm Water Pollution Prevention Plan (SWPPP) as necessary to control the discharge of total iron to the Wabash River. Amendments to the SWPPP shall be made within the shortest reasonable period of time, and shall be provided to the Agency for review upon request.

The Agency may modify this permit during its term to incorporate additional limitations or requirements based on the results of this monitoring. Modifications under this condition shall follow public notice and opportunity for hearing.

SPECIAL CONDITION 8. During maintenance of the trash rack or intake screens, any debris collected from the trash rack or intake screens shall not be returned to the river but shall be properly disposed of.

SPECIAL CONDITION 9. There shall be no discharge of polychlorinated biphenyl compounds (PCB's) such as those commonly used for transformer fluid.

SPECIAL CONDITION 10. Any use of chlorine to control slime growths odors or as an operational control, etc. shall not exceed the limit of .05 mg/l (daily maximum) total residual chlorine in the effluent. Sampling is required on a daily grab basis during the chlorination process. Reporting shall be submitted with the (DMR's) on a monthly basis.

SPECIAL CONDITION 11. Chemical metal cleaning wastewater rinses may be placed on an active area of the coal pile for incineration provided a demonstration showing BAT equivalency is submitted to the IEPA within 90 days following completion of treatment. This demonstration will consist of a sampling program approved by the IEPA which will provide for the monitoring of iron and copper levels in coal pile runoff prior to, during, and after placement of rinses onto the coal pile. This monitoring must show that the naturally occurring iron and copper levels in coal pile runoff are not altered through this disposal practice (Attachment A).

SPECIAL CONDITION 12. Central Illinois Public Service Company has complied with Section 302.211F of Title 35, Subtitle C: Water Pollution Regulations demonstrating that its thermal discharges from its Hutsonville Power Station have not caused and cannot be reasonably expected to cause significant ecological damage to receiving waters as approved by PCB Order No. 78-108 dated October 19, 1978. Pursuant to 35 Ill. Adm. Code 302.211g no additional monitoring or modification is now being required for reissuance of this NPDES permit.

SPECIAL CONDITION 13. Central Illinois Public Service Company's demonstration for the Hutsonville Power Station in accordance with Section 316(b) of the CWA was approved by this Agency by letter dated September 18, 1979. It is determined that no additional intake monitoring or modification is now being required for reissuance of this NPDES permit.

SPECIAL CONDITION 14. The permittee shall record monitoring results on Discharge Monitoring Report forms using one such form for each discharge each month. The completed Discharge Monitoring Report form shall be submitted monthly to IEPA, no later than the 15th of the following month, unless otherwise specified by the Agency, to the following address:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

SPECIAL CONDITION 15.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. A storm water pollution prevention plan shall be developed by the permittee for the storm water associated with industrial activity at this facility. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit.

B. The plan shall be completed within 180 days of the effective date of this permit. Plans shall provide for compliance with the terms of the plan within 365 days of the effective date of this permit. The owner or operator of the facility shall make a copy of the plan available to the Agency at any reasonable time upon request. [Note: If the plan has already been developed and implemented it shall be maintained in accordance with all requirements of this special condition.]

SPECIAL CONDITIONS

C. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this condition. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

D. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph G of this condition indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objective of controlling pollutants in storm water discharges. Amendments to the plan shall be made within the shortest reasonable period of time, and shall be provided to the Agency for review upon request.

E. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from storm water outfalls at the facility. The plan shall include, at a minimum, the following items:

1. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate.

2. A site map showing:

   i. The storm water conveyance and discharge structures;

   ii. An outline of the storm water drainage areas for each storm water discharge point;

   iii. Paved areas and buildings;

   iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.

   v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);

   vi. Surface water locations and/or municipal storm drain locations

   vii .Areas of existing and potential soil erosion;

   viii. Vehicle service areas;

   ix. Material loading, unloading, and access areas.

3. A narrative description of the following:

   i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;

   ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;

   iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;

   iv. Industrial storm water discharge treatment facilities;

   v. Methods of onsite storage and disposal of significant materials;

4. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

5. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.

6. A summary of existing sampling data describing pollutants in storm water discharges.

SPECIAL CONDITIONS

F. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:

1. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.

2. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.

3. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.

4. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill clean up equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.

5. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:

   i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff;

   ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges;

   iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges;

   iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.

   v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination;

   vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.

6. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion and describe measures to limit erosion.

7. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.

8. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.

G. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.

H. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated thereunder, and Best Management Programs under 40 CFR 125.100.

SPECIAL CONDITIONS

I. The plan is considered a report that shall be available to the public under Section 308(b) of the CWA. The permittee may claim portions of the plan as confidential business information, including any portion describing facility security measures.

J. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.

Construction Authorization

K. Authorization is hereby granted to construct treatment works and related equipment that may be required by the Storm Water Pollution Prevention developed pursuant to this permit.

This Authorization is issued subject to the following condition(s).

1. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee there upon waives all rights thereunder.

2. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.

3. Plans and specifications of all treatment equipment being included as part of the stormwater management practice shall be included in the SWPPP.

4. Construction activities which result from treatment equipment installation, including cleaning, grading and excavation activities which result in the disturbance of five acres or more of land area, are not covered by this authorization. The permittee shall contact the IEPA regarding the required permit(s).

REPORTING

L. The facility shall submit an annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part G of the Storm Water Pollution Prevention Plan of this permit. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s).

M. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.

N. Annual inspection reports shall be mailed to the following address:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Annual Inspection Report
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

O. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.

SPECIAL CONDITION 16. The Agency has determined that the effluent limitations in this permit constitute BAT/BCT for storm water which is treated in the existing treatment facilities for purposes of this permit reissuance, and no pollution prevention plan will be required for such storm water. In addition to the chemical specific monitoring required elsewhere in this permit, the permittee shall conduct an annual inspection of the facility site to identify areas contributing to a storm water discharge associated with industrial activity, and determine whether any facility modifications have occurred which result in previously-treated storm water discharges no longer receiving treatment. If any such discharges are identified the permittee shall request a modification of this permit within 30 days after the inspection. Records of the annual inspection shall be retained by the permittee for the term of this permit and be made available to the Agency on request.

SPECIAL CONDITION 17. All sludges and other waste material generated on-site shall be disposed of at a site and in a manner acceptable to the Agency.

ATTACHMENT A

The Permittee shall monitor coal pile runoff for concentrations of copper (total) and iron (total) a minimum of 4 times prior to placing chemical metal cleaning wastewater on the coal pile. The Permittee shall monitor the coal pile for coal pile runoff following the placement of chemical metal cleaning wastewater on the coal pile. Upon placement of the wastewater on the coal pile, for each placement which causes an effluent from the coal pile and each rainfall event which produces coal pile runoff during 30 days following placement on the coal pile, a representative grab sample shall be taken daily of the discharge and analyzed for iron (total) and copper (total). The analysis report shall include the frequency, duration and amounts of the month's precipitation events.

If the Permittee after monitoring twice the above practice for incineration of chemical metal cleaning wastewater can demonstrate to the satisfaction of the permitting authority that there is no significant discharge of the designated parameters caused by this practice, upon written request by the Permittee, the permitting authority shall review the monitoring requirements and may, at their discretion revise or waive these monitoring requirements following Public Notice and opportunity for hearing.

Exhibit 4

Subpart B Permit

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 3689-05 **PERMIT NO.:** 2005-EO-3689

FINAL PLANS, SPECIFICATIONS, APPLICATION AND SUPPORTING DOCUMENTS PREPARED BY: Ameren Services

DATE ISSUED: JUN 14 2005

SUBJECT: AMEREN ENERGY GENERATING COMPANY - Hutsonville Power Station -- Operation of Ash Pond System

PERMITTEE TO OWN AND OPERATE

Ameren Energy Generating Company
One Ameren Plaza
1901 Chouteau Ave., MC-602
St. Louis, Missouri 63103

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows:

An existing ash pond system consisting of a bottom ash pond, a 1.8 acre drainage collection pond (lined), a 10 acre fly ash pond (lined), a 4.0 acre final pond (lined), and all the pipes, pumps, and appurtenances necessary for the treatment of fly ash sluice water, bottom ash sluice water, and miscellaneous wastestreams. Effluent from this pond system is discharged to the Wabash River via Outfall 002 in accordance with NPDES Permit No. IL0004120.

This permit renews and replaces Permits# 2000-EA-0729 and 2001-EO-2955 which were previously issued for the herein permitted facilities.

This operating permit expires on May 31, 2010.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

SPECIAL CONDITION 1: The discharge of treated effluent from this ash pond system shall be governed by NPDES Permit No. IL0004120.

SPECIAL CONDITION 2: Issuance of this permit does not release the Permittees from any liability for prior violations of the Act or Rules and Regulations promulgated thereunder.

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

SAK:DEL:368905.wpd

DIVISION OF WATER POLLUTION CONTROL

cc: EPA - Champaign FOS
Records - Industrial
Binds

Alan Keller by BAK

Alan Keller, P.E.
Manager, Permit Section

READ ALL CONDITIONS CAREFULLY:
STANDARD CONDITIONS

The Illinois Environmental Protection Act (Illinois Revised Statutes Chapter 111-12. Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.

2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials:

   a. to enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;

   b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;

   c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit;

   d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants;

   e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;

   b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;

   c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;

   d. does not take into consideration or attest to the structural stability of any units or parts of the project;

   e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the agency before the facility or equipment covered by this permit is placed into operation.

7. These standard conditions shall prevail unless modified by special conditions.

8. The Agency may file a complaint with the Board for suspension or revocation of a permit:

   a. upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed; or

   b. upon finding that any standard or special conditions have been violated; or

   c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 3689-05 **PERMIT NO.:** 2005-EO-3689

FINAL PLANS, SPECIFICATIONS, APPLICATION AND SUPPORTING DOCUMENTS
PREPARED BY: Ameren Services

DATE ISSUED: JUN 14 2005

SUBJECT: AMEREN ENERGY GENERATING COMPANY - Hutsonville Power Station -- Operation of Ash Pond System

SPECIAL CONDITION 3: The operation of the treatment facilities must be under the direct and active field supervision of a certified industrial treatment plant operator in accordance with the State of Illinois Rules and Regulations, Title 35, Subtitle C, Chapter 1, Part 312.

SPECIAL CONDITION 4: Fly ash shall be handled, stored and disposed of on site in a manner so as not to cause or contribute to violations of the Act. No additional fly ash may be disposed of or placed in any unlined storage areas on site except during construction or closure activities in accordance with any enforcement settlement or other action taken by the Illinois Pollution Control Board.

SPECIAL CONDITION 5: The following Class I Groundwater Quality Standards as promulgated in 35 Ill. Adm. Code 620, apply to this facility except in accordance with a Groundwater Management Zone obtained from the Agency, or an adjusted groundwater quality standard, or other Illinois Pollution Control Board action.

Parameter	Units	Standard
Total Dissolved Solids	mg/l	1,200
Sulfate	mg/l	400
Boron	mg/l	2.0
Manganese	mg/l	0.15
pH	Standard Units	6.5 - 9.0

SPECIAL CONDITION 6: Monitoring wells MW-6 through MW-9 shall remain operational. The permittee shall monitor existing groundwater monitoring wells MW-1 through MW-5 on a monthly basis. Samples shall be analyzed for pH, total dissolved solids, boron, calcium, hardness, manganese, sulfate, alkalinity, and depth to groundwater. Groundwater monitoring results shall be submitted on a yearly basis to the following addresses:

Illinois Environmental Protection Agency
DWPC / CAS
1021 North Grand Ave., East
P.O. Box 19276
Springfield, Illinois 62794-9276

Illinois Environmental Protection Agency
DWPC / FOS
2125 South First Street
Champaign, Illinois 61821

READ ALL CONDITIONS CAREFULLY:
STANDARD CONDITIONS

The Illinois Environmental Protection Act (Illinois Revised Statutes Chapter 111-12. Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

1. Unless the construction for which this permit is issued has been completed, this permit will expire (1) two years after the date of issuance for permits to construct sewers or wastewater sources or (2) three years after the date of issuance for permits to construct treatment works or pretreatment works.

2. The construction or development of facilities covered by this permit shall be done in compliance with applicable provisions of Federal laws and regulations, the Illinois Environmental Protection Act, and Rules and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification of the project, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

4. The permittee shall allow any agent duly authorized by the Agency upon the presentations of credentials:

   a. to enter at reasonable times, the permittee's premises where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;

   b. to have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit;

   c. to inspect at reasonable times, including during any hours of operation of equipment constructed or operated under this permit, such equipment or monitoring methodology or equipment required to be kept, used, operated, calibrated and maintained under this permit;

   d. to obtain and remove at reasonable times samples of any discharge or emission of pollutants;

   e. to enter at reasonable times and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located;

   b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities;

   c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations;

   d. does not take into consideration or attest to the structural stability of any units or parts of the project;

   e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6. Unless a joint construction/operation permit has been issued, a permit for operating shall be obtained from the agency before the facility or equipment covered by this permit is placed into operation.

7. These standard conditions shall prevail unless modified by special conditions.

8. The Agency may file a complaint with the Board for suspension or revocation of a permit:

   a. upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed; or

   b. upon finding that any standard or special conditions have been violated; or

   c. upon any violation of the Environmental Protection Act or any Rules or Regulation effective thereunder as a result of the construction or development authorized by this permit.

Exhibit 5

North Carolina General Statute: G.S. 143-215.1

§ 143-215.1. Control of sources of water pollution; permits required.

(a) Activities for Which Permits Required. – No person shall do any of the following things or carry out any of the following activities unless that person has received a permit from the Commission and has complied with all conditions set forth in the permit:

(1) Make any outlets into the waters of the State.

(2) Construct or operate any sewer system, treatment works, or disposal system within the State.

(3) Alter, extend, or change the construction or method of operation of any sewer system, treatment works, or disposal system within the State.

(4) Increase the quantity of waste discharged through any outlet or processed in any treatment works or disposal system to any extent that would result in any violation of the effluent standards or limitations established for any point source or that would adversely affect the condition of the receiving waters to the extent of violating any applicable standard.

(5) Change the nature of the waste discharged through any disposal system in any way that would exceed the effluent standards or limitations established for any point source or that would adversely affect the condition of the receiving waters in relation to any applicable standards.

(6) Cause or permit any waste, directly or indirectly, to be discharged to or in any manner intermixed with the waters of the State in violation of the water quality standards applicable to the assigned classifications or in violation of any effluent standards or limitations established for any point source, unless allowed as a condition of any permit, special order or other appropriate instrument issued or entered into by the Commission under the provisions of this Article.

(7) Cause or permit any wastes for which pretreatment is required by pretreatment standards to be discharged, directly or indirectly, from a pretreatment facility to any disposal system or to alter, extend or change the construction or method of operation or increase the quantity or change the nature of the waste discharged from or processed in that facility.

(8) Enter into a contract for the construction and installation of any outlet, sewer system, treatment works, pretreatment facility or disposal system or for the alteration or extension of any such facility.

(9) Dispose of sludge resulting from the operation of a treatment works, including the removal of in-place sewage sludge from one location and its deposit at another location, consistent with the requirement of the Resource Conservation and Recovery Act and regulations promulgated pursuant thereto.

(10) Cause or permit any pollutant to enter into a defined managed area of the State's waters for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals.

(11) Cause or permit discharges regulated under G.S. 143-214.7 that result in water pollution.

(12) Construct or operate an animal waste management system, as defined in G.S. 143-215.10B, without obtaining a permit under either this Part or Part 1A of this Article.

(a1) In the event that both effluent standards or limitations and classifications and water quality standards are applicable to any point source or sources and to the waters to which they discharge, the more stringent among the standards established by the Commission shall be applicable and controlling.

(a2) No permit shall be granted for the disposal of waste in waters classified as sources of public water supply where the head of the agency that administers the public water supply program pursuant to Article 10 of Chapter 130A of the General Statutes, after review of the plans and specifications for the proposed disposal facility, determines and advises the Commission that any outlet for the disposal of waste is, or would be, sufficiently close to the intake works or proposed intake works of a public water supply as to have an adverse effect on the public health.

(a3) If the Commission denies an application for a permit, the Commission shall state in writing the reason for the denial and shall also state the Commission's estimate of the changes in the applicant's proposed activities or plans that would be required in order that the applicant may obtain a permit.

(a4) The Department shall regulate wastewater systems under rules adopted by the Commission for Public Health pursuant to Article 11 of Chapter 130A of the General Statutes except as otherwise provided in this subsection. No permit shall be required under this section for a wastewater system regulated under Article 11 of Chapter 130A of the General Statutes. The following wastewater systems shall be regulated by the Department under rules adopted by the Commission:

(1) Wastewater systems designed to discharge effluent to the land surface or surface waters.

(2) Wastewater systems designed for groundwater remediation, groundwater injection, or landfill leachate collection and disposal.

(3) Wastewater systems designed for the complete recycle or reuse of industrial process wastewater.

(b) Commission's Power as to Permits. –

(1) The Commission shall act on all permits so as to prevent, so far as reasonably possible, considering relevant standards under State and federal laws, any significant increase in pollution of the waters of the State from any new or enlarged sources. No permit shall be denied and no condition shall be attached to the permit, except when the Commission finds such denial or such conditions necessary to effectuate the purposes of this Article.

(2) The Commission shall also act on all permits so as to prevent violation of water quality standards due to the cumulative effects of permit decisions. Cumulative effects are impacts attributable to the collective effects of a number of projects and include the effects of additional projects similar to the requested permit in areas available for development in the vicinity. All permit decisions shall require that the practicable waste treatment and disposal alternative with the least adverse impact on the environment be utilized.

(3) General permits may be issued under rules adopted pursuant to Chapter 150B of the General Statutes. Such rules may provide that minor activities may occur under a general permit issued in accordance with conditions set out in such rules. All persons covered under general permits shall be subject to all enforcement procedures and remedies applicable under this Article.

(4) The Commission shall have the power:

a. To grant a permit with such conditions attached as the Commission believes necessary to achieve the purposes of this Article.

b. To require that an applicant satisfy the Department that the applicant, or any parent, subsidiary, or other affiliate of the applicant or parent:

1. Is financially qualified to carry out the activity for which the permit is required under subsection (a) of this section; and

2. Has substantially complied with the effluent standards and limitations and waste management treatment practices applicable to any activity in which the applicant has previously engaged, and has been in substantial compliance with other federal and state laws, regulations, and rules for the protection of the environment.

3. As used in this subdivision, the words "affiliate," "parent," and "subsidiary" have the same meaning as in 17 Code of Federal Regulations § 240.12b-2 (April 1, 1990, Edition).

4. For a privately owned treatment works that serves 15 or more service connections or that regularly serves 25 or more individuals, financial qualification may be demonstrated through the use of a letter of credit, insurance, surety, trust agreement, financial test, bond, or a guarantee by corporate parents or third parties who can pass the financial test. No permit shall be issued under this section for a privately owned treatment works that serves 15 or more service connections or that regularly

serves 25 or more individuals, until financial qualification is established and the issuance of the permit shall be contingent on the continuance of the financial qualification for the duration of the activity for which the permit was issued.

c. To modify or revoke any permit upon not less than 60 days' written notice to any person affected.

d. To designate certain classes of minor activities for which a general permit may be issued, after considering:
   1. The environmental impact of the activities;
   2. How often the activities are carried out;
   3. The need for individual permit oversight; and
   4. The need for public review and comment on individual permits.

e. To designate certain classes of minor activities for which:
   1. Performance conditions may be established by rule; and
   2. Individual or general permits are not required.

(5) The Commission shall not issue a permit for a new municipal or domestic wastewater treatment works that would discharge to the surface waters of the State or for the expansion of an existing municipal or domestic wastewater treatment works that would discharge to the surface waters of the State unless the applicant for the permit demonstrates to the satisfaction of the Commission that:

a. The applicant has prepared and considered an engineering, environmental, and fiscal analysis of alternatives to the proposed facility.

b. The applicant is in compliance with the applicable requirements of the systemwide municipal and domestic wastewater collection systems permit program adopted by the Commission.

(b1) Repealed by Session Laws 1991, c. 156, s. 1.

(c) Applications for Permits and Renewals for Facilities Discharging to the Surface Waters. –

(1) All applications for permits and for renewal of existing permits for outlets and point sources and for treatment works and disposal systems discharging to the surface waters of the State shall be in writing, and the Commission may prescribe the form of such applications. All applications shall be filed with the Commission at least 180 days in advance of the date on which it is desired to commence the discharge of wastes or the date on which an existing permit expires, as the case may be. The Commission shall act on a permit application as quickly as possible. The Commission may conduct any inquiry or investigation it considers necessary before acting on an application and may require an applicant to submit plans, specifications, and other information the Commission considers necessary to evaluate the application.

(2) a. The Department shall refer each application for permit, or renewal of an existing permit, for outlets and point sources and treatment works and disposal systems discharging to the surface waters of the State to its staff for written evaluation and proposed determination with regard to issuance or denial of the permit. If the Commission concurs in the proposed determination, it shall give notice of intent to issue or deny the permit, along with any other data that the Commission may determine appropriate, to be given to the appropriate State, interstate and federal agencies, to interested persons, and to the public.

a1. The Commission shall prescribe the form and content of the notice. Public notice shall be given at least 45 days prior to any proposed final action granting or denying the permit. Public notice shall be given by publication of the notice one time in a newspaper having general circulation within the county.

b. Repealed by Session Laws 1987, c. 734.

(3) If any person desires a public hearing on any application for permit or renewal of an existing permit provided for in this subsection, he shall so request in writing to the Commission within 30 days following date of the notice of intent. The Commission shall consider all such requests for hearing, and if the Commission determines that there is a significant public interest in holding such hearing, at least 30 days' notice of such hearing shall be given to all persons to whom notice of intent was sent and to any other person requesting notice. At least 30 days prior to the date of hearing, the Commission shall also cause a copy of the notice thereof to be published at least one time in a newspaper having general circulation in such county. In any county in which there is more than one newspaper having general circulation in that county, the Commission shall cause a copy of such notice to be published in as many newspapers having general circulation in the county as the Commission in its discretion determines may be necessary to assure that such notice is generally available throughout the county. The Commission shall prescribe the form and content of the notices.

The Commission shall prescribe the procedures to be followed in hearings. If the hearing is not conducted by the Commission, detailed minutes of the hearing shall be kept and shall be submitted, along with any other written comments, exhibits or documents presented at the hearing, to the Commission for its consideration prior to final action granting or denying the permit.

(4) Not later than 60 days following notice of intent or, if a public hearing is held, within 90 days following consideration of the matters and things presented at such hearing, the Commission shall grant or deny

any application for issuance of a new permit or for renewal of an existing permit. All permits or renewals issued by the Commission and all decisions denying application for permit or renewal shall be in writing.

(5) No permit issued pursuant to this subsection (c) shall be issued or renewed for a term exceeding five years.

(6) The Commission shall not act upon an application for a new nonmunicipal domestic wastewater discharge facility until it has received a written statement from each city and county government having jurisdiction over any part of the lands on which the proposed facility and its appurtenances are to be located which states whether the city or county has in effect a zoning or subdivision ordinance and, if such an ordinance is in effect, whether the proposed facility is consistent with the ordinance. The Commission shall not approve a permit application for any facility which a city or county has determined to be inconsistent with its zoning or subdivision ordinance unless it determines that the approval of such application has statewide significance and is in the best interest of the State. An applicant for a permit shall request that each city and county government having jurisdiction issue the statement required by this subdivision by mailing by certified mail, return receipt requested, a written request for such statement and a copy of the draft permit application to the clerk of the city or county. If a local government fails to mail the statement required by this subdivision, as evidenced by a postmark, within 15 days after receiving and signing for the certified mail, the Commission may proceed to consider the permit application notwithstanding this subdivision.

(c1) Any person who is required to obtain an individual wastewater permit under this section for a facility discharging to the surface waters of the State that have been classified as nutrient sensitive waters (NSW) under rules adopted by the Commission shall not discharge more than an average annual mass load of total nitrogen than would result from a discharge of the permitted flow, determined at the time the Commission makes a finding that those waters are experiencing or are subject to excessive growth of microscopic or macroscopic vegetation, having a total nitrogen concentration of five and one-half milligrams of nitrogen per liter (5.5 mg/l). The total nitrogen concentration of 5.5 mg/l for nutrient sensitive waters required by this subsection applies only to:

(1) Facilities that were placed into operation prior to 1 July 1997 or for which an authorization to construct was issued prior to 1 July 1997 and that have a design capacity to discharge 500,000 gallons per day or more.

(2) Facilities for which an authorization to construct is issued on or after 1 July 1997.

(c2) Any person who is required to obtain an individual wastewater permit under this section for a facility discharging to the surface waters of the State that have been

classified as nutrient sensitive waters (NSW) under rules adopted by the Commission where phosphorus is designated by the Commission as a nutrient of concern shall not discharge more than an average annual mass load of total phosphorus than would result from a discharge of the permitted flow, determined at the time the Commission makes a finding that those waters are experiencing or are subject to excessive growth of microscopic or macroscopic vegetation, having a total phosphorus concentration of two milligrams of phosphorus per liter (2.0 mg/l). The total phosphorus concentration of 2.0 mg/l for nutrient sensitive waters required by this subsection applies only to:

(1) Facilities that were placed into operation prior to 1 July 1997 or for which an authorization to construct was issued prior to 1 July 1997 and that have a design capacity to discharge 500,000 gallons per day or more.

(2) Facilities for which an authorization to construct is issued on or after 1 July 1997.

(c3) A person to whom subsection (c1) or (c2) of this section applies may meet the limits established under those subsections either individually or on the basis of a cooperative agreement with other persons who hold individual wastewater permits if the cooperative agreement is approved by the Commission. A person to whom subsection (c1) or (c2) of this section applies whose agreement to accept wastewater from another wastewater treatment facility that discharges into the same water body and that results in the elimination of the discharge from that wastewater treatment facility shall be allowed to increase the average annual mass load of total nitrogen and total phosphorus that person discharges by the average annual mass load of total nitrogen and total phosphorus of the wastewater treatment facility that is eliminated. If the wastewater treatment facility that is eliminated has a permitted flow of less than 500,000 gallons per day, the average annual mass load of total nitrogen or phosphorus shall be calculated from the most recent available data. A person to whom this subsection applies shall comply with nitrogen and phosphorus discharge monitoring requirements established by the Commission. This average annual load of nitrogen or phosphorus shall be assigned to the wastewater discharge allocation of the wastewater treatment facility that accepts the wastewater.

(c4) A person to whom subsection (c1) of this section applies may request the Commission to approve a total nitrogen concentration greater than that set out in subsection (c1) of this section at a decreased permitted flow so long as the average annual mass load of total nitrogen is equal to or is less than that required under subsection (c1) of this section. A person to whom subsection (c2) of this section applies may request the Commission to approve a total phosphorus concentration greater than that set out in subsection (c2) of this section at a decreased permitted flow so long as the average annual mass load of total phosphorus is equal to or is less than that required under subsection (c2) of this section. If, after any 12-month period following approval of a greater concentration at a decreased permitted flow, the Commission finds that the greater concentration at a decreased permitted flow does not result in an average annual mass load of total nitrogen or total phosphorus equal to or less than those that would be achieved under subsections (c1) and (c2) of this section, the Commission shall rescind

its approval of the greater concentration at a decreased permitted flow and the requirements of subsections (c1) and (c2) of this section shall apply.

(c5) For surface waters to which the limits set out in subsection (c1) or (c2) of this section apply and for which a calibrated nutrient response model that meets the requirements of this subsection has been approved by the Commission, mass load limits for total nitrogen or total phosphorus shall be based on the results of the nutrient response model. A calibrated nutrient response model shall be developed and maintained with current data, be capable of predicting the impact of nitrogen or phosphorus in the surface waters, and incorporated into nutrient management plans by the Commission. The maximum mass load for total nitrogen or total phosphorus established by the Commission shall be substantiated by the model and may require individual discharges to be limited at concentrations that are different than those set out in subsection (c1) or (c2) of this section. A calibrated nutrient response model shall be developed by the Department in conjunction with the affected parties and is subject to approval by the Commission.

(c6) For surface waters that the Commission classifies as nutrient sensitive waters (NSW) on or after 1 July 1997, the Commission shall establish a date by which facilities that were placed into operation prior to the date on which the surface waters are classified NSW or for which an authorization to construct was issued prior to the date on which the surface waters are classified NSW must comply with subsections (c1) and (c2) of this section. The Commission shall establish the compliance date at the time of the classification. The Commission shall not establish a compliance date that is more than five years after the date of the classification. The Commission may extend the compliance date as provided in G.S. 143-215.1B. A request to extend a compliance date shall be submitted within 120 days of the date on which the Commission reclassifies a surface water body as NSW.

(d) Applications and Permits for Sewer Systems, Sewer System Extensions and Pretreatment Facilities, Land Application of Waste, and for Wastewater Treatment Facilities Not Discharging to the Surface Waters of the State. –

(1) All applications for new permits and for renewals of existing permits for sewer systems, sewer system extensions and for disposal systems, and for land application of waste, or treatment works which do not discharge to the surface waters of the State, and all permits or renewals and decisions denying any application for permit or renewal shall be in writing. The Commission shall act on a permit application as quickly as possible. The Commission may conduct any inquiry or investigation it considers necessary before acting on an application and may require an applicant to submit plans, specifications, and other information the Commission considers necessary to evaluate the application. If the Commission fails to act on an application for a permit, including a renewal of a permit, within 90 days after the applicant submits all information required by the Commission, the application is considered to be approved. Permits and renewals issued in approving such facilities pursuant to this subsection shall be effective until the date

specified therein or until rescinded unless modified or revoked by the Commission. Local governmental units to whom pretreatment program authority has been delegated shall establish, maintain, and provide to the public, upon written request, a list of pretreatment applications received.

(2) An applicant for a permit to dispose of petroleum contaminated soil by land application shall give written notice that he intends to apply for such a permit to each city and county government having jurisdiction over any part of the land on which disposal is proposed to occur. The Commission shall not accept such a permit application unless it is accompanied by a copy of the notice and evidence that the notice was sent to each such government by certified mail, return receipt requested. The Commission may consider, in determining whether to issue the permit, the comments submitted by local governments.

(d1) Each applicant under subsections (c) or (d) for a permit (or the renewal thereof) for the operation of a treatment works for a private multi-family or single family residential development, in which the owners of individual residential units are required to organize as a lawfully constituted and incorporated homeowners' association of a subdivision, condominium, planned unit development, or townhouse complex, shall be required to enter into an operational agreement with the Commission as a condition of any such permit granted. The agreement shall address, as necessary, construction, operation, maintenance, assurance of financial solvency, transfers of ownership and abandonment of the plant, systems, or works, and shall be modified as necessary to reflect any changed condition at the treatment plant or in the development. Where the Commission finds appropriate, it may require any other private residential subdivision, condominium, planned unit development or townhouse complex which is served by a private treatment works and does not have a lawfully constituted and incorporated homeowners' association, and for which an applicant applies for a permit or the renewal thereof under subsections (c) or (d), to incorporate as a lawfully constituted homeowners' association, and after such incorporation, to enter into an operational agreement with the Commission and the applicant as a condition of any permit granted under subsections (c) or (d). The local government unit or units having jurisdiction over the development shall receive notice of the application within an established comment period and prior to final decision.

(e) Administrative Review. – A permit applicant or permittee who is dissatisfied with a decision of the Commission may commence a contested case by filing a petition under G.S. 150B-23 within 30 days after the Commission notifies the applicant or permittee of its decision. If the permit applicant or permittee does not file a petition within the required time, the Commission's decision is final and is not subject to review.

(f) Local Permit Programs for Sewer Extension and Reclaimed Water Utilization. – Municipalities, counties, local boards or commissions, water and sewer authorities, or groups of municipalities and counties may establish and administer within their utility service areas their own general permit programs in lieu of State permit required in G.S. 143-215.1(a)(2), (3), and (8) above, for construction, operation,

alteration, extension, change of proposed or existing sewer system, subject to the prior certification of the Commission. For purposes of this subsection, the service area of a municipality shall include only that area within the corporate limits of the municipality and that area outside a municipality in its extraterritorial jurisdiction where sewer service or a reclaimed water utilization system is already being provided by the municipality to the permit applicant or connection to the municipal sewer system or a reclaimed water utilization system is immediately available to the applicant; the service areas of counties and the other entities or groups shall include only those areas where sewer service or a reclaimed water utilization system is already being provided to the applicant by the permitting authority or connection to the permitting authority's system is immediately available. No later than the 180th day after the receipt of a program and statement submitted by any local government, commission, authority, or board the Commission shall certify any local program that does all of the following:

(1) Provides by ordinance or local law for requirements compatible with those imposed by this Part and the rules implementing this Part.

(2) Provides that the Department receives notice and a copy of each application for a permit and that it receives copies of approved permits and plans upon request by the Commission.

(3) Provides that plans and specifications for all construction, extensions, alterations, and changes be prepared by or under the direct supervision of an engineer licensed to practice in this State.

(4) Provides for the adequate enforcement of the program requirements by appropriate administrative and judicial process.

(5) Provides for the adequate administrative organization, engineering staff, financial and other resources necessary to effectively carry out its plan review program.

(6) Provides that the system is capable of interconnection at an appropriate time with an expanding municipal, county, or regional system.

(7) Provides for the adequate arrangement for the continued operation, service, and maintenance of the sewer or a reclaimed water utilization system.

(8) Is approved by the Commission as adequate to meet the requirements of this Part and the rules implementing this Part.

(f1) The Commission may deny, suspend, or revoke certification of a local program upon a finding that a violation of the provisions in subsection (f) of this section has occurred. A denial, suspension, or revocation of a certification of a local program shall be made only after notice and a public hearing. If the failure of a local program to carry out this subsection creates an imminent hazard, the Commission may summarily revoke the certification of the local program. Chapter 150B of the General Statutes does not apply to proceedings under this subsection.

(f2) Notwithstanding any other provision of subsections (f) and (f1) of this section, if the Commission determines that a sewer system, treatment works, or disposal system is operating in violation of the provisions of this Article and that the appropriate local authorities have not acted to enforce those provisions, the Commission may, after

written notice to the appropriate local government, take enforcement action in accordance with the provisions of this Article.

(g) Any person who is required to hold a permit under this section shall submit to the Department a written description of his current and projected plans to reduce the discharge of waste and pollutants under such permit by source reduction or recycling. The written description shall accompany the payment of the annual permit fee. The written description shall also accompany any application for a new permit, or for modification of an existing permit, under this section. The written description required by this subsection shall not be considered part of a permit application and shall not serve as the basis for the denial of a permit or permit modification.

(h) Each applicant for a new permit or the modification of an existing permit issued under subsection (c) of this section shall include with the application: (i) the extent to which the new or modified facility is constructed in whole or in part with funds provided or administered by the State or a unit of local government, (ii) the impact of the facility on water quality, and (iii) whether there are cost-effective alternative technologies that will achieve greater protection of water quality. The Commission shall prepare a quarterly summary and analysis of the information provided by applicants pursuant to this subsection. The Commission shall submit the summary and analysis required by this subsection to the Environmental Review Commission (ERC) as a part of each quarterly report that the Commission is required to make to the ERC under G.S. 143B-282(b). (1951, c. 606; 1955, c. 1131, s. 1; 1959, c. 779, s. 8; 1967, c. 892, s. 1; 1971, c. 1167, s. 6; 1973, c. 476, s. 128; c. 821, s. 5; c. 1262, s. 23; 1975, c. 19, s. 51; c. 583, ss. 2-4; c. 655, ss. 1, 2; 1977, c. 771, s. 4; 1979, c. 633, s. 5; 1985, c. 446, s. 1; c. 697, s. 2; 1985 (Reg. Sess., 1986), c. 1023, ss. 1-5; 1987, c. 461, s. 1; c. 734, s. 1; c. 827, ss. 154, 159; 1989, c. 51, s. 2; c. 168, s. 29; c. 453, ss. 1, 2; c. 494, s. 1; c. 727, ss. 160, 161; 1989 (Reg. Sess., 1990), c. 1004, s. 17; c. 1024, s. 33; c. 1037, s. 1; 1991, c. 156, s. 1; c. 498, s. 1; 1991 (Reg. Sess., 1992), c. 944, s. 12; 1995 (Reg. Sess., 1996), c. 626, s. 2; 1997-458, ss. 6.1, 9.1, 11.2; 1997-496, s. 3; 1998-212, s. 14.9H(b), (d); 1999-329, s. 10.1; 2004-195, s. 1.5; 2006-250, s. 5; 2007-182, s. 2.)

Exhibit 6

North Carolina Administrative Code: 15A NCAC 2T Section .1100

SECTION .1100 – RESIDUALS MANAGEMENT

15A NCAC 02T .1101 SCOPE

This Section applies to the treatment, storage, transportation, use, and disposal of residuals. Not regulated under this Section is the treatment, storage, transportation, use, or disposal of:

(1) oil, grease, grit and screenings from wastewater treatment facilities;
(2) septage from wastewater treatment facilities;
(3) ash that is regulated in accordance with Section .1200;
(4) residuals that are regulated in accordance with Section .1300 and Section .1400 of this Subchapter;
(5) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
(6) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
(7) residuals that are transported out of state for treatment, storage, use, or disposal; and
(8) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis).

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1102 DEFINITIONS

As used in this Section:

(1) "Aerobic digestion" shall mean the biochemical decomposition of organic matter in residuals into carbon dioxide and water by microorganisms in the presence of air.
(2) "Agricultural land" shall mean land on which a food crop, feed crop, or fiber crop is grown.
(3) "Anaerobic digestion" shall mean the biochemical decomposition of organic matter in residuals into methane gas and carbon dioxide by microorganisms in the absence of air.
(4) "Bag and other container" shall mean a bag, bucket, bin, box, carton, vehicle, trailer, tanker, or an open or closed receptacle with a load capacity of 1.102 short tons or one metric ton or less.
(5) "Base flood" shall mean a flood that has a one percent change of occurring in any given year (i.e., a flood with a magnitude equaled once in 100 years).
(6) "Biological residuals" shall mean residuals that have been generated during the treatment of domestic wastewater, the treatment of animal processing wastewater, or the biological treatment of industrial wastewater.
(7) "Biological treatment" shall mean treatment in a system that utilizes biological processes that shall include lagoons, activated sludge systems, extended aeration systems, and fixed film systems.
(8) "Bulk residuals" shall mean residuals that are transported and not sold or given away in a bag or other container for application to the land.
(9) "Cover" shall mean soil or other material used to cover residuals placed in a surface disposal unit.
(10) "Cumulative pollutant loading rate" shall mean the maximum amount of a pollutant that can be applied to a unit area of land.
(11) "Dedicated program" shall mean a program involving the application of bulk residuals in which any of the permitted land meets the definition of a dedicated land application site.
(12) "Dedicated land application site" shall mean land:
    (a) to which bulk residuals are applied at greater than agronomic rates,
    (b) to which bulk residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system, or
    (c) where the primary use of the land is for the disposal of bulk residuals, and agricultural crop production is of secondary importance.
(13) "Density of microorganisms" shall mean the number of microorganisms per unit mass of total solids (i.e., dry weight basis) in the residuals.
(14) "Dry weight basis" shall mean the weight calculated after the residuals have been dried at 105 degrees Celsius until they reach a constant mass.
(15) "Feed crop" shall mean a crop produced for consumption by animals.
(16) "Fiber crop" shall mean a crop grown for fiber production. This shall include flax and cotton.

(17) "Food crop" shall mean a crop produced for consumption by humans. This shall include fruits, vegetables, and tobacco.

(18) "Grit" shall mean sand, gravel, cinders, or other materials with a high specific gravity generated during preliminary treatment of wastewater in a wastewater treatment facility.

(19) "Incorporation" shall mean the mixing of residuals with top soil to a minimum depth of four inches by methods such as discing, plowing, and rototilling.

(20) "Injection" shall mean the subsurface application of liquid residuals to a depth of four to 12 inches.

(21) "Land application" shall mean the spraying or spreading of residuals onto the land surface; the injection of residuals below the land surface; or the incorporation of residuals into the soil so that the residuals can condition the soil or fertilize crops or vegetation grown in the soil.

(22) "Lower explosive limit for methane gas" shall mean the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

(23) "Monthly average" shall mean the arithmetic mean of all measurements taken during the month.

(24) "Pathogens" shall mean disease-causing organisms including disease-causing bacteria, protozoa, viruses, and viable helminth ova.

(25) "Place residuals" shall mean to dispose of residuals in a surface disposal unit.

(26) "Person who prepares residuals" shall mean either the person who generates residuals during the treatment of waste in a wastewater treatment facility or the person who derives a material from residuals.

(27) "Pollutant limit" shall mean a numerical value that describes the amount of a pollutant allowed per unit amount of residuals or the amount of a pollutant that can be applied to a unit area of land.

(28) "Public contact site" shall mean land with a high potential for contact by the public as defined in 40 CFR 503.11(l). This shall include public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

(29) "Runoff" shall mean rainwater, leachate, or other liquid that drains overland and runs off of the land surface.

(30) "Screenings" shall mean rags or other relatively large materials generated during preliminary treatment of wastewater in a wastewater treatment facility.

(31) "Seismic impact zone" shall mean an area that has a 10 percent or greater probability that the horizontal ground level acceleration of the rock in the area exceeds 0.10 gravity once in 250 years.

(32) "Specific oxygen uptake rate (SOUR)" shall mean the mass of oxygen consumed per unit time per unit mass of total solids (i.e., dry weight basis) in the residuals.

(33) "Surface disposal unit" shall mean the land on which only residuals are placed for final disposal, not including land on which residuals is either treated or stored. This shall include monofills, lagoons, and trenches.

(34) "Surface disposal unit boundary" shall mean the outermost perimeter of a surface disposal unit.

(35) "Total solids" shall mean the materials that remain as residue after the residuals have been dried at between 103 and 105 degrees Celsius until they reach a constant mass.

(36) "Water treatment residuals" shall mean residuals that have been generated during the treatment of potable or process water.

(37) "Unstabilized residuals" shall mean residuals that have not been treated in either an aerobic or an anaerobic treatment process.

(38) "Unstable area" shall mean land subject to natural or human-induced forces that may damage the structural components of a surface disposal unit. This shall include land on which the soils are subject to mass movement.

(39) "Vector attraction" shall mean the characteristic of residuals that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

(40) "Volatile solids" shall mean the amount of the total solids in the residuals lost when they are combusted at 550 degrees Celsius in the presence of excess air.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1103 PERMITTING BY REGULATION

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

(1) Preparation for land application, use, or disposal of residuals in a solid waste facility permitted by the Division of Waste Management that is approved to receive the residuals.

(2) Land application of residuals that have been prepared for land application in a solid waste facility permitted by the Division of Waste Management approved to receive the residuals as long as the requirements of this Section are met.

(3) Land application sites onto which residuals that are sold or given away in a bag or other container, are applied provided the following criteria is met:
   (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
   (B) the residuals meet the pathogen requirements in Rule .1106(a)(1) of this Section,
   (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
   (D) the land application activities are carried out according to the instructions provided in the informational sheet or bag or other container label as required in Rule .1109(a) of this Section.

(4) Land application sites onto which bulk biological residuals are applied, provided that the residuals and activities meeting the following criteria:
   (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
   (B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section,
   (C) the residuals meet the vector attraction reduction requirements in Rule .1107(a) of this Section, and
   (D) the land application activities meet all applicable conditions of Rule .1108(b)(1) and Rule .1109(b) of this Section.

(5) Land application sites onto which residuals generated from the treatment of potable or fresh water or that are generated from the treatment of non-biological industrial wastewater with no domestic or municipal wastewater contributions are applied, provided that the residuals and activities meet the following criteria:
   (A) the residuals meet the pollutant limits in Rule .1105(a) and Rule .1105(c) of this Section,
   (B) the residuals meet the pathogen requirements in Rule .1106(b) of this Section, and
   (C) the land application activities meet all applicable conditions of Rule .1108(b)(1) and Rule .1109 of this Section.

(6) Transportation of residuals from the residuals generating source facility to other Division or Division of Waste Management facilities approved to treat, store, use, or dispose the residuals.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1104 APPLICATION SUBMITTAL

(a) For new and expanding residuals treatment and storage facilities:

(1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the applicant depicting the location, orientation and relationship of facility components including:
[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]
   (A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility-related structures and fences within the treatment and storage areas;
   (B) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of all treatment and storage facilities and delineation of the review and compliance boundaries;
   (C) setbacks as required by Rule .1108 of this Section; and
   (D) site property boundaries within 500 feet of all treatment and storage facilities.

(2) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the applicant:
[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]
(A) engineering plans for the facilities and equipment except those previously permitted unless they are directly tied into the new units or are critical to the understanding of the complete process;
(B) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product including leakage testing; and
(C) engineering calculations including hydraulic and pollutant loading for each unit, unit sizing criteria, hydraulic profile of the facilities, total dynamic head and system curve analysis for each pump, and buoyancy calculations.

(b) For new and modified sources of residuals:
(1) Site maps shall be provided to the Division by the applicant depicting the location of the source.
(2) A complete analysis of the residuals shall be provided to the Division by the applicant. The analysis may include all pollutants identified in Rule .1105 of this Section, nutrients and micronutrients, hazardous waste characterization tests, and proof of compliance with Rule .1106 and Rule .1107 of this Section if applicable.
(3) A sampling/monitoring plan that describes how compliance with Rule .1105, Rule .1106, and Rule .1107 of this Section if applicable shall be provided to the Division by the applicant.

(c) For new and expanding non-dedicated land application sites:
(1) Buffer maps shall be provided to the Division by the applicant depicting the location, orientation and relationship of land application site features including:
(A) a scaled map of the land application site, showing all related structures and fences within the land application area;
(B) the location of all wells, streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the land application area and delineation of the review and compliance boundaries;
(C) setbacks as required by Rule .1108 of this Section; and
(D) property boundaries within 500 feet of the land application site.
(2) Soils Report. A soil evaluation of the land application site shall be provided to the Division by the applicant. This evaluation shall be presented in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:
[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]
(A) Confirmation of a county soils map, soil evaluation, and verification of the presence or absence of a seasonal high water table within three feet of land surface or establishment of a soil map through field description of soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive horizon(s); and presence or absence and depth of evidence of any seasonal high water table (SHWT).
(B) A representative soils analysis for standard soil fertility and all pollutants listed in Rule .1105(b) of this Section. The Standard Soil Fertility Analysis shall include the following parameters: acidity; base saturation (by calculation); calcium; cation exchange capacity; copper; exchangeable sodium percentage (by calculation); magnesium; manganese; percent humic matter; pH; phosphorus; potassium; sodium, and zinc.
(3) A project evaluation and a land application site management plan (if applicable) with recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the residuals shall be provided to the Division.
(4) Unless the land application site is owned by the Permittee, property ownership documentation consisting of a notarized landowner agreement shall be provided to the Division.

(d) For new and expanding dedicated land application sites:

(1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the applicant depicting the location, orientation and relationship of land application site features including:
[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]
(A) a scaled map of the site, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all facility-related structures and fences within the land application area;
(B) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the land application site and delineation of the review and compliance boundaries;
(C) setbacks as required by Rule .1108 of this Section; and
(D) property boundaries within 500 feet of the land application site.

(2) Engineering design documents (for land applications sites onto which bulk residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only). If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the applicant:
[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]
(A) engineering plans for the facilities and equipment except those previously permitted unless they are directly tied into the new units or are critical to the understanding of the complete process;
(B) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product including leakage testing; and
(C) engineering calculations including hydraulic and pollutant loading, sizing criteria, hydraulic profile, total dynamic head and system curve analysis for each pump, and irrigation design.

(3) Soils Report. A soil evaluation of the land application site shall be provided. This evaluation shall be presented to the Division by the applicant in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:
[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]
(A) Field description of soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive horizon(s); and presence or absence and depth of evidence of any seasonal high water table (SHWT). Applicants shall dig pits if necessary for proper evaluation of the soils at the site.
(B) Recommendations concerning loading rates of liquids, solids, other residuals constituents and amendments (i.e., for land application sites onto which bulk residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only). Annual hydraulic loading rates shall be based on in-situ measurement of saturated hydraulic conductivity in the most restrictive horizon for each soil mapping unit. Maximum irrigation precipitation rates shall be provided for each soil mapping unit.
(C) A soil map delineating soil mapping units within the land application site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow.
(D) A representative soils analysis for standard soil fertility and all pollutants listed in Rule .1105(b) of this Section. The Standard Soil Fertility Analysis shall include the following parameters: acidity, base saturation (by calculation), calcium, cation exchange capacity, copper, exchangeable sodium percentage (by calculation), magnesium, manganese, percent humic matter, pH, phosphorus, potassium, sodium, and zinc.

(4) A hydrogeologic description prepared by a Licensed Geologist, License Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C respectively of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided to the Division by the applicant. A greater depth of investigation is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site. These techniques may include geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following components:

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under G.S. 89C.]

(A) a description of the regional and local geology and hydrogeology;

(B) a description, based on field observations of the land application site, of the land application site topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the contaminant plume and treated wastewater;

(C) changes in lithology underlying the land application site;

(D) depth to bedrock and occurrence of any rock outcrops;

(E) the hydraulic conductivity and transmissivity of the affected aquifer(s);

(F) depth to the seasonal high water table;

(G) a discussion of the relationship between the affected aquifers of the land application site to local and regional geologic and hydrogeologic features;

(H) a discussion of the groundwater flow regime of the land application site prior to operation of the proposed site and post operation of the proposed site focusing on the relationship of the site to groundwater receptors, groundwater discharge features, and groundwater flow media; and

(I) if residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only and if the SHWT is within six feet of the surface, a mounding analysis to predict the level of the SHWT after residuals land application.

(5) For land application sites onto which bulk residuals are applied through fixed irrigation facilities or irrigation facilities fed through a fixed supply system only, a water balance shall be provided to the Division by the applicant that determines required residuals storage based upon the most limiting factor of the hydraulic loading based on either the most restrictive horizon or groundwater mounding analysis; or nutrient management based on either agronomic rates for the specified cover crop or crop management requirements.

(6) A project evaluation and a receiver site management plan (if applicable) with recommendations concerning cover crops and their ability to accept the proposed application rates of liquid, solids, minerals and other constituents of the residuals shall be provided to the Division by the applicant.

(7) Property Ownership Documentation shall be provided to the Division by the applicant consisting of:

(A) legal documentation of ownership (i.e., contract, deed or article of incorporation);

(B) written notarized intent to purchase agreement signed by both parties, accompanied by a plat or survey map; or

(C) written notarized lease agreement signed by both parties, specifically indicating the intended use of the property, as well as a plat or survey map. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

(e) For new and expanding surface disposal units:

(1) Site plans. If required by G.S. 89C, a professional land surveyor shall provide location information on boundaries and physical features not under the purview of other licensed professions. Site plans or maps shall be provided to the Division by the applicant depicting the location, orientation and relationship of the surface disposal unit features including:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that locating boundaries and physical features, not under the purview of other licensed professions, on maps pursuant to this Paragraph constitutes practicing surveying under G.S. 89C.]

(A) a scaled map of the surface disposal unit, with topographic contour intervals not exceeding 10 feet or 25 percent of total site relief and showing all surface disposal unit-related structures and fences within the surface disposal unit;

(B) the location of all wells (including usage and construction details if available), streams (ephemeral, intermittent, and perennial), springs, lakes, ponds, and other surface drainage features within 500 feet of the surface disposal unit and delineation of the review and compliance boundaries;

(C) setbacks as required by Rule .1108 of this Section; and

(D) site property boundaries within 500 feet of the surface disposal unit.

(2) Engineering design documents. If required by G.S. 89C, a professional engineer shall prepare these documents. The following documents shall be provided to the Division by the applicant:

[Note: The North Carolina Board of Examiners for Engineers and Surveyors has determined, via letter dated December 1, 2005, that preparation of engineering design documents pursuant to this Paragraph constitutes practicing engineering under G.S. 89C.]

(A) engineering plans for the surface disposal unit and equipment except those previously permitted unless they are directly tied into the new units or are critical to the understanding of the complete process;

(B) specifications describing materials to be used, methods of construction, and means for ensuring quality and integrity of the finished product including leakage testing; and

(C) engineering calculations including hydraulic and pollutant loading, sizing criteria, hydraulic profile, and total dynamic head and system curve analysis for each pump.

(3) Soils Report. A soil evaluation of the surface disposal unit site shall be provided to the Division by the applicant in a report that includes the following. If required by G.S. 89F, a soil scientist shall prepare this evaluation:

[Note: The North Carolina Board for Licensing of Soil Scientists has determined, via letter dated December 1, 2005, that preparation of soils reports pursuant to this Paragraph constitutes practicing soil science under G.S. 89F.]

(A) Field description of soil profile, based on examinations of excavation pits or auger borings, within seven feet of land surface or to bedrock describing the following parameters by individual diagnostic horizons: thickness of the horizon; texture; color and other diagnostic features; structure; internal drainage; depth, thickness, and type of restrictive horizon(s); and presence or absence and depth of evidence of any seasonal high water table (SHWT). Applicants may be required to dig pits when necessary for proper evaluation of the soils at the site.

(B) A soil map delineating major soil mapping units within the surface disposal unit site and showing all physical features, location of pits and auger borings, legends, scale, and a north arrow.

(4) A hydrogeologic description prepared by a Licensed Geologist, License Soil Scientist, or Professional Engineer if required by Chapters 89E, 89F, or 89C respectively of the subsurface to a depth of 20 feet or bedrock, whichever is less, shall be provided to the Division by the applicant. A greater depth of investigation is required if the respective depth is used in predictive calculations. This evaluation shall be based on borings for which the numbers, locations, and depths are sufficient to define the components of the hydrogeologic evaluation. In addition to borings, other techniques may be used to investigate the subsurface conditions at the site. These techniques include geophysical well logs, surface geophysical surveys, and tracer studies. This evaluation shall be presented in a report that includes the following components:

[Note: The North Carolina Board for Licensing of Geologists, via letter dated April 6, 2006, North Carolina Board for Licensing of Soil Scientists, via letter dated December 1, 2005, and North Carolina Board of Examiners for Engineers and Surveyors, via letter dated December 1, 2005, have determined that preparation of hydrogeologic description documents pursuant to this Paragraph constitutes practicing geology under G.S. 89E, soil science under G.S. 89F, or engineering under G.S. 89C.]

(A) a description of the regional and local geology and hydrogeology;

(B) a description, based on field observations of the site, of the site topographic setting, streams, springs and other groundwater discharge features, drainage features, existing and abandoned wells, rock outcrops, and other features that may affect the movement of the contaminant plume and treated wastewater;

(C) changes in lithology underlying the site;

(D) depth to bedrock and occurrence of any rock outcrops;
(E) the hydraulic conductivity and transmissivity of the affected aquifer(s);
(F) depth to the seasonal high water table;
(G) a discussion of the relationship between the affected aquifers of the site to local and regional geologic and hydrogeologic features; and
(H) a discussion of the groundwater flow regime of the site prior to operation of the proposed unit and post operation of the proposed unit focusing on the relationship of the unit to groundwater receptors, groundwater discharge features, and groundwater flow media.

(5) Property Ownership Documentation shall be provided to the Division by the applicant consisting of:
(A) legal documentation of ownership (i.e., contract, deed or article of incorporation);
(B) written notarized intent to purchase agreement signed by both parties, accompanied by a plat or survey map; or
(C) written notarized lease agreement signed by both parties, specifically indicating the intended use of the property, as well as a plat or survey map. Lease agreements shall adhere to the requirements of 15A NCAC 02L .0107.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1105 POLLUTANT LIMITS

(a) Bulk residuals or residuals that are sold or given away in a bag or other container shall not be applied to the land if the concentration of any pollutant in the residuals exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

Pollutant	Ceiling Concentration (milligrams per kilogram)
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

(b) Bulk residuals shall not be applied to the land if the land application causes the exceedance of the cumulative pollutant loading rate for any pollutant as stipulated in the following (i.e., on a dry weight basis):

Pollutant	Cumulative Pollutant Loading Rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

(1) A person shall determine compliance with the cumulative pollutant loading rates using one of the following methods:
(A) by calculating the existing cumulative level of pollutants using actual analytical data from all historical land application events of residuals not otherwise exempted by this Paragraph or

(B) for land on which land application events of residuals has not occurred or for which the data required in Rule .1105(b) is incomplete, by determining background concentrations through representative soil sampling.

(2) When applied to the land, bulk residuals shall be exempt from complying with this Paragraph as long as they meet all of the following criteria:

(A) the monthly average concentrations stipulated in Rule .1105(c) of this Section.

(B) the pathogen reduction requirements stipulated in Rule .1106(b) of this Section, and

(C) the vector attraction reduction requirements stipulated in Rule .1107 of this Section.

(c) Bulk residuals shall not be applied to a lawn, home garden, or public contact use site nor shall residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in the residuals exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

Pollutant	Monthly Average Concentration (milligrams per kilogram)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

(d) Bulk residuals shall not be placed in a surface disposal unit if the concentration of any pollutant in the residuals exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

Distance from Surface Disposal Unit Boundary to Closest Property Line (meters)	Ceiling Concentration (milligrams per kilogram)		
	Arsenic	Chromium	Nickel
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270
75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 and greater	62	450	420

History Note: *Authority G.S. 143-215.1; 143-215.3(a); Eff. September 1, 2006.*

15A NCAC 02T .1106 PATHOGEN REDUCTION REQUIREMENTS

(a) The following pathogen requirements shall be met when biological residuals are applied to the land or placed in a surface disposal unit:

(1) The Class A pathogen requirements shall be met when bulk biological residuals are applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.

(2) Biological residuals placed in a surface disposal unit shall be exempt from meeting the Class A or Class B pathogen requirements if the vector attraction reduction method in Rule .1107(b)(2) of this Section is met.

(3) Programs involving the land application of biological residuals generated by wastewater treatment facilities treating industrial wastewater only that are operational at the time of this Rule's effective date shall comply with the requirements stipulated in this Rule no later than five years from the effective date of this Rule unless the Permittee is adhering to an established schedule in an individual permit,

settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document that establishes a later deadline.

(b) For biological residuals to be classified as Class A with respect to pathogens, the following shall be met:

(1) The requirements in this Paragraph are met either prior to meeting or at the same time as vector attraction reduction requirements in Rule .1107 of this Section are met, unless the vector attraction reduction methods stipulated in Rule .1107(a)(6), Rule .1107(a)(7), and Rule .1107(a)(8) of this Section are met.

(2) The biological residuals are monitored at the time that the biological residuals are used or disposed or are prepared for sale or giving away in a bag or other container for application to the land for the density of fecal coliform or Salmonella sp. bacteria to demonstrate the following:

(A) the density of fecal coliform is less than 1,000 Most Probable Number per gram of total solids (i.e., dry weight basis), or

(B) the density of Salmonella sp. bacteria is less than three Most Probable Number per four grams of total solids (i.e., dry weight basis).

(3) The biological residuals meet one of the following alternatives:

(A) Time/Temperature. The temperature of the biological residuals shall be maintained at a specific value for a period of consecutive time in accordance with the following:

Total Solids (percent)	Temperature (t) (degrees Celsius)	Time	Equation to Determine Minimum Holding Time (D) (days)
≥ 7	≥ 50	$\geq$ 20 minutes	$\frac{131,700,000}{10^{0.1400t}}$
≥ 7	≥ 50	$\geq$ 15 seconds[1]	$\frac{131,700,000}{10^{0.1400t}}$
< 7	≥ 50	$\geq$ 15 seconds <30 minutes	$\frac{131,700,000}{10^{0.1400t}}$
<7	≥ 50	$\geq$ 30 minutes	$\frac{50,070,000}{10^{0.1400t}}$

1 – when residuals are heated by warmed gases or an immiscible liquid

(B) Alkaline Treatment. The pH of the biological residuals shall be raised to above 12 and remains above 12 for 72 consecutive hours. The temperature of the biological residuals shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the biological residuals is above 12. At the end of the 72-hour period during which the pH is above 12, the biological residuals shall be air dried to achieve a total solids greater than 50 percent.

(C) Prior Testing for Enteric Viruses/Viable Helminth Ova. The biological residuals shall be analyzed prior to pathogen reduction treatment to determine whether the biological residuals contain enteric viruses or viable helminth ova. The density of enteric viruses prior to pathogen reduction treatment shall be less than one Plaque-forming Unit per four grams of total solids (i.e., dry weight basis) or the density of viable helminth ova shall be less than one per four grams of total solids (i.e., dry weight basis). When the density of enteric viruses or viable helminth ova are equal to or greater than these values, the biological residuals shall be considered to be Class A following pathogen reduction treatment if the resultant densities are less than these values and the operating parameters for the pathogen reduction treatment are documented to the satisfaction of the Division. After this demonstration, the biological residuals shall be considered to be Class A as long as the operating parameters for the pathogen reduction treatment are met and documented to the satisfaction of the Division.

(D) No Prior Testing for Enteric Viruses/Viable Helminth Ova. The density of enteric viruses in the biological residuals shall be less than one Plaque-forming Unit per four grams of total solids (i.e., dry weight basis) or the density of viable helminth ova in the biological residuals

shall be less than one per four grams of total solids (i.e., dry weight basis) at the time that the biological residuals are used or disposed or is prepared for sale or giving away in a bag or other contained for application to the land.

(E) Process to Further Reduce Pathogens - Composting. The biological residuals shall be composted using either the within-vessel method or the static aerated pile method, during which the temperature of the biological residuals is maintained at 55 degrees Celsius or higher for three consecutive days or longer. Alternatively, the biological residuals shall be composted using the windrow method, during which the temperature of the biological residuals is maintained at 55 degrees Celsius or higher for 15 consecutive days or longer. The windrow shall be turned five times during the period when the biological residuals are maintained at 55 degrees Celsius or higher, Natural decay of the biological residuals under uncontrolled conditions are not sufficient to meet this process.

(F) Process to Further Reduce Pathogens - Heat Drying. The biological residuals shall be dried by direct or indirect contact with hot gases to reduce the moisture content of the biological residuals to 10 percent or lower. During the process, either the temperature of the biological residuals particles exceeds 80 degrees Celsius or the wet bulb temperature of the gas in contact with the biological residuals as they leave the dryer exceeds 80 degrees Celsius.

(G) Process to Further Reduce Pathogens - Heat Treatment. The biological residuals shall be heated to a temperature of 180 degrees Celsius or higher for 30 minutes. This process is only available to biological residuals that are in a liquid state.

(H) Process to Further Reduce Pathogens - Thermophilic Aerobic Digestion. The biological residuals shall be agitated with air or oxygen to maintain aerobic conditions, and the mean cell residence time of the biological residuals shall be 10 days at between 55 and 60 degrees Celsius. This process is only available to biological residuals that are in a liquid state.

(I) Process to Further Reduce Pathogens - Beta Ray Irradiation. The biological residuals shall be irradiated with beta rays from an accelerator at dosages of at least 1.0 megarad at room temperature (i.e., approximately 20 degrees Celsius).

(J) Process to Further Reduce Pathogens - Gamma Ray Irradiation. The biological residuals shall be irradiated with gamma rays from certain isotopes, such as Cobalt 60 and Cesium 137, at room temperature (i.e., approximately 20 degrees Celsius).

(K) Process to Further Reduce Pathogens - Pasteurization. The temperature of the biological residuals shall be maintained at 70 degrees Celsius or higher for 30 minutes or longer.

(c) For biological residuals to be classified as Class B with respect to pathogens one of the following shall be met:

(1) Fecal Coliform Density Demonstration. Seven samples of the biological residuals are collected at the time the residuals are used or disposed, and the geometric mean of the density of fecal coliform in the samples collected is less than either 2,000,000 Most Probable Number per gram of total solids (i.e., dry weight) or 2,000,000 Colony Forming Units per gram of total solids (i.e., dry weight basis).

(2) Process to Significantly Reduce Pathogens. The biological residuals processed in a process to significantly reduce pathogens. The processes to significantly reduce pathogens are as follows:

(A) Aerobic Digestion. Biological residuals are agitated with air or oxygen to maintain aerobic conditions for a specific mean cell time at a specific temperature. Values for the mean cell residence time and temperature are between 40 days at 20 degrees Celsius and 60 days at 15 degrees Celsius.

(B) Air Drying. Biological residuals are dried on sand beds or on paved or unpaved basins for a minimum of three months. During two of the three months, the ambient average daily temperature is above zero degrees Celsius.

(C) Anaerobic Digestion. Biological residuals are treated in the absence of air for a specific mean cell residence time at a specific temperature. Values for the mean cell residence time and temperature are between 15 days at 35 to 55 degrees Celsius and 60 days at 20 degrees Celsius.

(D) Composting. Using either the within-vessel, static aerated pile, or windrow composting methods, the temperature of the biological residuals is raised to 40 degrees Celsius or higher and remains at 40 degrees Celsius or higher for five days. For four hours during the five days, the temperature in the compost pile exceeds 55 degrees Celsius. Natural decay of the biological residuals under uncontrolled conditions is not sufficient to meet this process

(E) Lime Stabilization. Sufficient lime is added to the biological residuals to raise the pH to 12 after two hours of contact.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1107 VECTOR ATTRACTION REDUCTION REQUIREMENTS

(a) Biological residuals shall not be applied to the land unless the requirements of one of the vector attraction reduction alternatives have been met. Programs involving the land application of biological residuals generated by wastewater treatment facilities treating industrial wastewater only that are operational at the time of this Rule's effective date shall comply with the requirements stipulated in this Rule no later than five years from the effective date of this Rule unless the Permittee is adhering to an established schedule in an individual permit, settlement agreement, special order pursuant to G.S. 143-215.2, or other similar document that establishes a later deadline. The vector attraction reduction alternatives shall be as follows:

(1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the biological residuals shall be reduced by a minimum of 38 percent between the time that the biological residuals enter the digestion process and the time it is land applied.

(2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested biological residuals shall be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the biological residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.

(3) 30-Day Bench Scale Test. A portion of previously aerobically-digested biological residuals shall be further aerobically-digested in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically-digested biological residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the biological residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.

(4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for biological residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.

(5) 14-Day Aerobic Processes. The biological residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the biological residuals shall be higher than 40 degrees Celsius, and the average temperature of the biological residuals shall be higher than 45 degrees Celsius.

(6) Alkaline Stabilization. The pH of the biological residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

(7) Drying of Stabilized Residuals. The biological residuals shall be dried to 75 percent total solids if the biological residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the biological residuals with other materials shall not be used to meet this alternative.

(8) Drying of Unstabilized Residuals. The biological residuals shall be dried to 90 percent total solids if the biological residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the biological residuals with other materials shall not be used to meet this alternative.

(9) Injection.
  (A) Biological residuals shall be injected below the surface of the land in accordance with 40 CFR 503.33(b)(9)(ii).
  (B) If Class A with respect to pathogens, the biological residuals shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

(10) Incorporation.
  (A) If Class B with respect to pathogens, the biological residuals shall be incorporated into the soil within six hours after application to the land.
  (B) If Class A with respect to pathogens, the biological residuals shall be applied to the land within eight hours after being discharged from the pathogen treatment process.

(b) Biological residuals shall not be placed in a surface disposal unit unless one of the following vector attraction reduction alternatives have been met:

(1) Any alternative stipulated in Paragraph (a) of this Rule.

(2) Daily Cover. Biological residuals shall be covered with soil or other material at the end of each operating day.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1108 SETBACKS

(a) For residuals treatment and storage facilities, the following minimum setbacks (i.e., in feet) shall be adhered to:

Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	100
Private or public water supply sources	100
Surface waters (streams – intermittent and perennial, lakes, perennial waterbodies, and wetlands)	50
Wells with exception to monitoring wells	100
Property lines	50

(b) For land onto which bulk residuals are applied or stockpiled, the following minimum setbacks (i.e., in feet) shall be adhered to:

(1) If the bulk residuals meet the requirements of Rules .1105(c), .1106(b), and .1107 of this Section:

	Liquid Residuals	Cake Residuals
Private or public water supply sources	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100	25
Surface water diversions (ephemeral streams, waterways, ditches)	25	0
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	0
Wells with exception to monitoring wells	100	100
Bedrock outcrops	25	0

(2) If the bulk residuals do not meet the requirements of Rules .1105(c), .1106(b), and .1107 of this Section:

	Surface Application by Vehicle	Surface Application by Irrigation	Injection/ Incorporation
Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	400	400	200
Habitable residences or places of public assembly owned by the permittee, the owner of the land, or the lessee/operator of the land to be maintained as part of the project site	0	200	0
Property lines	50	150	50
Public rights of way	50	50	50
Private or public water supply sources	100	100	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100	100	50
Surface water diversions (ephemeral streams, waterways, ditches)	25	100	25
Groundwater lowering ditches (where the bottom of the ditch intersects the SHWT)	25	100	25
Subsurface groundwater lowering drainage systems	0	100	0
Wells with exception to monitoring wells	100	100	100
Bedrock outcrops	25	25	25
Top of slope of embankments or cuts of two feet or more in vertical height	15	15	15
Building foundations or basements	0	15	0
Water lines	0	10	0
Swimming pools	100	100	100
Nitrification fields	0	20	0

(c) For the construction and operation of surface disposal units, the following minimum setbacks (i.e., in feet) shall be adhered to:

Habitable residences or places of public assembly under separate ownership or not to be maintained as part of the project site	400
Property lines	50
Public rights of way	50
Private or public water supply sources	100
Surface waters (streams - intermittent and perennial, perennial waterbodies, and wetlands)	100
Surface water diversions (ephemeral streams, waterways, ditches)	25
Groundwater lowering ditches(where the bottom of the ditch intersects the SHWT)	100
Subsurface groundwater lowering drainage systems	100
Wells with exception to monitoring wells	100
Water lines	10
Swimming pools	100

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1109 OPERATION AND MANAGEMENT PRACTICES

(a) For residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the residuals. The label/information sheet shall contain the following information:

(1) the name and address of the person who prepared the residuals and

(2) a statement that land application of the residuals shall be prohibited except with the instructions on the label/sheet.

(3) that residuals shall be applied at agronomic rates and recommended rates for intended uses.

(b) For land onto which bulk residuals are applied, the following shall apply:

(1) Bulk residuals shall not be applied to the land under the following conditions:

(A) if the requirements specified by 40 CFR 503.14(a) as stated on January 1, 1996 and incorporated by reference cannot be met;

(B) if the application causes prolonged nuisance conditions;

(C) if the land fails to assimilate the bulk residuals or the application causes the contravention of surface water or groundwater standards;

(D) if the land is flooded, frozen, or snow-covered or is otherwise in a condition such that runoff of the residuals would occur;

(E) within the 100-year flood elevation unless the bulk residuals are injected or incorporated within a 24-hour period following the residuals land application event;

(F) during precipitation events or within 24 hours following a rainfall event of 0.5 inches or greater in a 24-hour period;

(G) if the slope of the land is greater than 10 percent when bulk liquid residuals are surface applied, and if the slope of the land is greater than 18 percent when bulk liquid residuals are injected or incorporated;

(H) if the land does not have an established vegetative cover crop unless the bulk residuals are incorporated within a 24-hour period following the residuals land application event or injected;

(I) if the vertical separation of the seasonal high water table and the depth of residuals application is less than one foot;

(J) if the vertical separation of the depth to bedrock and the depth of residuals application is less than one foot; or

(K) application exceeds agronomic rates except for dedicated sites where the applicant has specifically requested higher rates in an applications pursuant to Rule .1104(d) of this Section.

(2) For land onto which bulk residuals that do not meet the requirements of Rule .1106(b) of this Section are applied, the following public access restrictions shall be adhered to:

(A) public access to public contact sites shall be restricted for one calendar year after any residuals land application event;

(B) public access to land that is not a public contact site shall be restricted for 30 days after any residuals land application event; and

(C) public access to land associated with a dedicated land application site shall be restricted continuously while the land is permitted for active use and for one calendar year after the final residuals land application event.

(3) For land onto which bulk residuals that do not meet the requirements of Rule .1106(b) of this Section are applied, the following harvesting and grazing restrictions shall be adhered to:

(A) animals shall not be allowed to graze on land for 30 calendar days after any residuals land application event;

(B) food crops, feed crops, and fiber crops shall not be harvested for 30 calendar days after any residuals land application event;

(C) food crops with harvested parts that touch the residuals/soil mixture and are totally above the land surface shall not be harvested for 14 months after any residuals land application event;

(D) food crops with harvested parts below the surface of the land shall not be harvested for 20 months after any residuals land application event when the residuals remain on the land surface for four months or longer prior to incorporation into the soil;

(E) food crops with harvested parts below the surface of the land shall not be harvested for 38 months after any residuals land application event when the residuals remain on the land surface for less than four months prior to incorporation into the soil; and

(F) turf grown on land where residuals are applied shall not be harvested for one calendar year after any residuals land application event.

(c) For surface disposal units, the following conditions shall be met:

(1) For new and expanding surface disposal units, the following conditions shall be met.

(A) Surface disposal units shall not be located in a seismic impact zone unless designed to withstand the maximum recorded horizontal ground level acceleration.

(B) Surface disposal units shall not be located less than 60 meters from a fault that has displacement in Holocene time.

(C) Surface disposal units shall not be located within an unstable area.

(D) Surface disposal units shall not be located within the 100-year floodplain.

(E) Surface disposal units shall not restrict base flood flow.

(F) The vertical separation of the seasonal high water table and the bottom of surface disposal units shall not be less than three feet.

(G) Surface disposal units shall be provided with a liner system with a maximum hydraulic conductivity of 10^{-7} centimeters per second. If cake residuals are to be placed in the unit, a leachate collection system shall be required. If liquid residuals are to be placed in the unit, a decanting system and freeboard marker shall be required.

(2) The following conditions shall be met while surface disposal units are permitted for active use and for three calendar years after closure:

(A) The requirements specified by 40 CFR 503.24(a) as stated on January 1, 1996 and incorporated by reference shall be met.

(B) Surface disposal units shall not cause prolonged nuisance conditions.

(C) Surface disposal units shall not cause the contravention of surface water or groundwater standards.

(D) Runoff from a 24-hour 25-year storm event, decant water, and leachate (i.e., as applicable) shall be collected from surface disposal units.

(E) If biological residuals are placed in the surface disposal unit, the concentration of methane gas shall not exceed 25 percent of the lower explosive limit for methane gas in any structure within the surface disposal unit boundary.

(F) If biological residuals are placed in the surface disposal unit, the concentration of methane gas shall not exceed the lower explosive limit for methane gas at any property line of the surface disposal unit.

(G) Public access to surface disposal units shall be restricted continuously.

(H) Animals shall not be allowed to graze on surface disposal units.

(I) Food crops, feed crops, and fiber crops shall not be harvested from surface disposal units.

(3) Following active use, surface disposal units shall be closed. Permits for surface disposal units shall be maintained for a minimum of three years following successful closure. Requests for approval of

closure plans shall be submitted to the Division at least 180 days prior to the date that a surface disposal unit is to be closed and shall include the following information:

(A) how the surface disposal unit will be closed;

(B) a discussion of how the leachate collection system will be operated and maintained, if applicable;

(C) a description of the system used to monitor the air for methane gas in the air in any structures within the surface disposal unit boundary and at the property line of the surface disposal unit, if applicable;

(D) a discussion of how public access to the surface disposal unit will be restricted; and

(E) proof that the deed for the surface disposal unit property has been amended to provide permanent written notification to subsequent owners of the property that the property was used for the purposes of operating a surface disposal unit.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1110 OPERATION AND MAINTENANCE PLAN

An Operation and Maintenance Plan shall be maintained for all residuals management programs. The plan shall:

(1) describe the operation of the program and any associated facilities and equipment in sufficient detail to show what operations are necessary for the program to function and by whom the functions are to be conducted;

(2) describe anticipated maintenance of facilities and equipment that are associated with the program.

(3) include provisions for safety measures including restriction of access to the site and equipment, as appropriate;

(4) include spill control provisions including:

(a) response to upsets and bypasses including control, containment, and remediation; and

(b) contact information for program personnel, emergency responders, and regulatory agencies;

(5) detail procedures for sampling and monitoring to ensure that the program stays in compliance with this Section and any issued permit; and

(6) for surface disposal units, detail procedures for post-closure care management.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

15A NCAC 02T .1111 MONITORING AND REPORTING

(a) Representative samples of residuals that are prepared for application to the land or placed in a surface disposal unit shall be collected and analyzed.

(b) The analytical methods listed in 40 CFR 503.8(b) as stated on January 1, 1996 shall be incorporated into this Section by reference.

(c) Residuals applied to the land or placed in a surface disposal unit shall be monitored for pollutants as listed in Rule .1105(a) and Rule .1105(d) of this Section as well as Rule .1106 and Rule .1107 as applicable at the frequency as stipulated in the following:

Metric Tons per 365 day period (Dry Weight Basis)	Monitoring Frequency
Greater than zero but less than 290	Once per year
Equal to or greater than 290 but less than 1,500	Once per quarter (four times per year)
Equal to or greater than 1,500 but less than 15,000	Once per 60 days (six times per year)
Equal to or greater than 15,000	Once per month (12 times per year)

(d) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the permittee annually on or before March 1st of each calendar year.

(e) All records shall be retained for a minimum of five years.

History Note: *Authority G.S. 143-215.1; 143-215.3(a);*
Eff. September 1, 2006.

Exhibit 7

North Carolina Guidance

August 18, 2003

MEMORANDUM

TO: Groundwater Regional Supervisors
Permits & Compliance Unit
Operations Branch

FROM: Arthur Mouberry, P.E.
Chief, Groundwater Section

SUBJECT: Guidelines for the Closure of Treatment Ponds and Lagoons

Purpose: The purpose of these guidelines is to protect the quality of the groundwater resources of the state while accomplishing the closure of a treatment pond or lagoon.

Background: Man-made treatment ponds and lagoon type structures are used to contain fluids and semi-solids for a variety of reasons. As these ponds and lagoons become no longer necessary, the structure needs to be abandoned in an environmentally friendly manner. The Groundwater Section's major concern with the elimination of these structures is that groundwater remains protected both during and after abandonment. Each structure must be considered for its unique circumstances on a case-by-case basis.

Regulations relevant to the abandonment of ponds and lagoons for ground waters of the state include the Classifications and Water Quality Standards found in Title 15A NCAC 2L. Other pertinent standards and regulations may be found in the DENR Land Resources regulations pertaining to Sedimentation and Erosion Control and Dam Safety, the DENR Waste Management regulations pertaining to the disposal of wastes and sludge, and the NCDOT regulations pertaining to transportation of materials on public highways. Lagoons for animal waste are regulated under the federal NRCS Standards.

Recommended Procedure:

The major elements of pond and lagoon structures include the contents, the walls, the floor and the liner, if one exists. Each element must be characterized for its quantity and material properties in order to prepare a closure plan. Guidelines for the preparation of this plan are described in the following steps:

1) Collect and assemble **field information** by characterizing the structural elements and liquid contents, including bottom sludge in the impoundment. Sampling will be required in most situations, and the types of sampling and analyses will depend on factors such as what the lagoon was used for, its construction materials (earthen, concrete, natural or synthetic liner), and size. The samples must be representative of the medium sampled, and the rationale for the depths, locations and number of samples should be justified and documented in preparation of being legally defensible. The sampling must be performed

under the direction of a qualified individual and analyzed by a DWQ Certified Laboratory.

2) Prepare and submit a **Closure Plan** to the DWQ regional office at least 30 days prior to commencing deconstruction activities. This should include as a minimum:

   a. the quantity and characteristics (TCLP, nutrients, metals) of the materials for disposal (contents, walls, floor and liner), including the calculations used to determine volumes,
   b. an assessment of alternatives (actions, costs and timing) in sufficient detail to select an optimum approach consistent with minimal groundwater impact,
   c. a proposed method for removal/disposal, including the abandonment and salvage of any physical equipment, and a timetable for the project,
   d. site reclamation plan and section view of the treatment, storage and disposal area(s),
   e. vicinity map, and
   f. location map to scale showing items such as the location of sampling points, existing monitoring and supply wells (within 500 feet), depth to groundwater, direction of groundwater flow, roads, structures, and rock outcrops.

3) If the structure is to be retained for an ornamental pond, storage or any other function other than for treatment, then the Closure Plan will need to demonstrate that the residuals of treatment (e.g. physical connections, bottom sludge, coliforms, nutrients and metals) conform to all appropriate surface water standards.

   If the structure is to be abandoned in place (totally or partially), sampling of the underlying native soil, whether it has a natural or synthetic liner, is required. If the sampling determines that the soil is contaminated, , then the Closure Plan will need to demonstrate, by modeling or numerical calculations, that leaving the contents and or structure materials in place will not cause a contravention of the groundwater quality standards in the groundwater beneath the structure. If the modeling does not demonstrate this, than removal or treatment of the soils must be included as part of the Closure Plan. If it were an earthen structure, the preferable approach would be to completely eliminate the walls and incorporate the material in the existing site.

4) Any land disturbing activity associated with the closure activities that affect more than one (1) acre of land must have an erosion and sediment control plan approved by the Land Quality Section of the Division of Land Resources. NC General Statute 113A-57(4) requires this plan to be submitted at least thirty (30) days prior to beginning the land-disturbing activity.

Closure Documentation:

Upon completion of the closure, the owner should submit documentation to the DWQ regional office with the following:

1) A description of all actions taken and dates relative to the abandonment.

2) Copies of all pertinent correspondence with private, local, state and/or federal agencies.

3) Ultimate disposal sites with weigh tickets or processing verifications, as appropriate.

4) Certification by a Professional Engineer (PE) or Professional Geologist (PG) if the pond or lagoon:

   a) is greater than five (5) acres in total area,
   b) contains hazardous substances as defined by TCLP tests, or
   c) involves a breaching of a dam, which could impose a safety hazard to persons or property below it.

Exhibit 8

Relevant Sections of Ohio Revised Code And Ohio Administrative Code

Ohio Revised Code, Title 61 Water Supply, Sanitation Ditches
Chapter 6111: Water Pollution Control

6111.45 Plans for the disposal of the waste to be submitted to director of environmental protection.

No municipal corporation, county, public institution, corporation, or officer or employee thereof or other person shall establish as proprietor, agent, employee, lessee, or tenant, any garbage disposal plant, shop, factory, mill, industrial establishment, process, trade, or business in the operation of which an industrial waste is produced, or make a change in or enlargement of a garbage disposal plant, shop, factory, mill, industrial establishment, process, trade, or business whereby an industrial waste is produced or materially increased or changed in character, or install works for the treatment or disposal of any such waste until the plans for the disposal of the waste have been submitted to and approved by the director of environmental protection. As used in sections 6111.44 to 6111.46 of the Revised Code, "industrial waste" means sludge or sludge materials or a water-carried or liquid waste resulting from any process of industry, manufacture, trade, or business or development of any natural resource, but does not include storm water from any animal feeding facility, as defined in section 903.01 of the Revised Code, or manure, as defined in that section. In granting an approval, the agency may stipulate modifications, conditions, and rules that the public health and welfare may require. Any action taken by the director shall be a matter of public record and shall be entered in the director's journal. Each period of thirty days that a violation of this section continues, after a conviction of the violation, constitutes a separate offense.

Effective Date: 03-15-2001

3745-27-01 **Definitions.**

(A)

(1) "Additive" means a supplemental material mixed with or otherwise added with compostable feedstock and bulking agents to create a favorable condition for the composting process and includes, but is not limited to, the following source-separated materials: urea; sterilized, dried and crushed egg shells; rice hulls; earthworms; and bacterial or fungal inoculum consisting only of microorganisms that may also include a commercially prepared medium designed to sustain the microorganisms during storage and transport that is manufactured and distributed for the purpose of use in a composting process as an inoculant.

(2) "Aerated static pile" means a pile of solid waste remaining stationary with air forced through the waste while composting takes place.

(3) "Airport" means any airport certified by the federal aviation administration and open to the public without prior permission and without restrictions within the physical capabilities of the available facilities.

(4) "Alteration" means a change to a facility from the requirements specified in the facility's authorizing document which is at least equivalent to rule requirements, other than a "modification" as that term is defined in rule 3745-27-02 of the Administrative Code, which requires written concurrence by Ohio EPA.

[Comment: If the change is not equivalent to rule requirements, approval through a permit, variance, or exemption would be necessary.]

(5) "Animal waste" means animal excreta, bedding, wash waters, waste feed, and silage drainage.

(6) "Applicant" means any person who has applied for a registration certificate, permit to install, an alternative infectious waste treatment technology approval, or an operating license in accordance with Chapter 3745-27, 3745-29, 3745-30, or 3745-37 of the Administrative Code.

(7) "Aquifer" means a consolidated or unconsolidated geologic formation or series of formations that are hydraulically interconnected and that have the ability to receive, store, or transmit water to wells or springs.

(8) "Aquifer system" means one or more geological units or formations that are wholly or partially saturated with water and are able to store, transmit, and yield significant amounts of water to wells or springs.

(9) "Assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity.

(10) "Authorized maximum daily waste receipt" means the maximum amount of solid waste a solid waste disposal facility may receive at the gate in any calendar day. The waste receipt limit shall be expressed in tons per day for facilities utilizing scales or cubic yards per day at the gate for all other facilities. The conversion factor between tons and cubic yards shall be one ton to three cubic yards unless the solid waste is baled, in which case a one-ton to one-cubic-yard conversion factor shall be used.

(B)

(1) "Beneficial use" means to use a scrap tire in a manner that results in a commodity for sale or exchange or in any other manner authorized as a beneficial use in accordance with rule 3745-27-78 of the Administrative Code. The use of a scrap tire at a scrap tire recovery facility is not a "beneficial use" of scrap tires, for the purposes of Chapter 3745-27 of the Administrative Code. "Beneficial use" does not apply to products manufactured from scrap tires and sold to a customer, including tire derived fuel as defined in this rule.

(2) "Biodegradable containers" means a container composed of materials, such as vegetable matter, paper, cardboard, and plastics that meet the American Society for Testing and Materials (ASTM) "Standard Specification for the Compostable Plastics" (D6400-04) (www.astm.org) and that may display the International Biodegradable Products Institute's "Compostable Logo," that will decompose or degrade at a rate equal to or faster than the material within the containers under equivalent conditions.

(3) "Biofilter" means a layer of a minimum of six inches in depth, consisting of bulking agents, shredded yard waste, finished compost, or materials otherwise authorized in accordance with paragraphs (G) and (H) of rule 3745-27-40 of the Administrative Code, and that is applied over the composting mixture to control odors, dust, or vectors. The biofilter layer shall be considered part of the composting mixture.

(4) "Biomass fuels" are defined in rule 3745-27-03 of the Administrative Code.

(5) "Bird hazard" means an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to the occupants of the aircraft.

(6) "Board of directors of a joint district" means a collective body of the boards of county commissioners of the counties establishing a joint solid waste management district as specified in section 343.01 of the Revised Code.

(7) "Board of health" means the board of health of a city or general health district, or the authority having the duties of a board of health in any city as authorized by section 3709.05 of the Revised Code.

(8) "Bulking agent" means a material added to a composting system to provide structural support, improve aeration, or absorb moisture from the decomposing waste and includes only the following source-separated materials: wood chips, straw, shredded newspaper, shredded cardboard, sawdust, shredded brush, biodegradable containers, stover, and materials otherwise authorized in accordance with rule 3745-27-40 of the Administrative Code. Bulking agent does not include any wood that has been treated with preservatives containing arsenic or chromium.

(C)

(1) "Closed unit" means any unit of a sanitary landfill facility for which the owner or operator is required to complete, or has completed, all closure activities in accordance with rule 3745-27-11 of the Administrative Code.

(2) "Commingled yard waste" means yard waste that has been commingled with other solid wastes. Commingled yard waste does include containerized source-separated yard waste including, but not limited to, yard waste in paper or plastic bags where such bags are commingled with other solid wastes.

(3) "Compost product" means cured compost that meets applicable compost product quality standards in accordance with rule 3745-27-46 of the Administrative Code. A compost product that is sold, offered for sale at retail or wholesale, used, distributed for use, or given away is not a solid waste when it is for acceptable horticultural, agricultural, or silvicultural practices. In the circumstance where any unwanted compost product is disposed of, the compost product becomes, by definition, a solid waste.

(4) "Composting" means decomposition of organic matter that requires controlled conditions and yields temperatures conducive to thermophilic microorganisms, resulting in a humus like organic material.

(5) "Composting facility" means a designated facility where composting of solid waste occurs in accordance with Chapters 3745-27 and 3745-37 of the Administrative Code. The composting facility includes the area of materials placement and any leachate management system structures.

(6) "Cured compost" means solid waste that has completed the thermophilic and curing stages of composting and is ready to be tested in accordance with rule 3745-27-46 of the Administrative Code.

(7) "Curing compost" means solid waste that has completed the thermophilic stage of composting. Curing compost is characterized as solid waste that may reheat to temperatures greater than one hundred ten degrees Fahrenheit.

(8) "Current assets" means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

(9) "Current corrective measures cost estimate" means the most recent of the estimates prepared in accordance with rule 3745-27-18 of the Administrative Code.

(10) "Current final closure cost estimate" or "current closure cost estimate" means the most recent of the estimates prepared in accordance with rule 3745-27-15, 3745-27-24, 3745-27-53, 3745-27-61, 3745-27-63, 3745-27-66, or 3745-27-73 of the Administrative Code.

(11) "Current transporter cost estimate" means the most recent of the estimates prepared in accordance with rule 3745-27-15, 3745-27-54, or 3745-27-56 of the Administrative Code.

(12) "Current liabilities" means obligations whose liquidation is reasonably expected to require either the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

(13) "Current post-closure care cost estimate" means the most recent of the estimates prepared in accordance with rule 3745-27-16 or 3745-27-73 of the Administrative Code.

(D)

(1) "Daily design input capacity" or "DDIC" means the weight of scrap tires that can be processed at a scrap tire recovery facility per day. The DDIC is expressed in tons and shall be calculated as an averaged daily processing amount for all operating days in a calendar month.

(2) "Developed spring" means any spring which has been permanently modified by the addition of pipes or a collection basin to facilitate the collection and use of the spring water.

(3) "Director" means the director of environmental protection or the director's authorized representative.

(E)

(1) "Execute" means to complete and sign a document acceptable to the director for the purpose of establishing a financial assurance instrument.

(2) "Existing unit" means any unit of a sanitary landfill facility that is receiving solid waste on or before June 1, 1994, and is a geographically contiguous area within the limits of waste placement of the sanitary landfill facility, as the limits of waste placement existed on June 1, 1994.

(F)

(1) "Final slope" means the slope of a landfill when it has reached final grade and includes but is not limited to the composite cap system, the waste, the composite liner system and the subsurface.

(2) "Fire break" means the area around individual scrap tire storage piles that is maintained free of combustible and vegetative material. The width of the fire break shall be as specified in the applicable rule of Chapter 3745-27 of the Administrative Code. The fire break may include well mowed grass if the fire break also includes a gravel or paved fire lane twenty feet wide.

(3) "Foreign matter" means inorganic and organic constituents that were not readily decomposed during composting including, but not limited to: plastics, glass, textiles, rubber, leather, metal, ceramics, styrofoam, sharp objects, and painted, laminated, or treated wood and bark.

(4) "Foundry sand" is defined in rule 3745-30-01 of the Administrative Code.

(G)

(1) "Ground water" means any water below the surface of the earth in a zone of saturation.

(H)

(1) "Hazardous waste" means waste that is listed specifically as hazardous waste or exhibits one or more characteristics of hazardous waste as defined in Chapter 3745-51 of the Administrative Code.

(2) "Health commissioner" means the individual occupying the office created by sections 3709.11 and 3709.14 of the Revised Code, or the health commissioner's authorized representative.

(3) "Health district" means a city or general health district as created by or under authority of Chapter 3709. of the Revised Code.

(4) "Household hazardous waste" means solid waste originally generated by individual households that is listed specifically as hazardous waste or exhibits one or more characteristics of hazardous waste as defined in rule 3745-51-03 of the Administrative Code. Household hazardous waste is excluded from regulation as a hazardous waste pursuant to paragraph (B)(1) of rule 3745-51-04 of the Administrative Code.

(I)

(1) "Incinerator" means any equipment, machine, device, article, contrivance, structure, or part of a structure used to burn solid or infectious wastes to ash.

(2) "Independently audited" refers to an audit performed by an independent certified public accountant in accordance with generally accepted accounting standards, or for a publicly-owned facility, an equivalent comprehensive audit performed by the auditor of the state of Ohio pursuant to Chapter 117. of the Revised Code.

(3) "Industrial solid waste" is defined in rule 3745-29-01 of the Administrative Code.

(4) "Industrial solid waste landfill facility" is defined in rule 3745-29-01 of the Administrative Code.

(5) "Infectious agent" means a type of microorganism, helminth, or virus that causes, or significantly contributes to the cause of increased morbidity or mortality of human beings.

(6) "Infectious wastes" includes all of the following substances or categories of substances:

(a) Cultures and stocks of infectious agents and associated biologicals, including, without limitation, specimen cultures, cultures and stocks of infectious agents, wastes from production of biologicals, and discarded live and attenuated vaccines.

(b) Laboratory wastes that were, or are likely to have been, in contact with infectious agents that may present a substantial threat to public health if improperly managed.

(c) Pathological wastes, including, without limitation, human and animal tissues, organs, and body parts, and body fluids and excreta that are contaminated with or are likely to be contaminated with infectious agents, removed or obtained during surgery or autopsy or for diagnostic evaluation, provided that, with regard to pathological wastes from animals, the animals have or are likely to have been exposed to a zoonotic or infectious agent.

(d) Waste materials from the rooms of humans, or the enclosures of animals, that have been isolated because of diagnosed communicable disease that are likely to transmit infectious agents. Also included are waste materials from the rooms of patients who have been placed on blood and body fluid precautions under the universal precaution system established by the "Centers for Disease Control" in the public health service of the United States department of health and human services, if specific wastes generated under the universal precautions system have been identified as infectious wastes by rules referred to in paragraph (I)(6)(h) of this rule.

(e) Human and animal blood specimens and blood products that are being disposed of, provided that, with regard to blood specimens and blood products from animals, the animals were or are likely to have been exposed to a zoonotic or infectious agent. "Blood products" does not include patient care waste such as bandages or disposable gowns that are lightly soiled with blood or other body fluids, unless such wastes are soiled to the extent that the generator of the wastes determines that they should be managed as infectious waste.

(f) Contaminated carcasses, body parts, and bedding of animals that were intentionally exposed to infectious agents from zoonotic or human diseases during research, production of biologicals, or testing of pharmaceuticals, and carcasses and bedding of animals otherwise infected by zoonotic or infectious agents that may present a substantial threat to public health if improperly managed.

(g) Sharp wastes used in the treatment, diagnosis, or inoculation of human beings or animals or that have, or are likely to have, come in contact with infectious agents in medical, research, or industrial laboratories, including, without limitation, hypodermic needles and syringes, scalpel blades, and glass articles that have been broken. Such wastes are hereinafter in this chapter referred to as "sharp infectious waste" or "sharps."

(h) Any other waste materials generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production of testing of biologicals, that the public health council created in section 3701.33 of the Revised Code, by rules adopted in accordance with Chapter 119. of the Revised Code, identifies as infectious wastes after determining that the wastes present a substantial threat to human health when improperly managed because they are contaminated with, or are likely to be contaminated with, infectious agents.

(i) Any other waste materials the generator designates as infectious waste.

(7) "Infectious waste handling area" means any area where infectious wastes are stored, loaded, unloaded, prepared for treatment, or treated. Infectious waste handling areas also include areas where vehicles or containers are decontaminated, areas where transportation of infectious wastes within the facility premises occurs, and areas where treated infectious wastes are unloaded, stored, and loaded.

(8) "Infectious waste treatment unit" or "treatment unit" means the apparatus responsible for the attainment of the performance standard for treatment and for the reduction in microorganisms that is part of the treatment process. A free standing shredder or grinder is not considered a treatment unit.

[Comment: If the treatment process is contained within a single, enclosed piece of equipment, then the treatment unit and treatment process are considered one and the same.]

(9) "Interim slope" means the slope of a landfill as a result of daily filling or when a phase, cell or unit has reached its limits and includes but is not limited to daily cover, intermediate cover, transitional cover, waste, the composite liner system and the subsurface.

(10) "Internal slope" means the slope as excavated or constructed and includes but is not limited to the leachate collection layer, protective material, select waste, composite liner system and the subsurface.

(11) "In-vessel composting" means composting solid wastes utilizing an enclosed or nearly enclosed physical structure where the environment can be highly controlled for temperature, moisture, turning frequency, and other factors related to the rate of decomposition.

(J) [Reserved.]

(K) [Reserved.]

(L)

(1) "Leachate" means liquid that has come in contact with or been released from solid waste.

(2) "Legitimate recycling facility" means an engineered facility or site where recycling of material other than scrap tires is the primary objective of the facility.

For the purposes of Chapters 3745-27 and 3745-37 of the Administrative Code, legitimate recycling facilities are either of the following:

(a) Facilities that accept only source separated recyclables, except scrap tires, or commingled recyclables which are currently recoverable utilizing existing technology.

(b) Facilities that meet all of the following:

(i) Accept mixed or source separated solid waste streams.

(ii) Recover for beneficial use not less than sixty per cent of the weight of solid wastes brought to the facility each month (as averaged monthly) for not less than eight months in each calendar year.

(iii) Dispose of not more than forty per cent of the total weight of solid wastes brought to the facility each month (as averaged monthly) for not less than eight months in each calendar year.

For purposes of Chapters 3745-27 and 3745-37 of the Administrative Code, legitimate recycling facility does not include any facility identified as a solid waste disposal facility as "solid waste" is defined in this rule, nor does it include any facility identified as a scrap tire collection, storage, monofill, monocell, or recovery facility or any premises at which the beneficial use of scrap tires occurs.

(3) "Liabilities" means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

(4) "Lime sludge" is defined in rule 3745-27-03 of the Administrative Code.

(5) "Limestone quarry" means an excavation resulting from a mining operation where limestone is the principal material excavated for commercial sale or use in another location. This term does not include excavations of limestone resulting from the construction of the sanitary landfill facility.

(6) "Limits of waste placement" means the horizontal and vertical boundaries of a sanitary landfill facility within which the owner or operator has been authorized to dispose of solid waste.

(7) "Lower explosive limit" means the lowest per cent by volume of a mixture of explosive gases in air that will propagate a flame at twenty-five degrees Celsius and atmospheric pressure.

(M)

(1) "Materials placement area" means any area of the composting facility where compost products, solid wastes, feedstocks, bulking agents, or additives are placed, processed, or stored including, but not limited to, the following:

(a) Waste handling areas.

(b) Areas used for mixing, turning, composting, or otherwise processing solid waste.

(c) Storage areas for any of the following:

(i) Bulking agents.

(ii) Curing compost.

(iii) Cured compost.

(iv) Compost product.

(v) Additives.

(vi) Materials to be removed from the facility in accordance with rule 3745-27-45 of the Administrative Code.

(2) "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a ninety per

cent or greater probability that the acceleration will not be exceeded in two hundred fifty years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

(3) "Modification" is defined in rule 3745-27-02 of the Administrative Code.

(4) "Monocell" means a discrete volume for solid waste, which is provided isolation from other solid wastes, where a segregated waste stream is exclusively disposed within the limits of waste placement of a sanitary landfill facility.

(5) "Monofill" means a specialized sanitary landfill facility where a single segregated waste stream is exclusively disposed.

(6) "Municipal solid waste" is a type of solid waste generated from community, commercial, and agricultural operations, including, but not limited to, the following:

(a) Solid waste generated by community operations, i.e. wastes derived from households (including single and multiple household residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

(b) Solid waste generated by commercial operations (including stores, offices, restaurants, warehouses, and other non-manufacturing activities).

(c) Solid waste generated from agricultural operations (including single-family and commercial farms, greenhouses, and nurseries).

(d) Sludge from municipal, commercial or industrial waste water treatment plants, water treatment plants, and air pollution control facilities that is co-disposed with wastes specified in paragraph (M)(6)(a), (M)(6)(b), (M)(6)(c) or (M)(6)(e) of this rule in a sanitary landfill facility.

(e) Fly ash and bottom ash generated from the incineration of municipal solid waste provided the fly ash and bottom ash are not regulated as hazardous wastes.

(N)

(1) "Net working capital" means current assets minus current liabilities.

(2) "Net worth" means total assets minus total liabilities and is equivalent to owner's equity.

(3) "New tire" means a tire that has never been installed on a vehicle or trailer, or any tire that is part of a new vehicle or trailer when the motor vehicle or trailer is manufactured or initially received in this state. New tire does not include any used or retreaded tire.

(4) "New unit" means any unit of a sanitary landfill facility that did not receive solid waste prior to June 1, 1994, and that has not been designated an existing unit by the owner or operator. A new unit may be contiguous or noncontiguous.

(5) "Nonputrescible solid wastes" is defined in rule 3745-27-12 of the Administrative Code.

(6) "Nuisance" means anything which is injurious to human health or offensive to the senses; interferes with the comfortable enjoyment of life or property; and affects a community, neighborhood, or any considerable number of persons (although the extent of annoyance or damage inflicted upon individual persons may be unequal).

(O)

(1) "Occupied structure" is defined in rule 3745-27-12 of the Administrative Code.

(2) "Open burning" means the burning of solid wastes in an open area or burning of solid wastes in a type of chamber or vessel that is not approved or authorized in rules adopted by the director under section 3734.02 of the Revised Code or, if the solid wastes consist of scrap tires, in rules adopted by the director under section 3734.73 of the Revised Code, or the burning of treated or untreated infectious wastes in an open area or vessel that is not approved in rules adopted by the director under section 3734.021 of the Revised Code.

(3) "Open dump" means a site where solid wastes or untreated infectious wastes have been disposed without a license.

(4) "Open dumping" means the following:

(a) The deposition of solid wastes, other than scrap tires, into waters of the state, and also means the final deposition of solid wastes on or into the ground at any place other than a solid waste facility operated in accordance with Chapter 3734. of the Revised Code, and Chapters 3745-27, 3745-29, 3745-30, and 3745-37 of the Administrative Code.

(b) The deposition of solid wastes that consist of scrap tires into waters of the state, and also means the final deposition of scrap tires on or into the ground at any place other than a scrap tire collection, storage, monofill, monocell, or recovery facility licensed under section 3734.81 of the Revised Code, or at a site or in a manner not specifically identified in division (C)(2), (C)(3), (C)(4), (C)(5), (C)(7), or (C)(10) of section 3734.85 of the Revised Code, or at any licensed solid waste facility if the deposition is not in accordance with Chapters 3745-27 and 3745-37 of the Administrative Code.

(c) The deposition of solid wastes that consist of scrap tires in buildings, trailers, or other vehicles at locations other than a scrap tire transporter's registered business location, a licensed scrap tire facility, or an unregistered scrap tire facility operating

in accordance with rule 3745-27-61 of the Administrative Code (such as pre-positioned trailers in accordance with paragraph (C)(8) of rule 3745-27-56 of the Administrative Code) for longer than fourteen days. The scrap tires in trailers or vehicles shall be considered open dumped unless written prior notification is given to the local health department and Ohio EPA that the vehicle or trailer requires mechanical repairs which will take longer than fourteen days to complete and that the repairs are being completed in a timely manner.

(d) The deposition of untreated or treated infectious wastes into waters of the state, and also means the final deposition of untreated infectious wastes on or into the ground at any place other than a licensed solid waste facility operated in accordance with Chapter 3734. of the Revised Code, and Chapters 3745-27 and 3745-37 of the Administrative Code.

(5) "Operator" or "facility operator" means the person responsible for the on-site supervision of technical operations and maintenance of a solid or infectious waste facility, or any parts thereof, which may affect the performance of the facility and its potential environmental impact or any person who has authority to make discretionary decisions concerning the daily operations of the solid or infectious waste facility. "Operator" also means the person responsible for the supervision of technical operations of a scrap tire transportation business.

(6) "Original scrap tire generator" or "original owner" means the person or business who purchased a new, retread, or used tire for use on a wheel or rim. Original scrap tire generator or original owner does not include anyone who has accepted a tire other than a new or retreaded tire, for the purposes of transportation, collection, storage, processing, or disposal.

(7) "Owner" or "property owner" means the person who holds title to the property on which the solid waste facility, infectious waste treatment facility, or scrap tire transportation business is located.

(P)

(1) "Parent corporation" means a corporation, or the ultimate corporation, which directly owns at least fifty per cent of the voting stock of the corporation which holds a permit or license issued in accordance with section 3734.05 of the Revised Code and Chapter 3745-27, 3745-29, or 3745-30 of the Administrative Code; the latter corporation is deemed a "subsidiary" of the parent corporation.

(2) "Permittee" means a person to whom a permit to install has been issued.

(3) "Person" means the state, any political subdivision, public or private corporation, individual, partnership, or other entity.

(4) "Phase" means a discrete area of a sanitary landfill facility, which has been designated to facilitate the systematic construction, operation, and closure of the sanitary landfill facility. For a sanitary landfill facility, other than an industrial solid waste landfill facility or residual solid waste landfill facility, a phase is a discrete area that is part of a unit.

(5) "Portable solid waste container" or "portable container" is a container used for solid waste transfer that is not part of the permanent structure of a transport vehicle, can be removed from the transporting vehicle without compromising the container's or the transporting vehicle's structural integrity, and can be removed from the transporting vehicle without utilizing destructive measures. Portable containers include trailers used to store and transport solid wastes.

(6) "Premises" means one of the following:

(a) Geographically contiguous property owned by an entity.

(b) Noncontiguous property that is owned by an entity and connected by a right-of-way that the entity controls and to which the public does not have access. Two or more pieces of property that are geographically contiguous and divided by public or private right-of-way or rights-of-way are a single premises.

(7) "Processed tire" or "processed scrap tire" means a scrap tire that has been altered through a mechanical, chemical, thermal, or controlled combustion process so that the resulting material is a marketable product or is suitable for storage or disposal in a scrap tire monocell or monofill facility. For the purpose of disposal processed tires shall be defined as a solid waste or a scrap tire based on the following:

(a) Processed tires that are readily identifiable as scrap tires or pieces of scrap tires by visual inspection shall be disposed of as scrap tires.

(b) Processed tires that are not readily identifiable as scrap tires or pieces of scrap tires by visual inspection when disposed may be disposed of as solid waste rather than scrap tires.

(c) Items manufactured from processed tires and scrap tire material which is a by-product of a manufacturing process when disposed may be disposed of as solid waste.

(d) "Processed tire" includes, but is not limited to, cut, split, and shredded tires. Baled tires are only considered "processed tires" for the purpose of disposal at a scrap tire monocell or monofill.

(8) "Public water supply well" means any well connected to a public water system as defined by division (A) of section 6109.01 of the Revised Code.

(9) "Public well field" means any system of wells which is connected to a public water system as defined by division (A) of section 6109.01 of the Revised Code.

(Q)

(1) "Qualified ground water scientist" means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has at least five years relevant experience in ground water hydrology and related fields to enable that individual to make sound professional judgments regarding ground water monitoring, contaminant fate and transport, and corrective measures.

(R)

(1) "Recycling" means the process of collecting, sorting, cleansing, treating, and reconstituting solid waste that would otherwise be disposed in a solid waste disposal facility and returning reconstituted materials to commerce as commodities for use or exchange.

(2) "Regional aquifer" means the aquifer used as a primary source of water to wells within one mile of the solid waste disposal facility.

(3) "Registered composting facility" means a composting facility where the owner or operator has met all registration requirements of rule 3745-27-41 of the Administrative Code.

(4) "Registrant" means any person to whom a registration certificate has been issued.

(5) "Regulatory floodplain" means an area covered by a one hundred year flood as depicted on a flood insurance rate map published by the federal emergency management agency.

(6) "Residual solid waste" or "residual waste" is defined in rule 3745-30-01 of the Administrative Code.

(7) "Residual waste landfill facility" or "residual waste landfill" is defined in rule 3745-30-01 of the Administrative Code.

(8) "Retention time" means the average time for gases to pass through a chamber. The residence time is equivalent to retention time.

(9) "Rough tire shreds" or "rough shredded scrap tires" means tire shreds or cut tire pieces that have any dimension greater than four inches.

(S)

(1) "Salvaging" means the extracting or removing of materials from the solid waste stream at the working face of a solid waste disposal facility for the intended purpose of recycling

or for removal to a salvage facility regulated by Chapter 4737. of the Revised Code and rules promulgated thereunder.

(2) "Sand or gravel pit" means an excavation resulting from a mining operation where the removal of sand or gravel is undertaken for commercial sale or use in another location. This term does not include excavations of sand or gravel resulting from the construction of the sanitary landfill facility.

(3) "Sandstone quarry" means an excavation resulting from a mining operation where sandstone is the principal material excavated for commercial sale or use in another location. This term does not include excavations of sandstone resulting from the construction of a sanitary landfill facility.

(4) "Sanitary landfill facility" means an engineered facility where the final deposition of solid waste on or into the ground is practiced in accordance with Chapter 3745-27, 3745-29 or 3745-30, as appropriate, and 3745-37 of the Administrative Code, and includes the units within the limits of waste placement, all ground water monitoring and control system structures, buildings, explosive gas monitoring, control, and extraction system structures, surface water run-on and runoff control structures, sedimentation - ponds, liner systems, and leachate management system structures. The sanitary landfill facility includes all portions of the facility described above and those areas within three hundred feet of the limits of waste placement unless an alternate setback is deemed acceptable by the director. If the owner or operator has not obtained approval of a permit to install, which delineates the setback from the limits of waste placement, submitted in accordance with section 3734.05 of the Revised Code, the sanitary landfill facility includes all portions of the facility described above and those areas within three hundred feet of the limits of waste placement unless the property line of the facility is less than three hundred feet from the limits of waste placement, in which case the sanitary landfill facility includes those areas within the property line.

(5) "Scavenging" means the removal by unauthorized personnel of materials from the solid waste stream at waste handling areas of a solid waste disposal facility or solid waste transfer facility.

(6) "Scrap tire" is a type of solid waste and means any unwanted or discarded tire, regardless of size, that has been removed from its original use. "Scrap tire" includes all whole scrap tires and pieces of scrap tires which are readily identifiable as parts of scrap tires by visual inspection.

For purposes of this definition, "unwanted" means the original scrap tire generator, original owner or manufacturer of the tire no longer wants to use, or is unable to use the tire for its original purpose, and "discarded" means the original scrap tire generator, original owner, or manufacturer of the tire has otherwise managed the tire in such a manner that disposal has occurred.

"Scrap tire" does not include the following:

(a) A tire after it has been retreaded or regrooved for resale or reuse, unless it has been declared defective or has been returned to the seller or manufacturer for warranty adjustment.

(b) A tire that is mounted and installed on a vehicle or trailer, or carried on the vehicle or trailer as the spare tire. Trucks with more than four wheels or with different size wheels or tires may carry more than one spare tire.

For purposes of this definition "installed" means placing the mounted wheel and tire assembly at any of the positions on a vehicle or trailer where a wheel and tire assembly was initially placed on the vehicle or trailer during manufacture and includes the position normally used for a spare tire or tires.

For purposes of this definition "mounted" means placing a tire on a wheel rim so that it can be installed on a vehicle. A mounted tire may be a scrap tire unless it is also installed.

(c) Tires from non-motorized vehicles such as bicycles, or tires from small equipment such as lawn mowers, wheelbarrows, etc.

[Comment: Tires from non-motorized vehicles may be recycled, disposed of as scrap tires, or may be disposed of as solid waste.]

(d) Only at a retreading business, a retreadable casing stored in an enclosed building or stored in a manner otherwise authorized or exempted by the director that the retreading business has inspected and individually labeled or marked the casing as suitable for retreading.

(e) Tire derived fuel (TDF) or tire derived chips (TDC) as defined in this rule after the TDF or TDC has been transported from the scrap tire recovery facility for use as a fuel or for an authorized beneficial use.

(f) Non-pneumatic, hard, pressed tires, such as forklift tires.

(7) "Scrap tire collection facility" means a type of facility for scrap tire storage that meets the following:

(a) The facility is used for the receipt and storage of whole scrap tires from the public prior to the transportation of the scrap tires to one of the destinations listed in rule 3745-27-65 of the Administrative Code.

(b) The facility exclusively stores scrap tires in portable containers.

(c) The aggregate storage of the portable containers in which the scrap tires are stored does not exceed five thousand cubic feet.

[Comment: If the facility does not meet the above definition for a scrap tire collection facility, then the facility may be a scrap tire storage facility. If the facility includes any equipment for processing (e.g. cutting or shredding equipment) the scrap tires to produce a usable product, then the facility is a scrap tire recovery facility.]

(8) "Scrap tire facility" is a generic term that includes, but is not limited to, the following: scrap tire collection facility, scrap tire storage facility, scrap tire recovery facility, scrap tire monofill facility, scrap tire monocell facility, and scrap tire submergence facility as those terms are defined in this rule.

(9) "Scrap tire generator" means any person or business that generates scrap tires. Scrap tire generator includes the original scrap tire generator, as defined in this rule, and any business which removes tires from vehicles and accepts scrap tires in the normal course of business such as tire retail dealers and tire retreaders.

[Comment: A scrap tire generator or original scrap tire generator who stores more than one hundred scrap tires and who does not qualify for one of the exclusions from registration in rule 3745-27-61 or permitting in rule 3745-27-63 of the Administrative Code may also be a scrap tire collection, storage, or recovery facility.]

(10) "Scrap tire handling area" means any area of a scrap tire collection, storage, monocell, monofill, or recovery facility where scrap tires are stored, loaded, unloaded, sorted, baled, shredded, prepared for processing, or otherwise processed. A scrap tire handling area includes the scrap tire storage area but does not include vehicle staging areas, vehicle storage areas, or buildings not used for the processing or storage of scrap tires. Scrap tire handling area also includes that portion of a scrap tire transporter's business location where scrap tires are unloaded, sorted, and loaded.

(11) "Scrap tire monocell facility" means a type of "monocell," as that term is defined in this rule, that is used or intended to be used exclusively for the environmentally sound storage or disposal of scrap tires that have been shredded, chipped, of otherwise mechanically processed.

(12) "Scrap tire monofill facility" means a type of "monofill," as that term is defined in this rule, that is used or intended to be used exclusively for the environmentally sound storage or disposal of scrap tires that have been shredded, chipped, or otherwise mechanically processed.

(13) "Scrap tire recovery facility" means any site, location, tract of land, installation, or building that is used or intended to be used for the processing of scrap tires for the purpose of extracting or producing usable products, materials, or energy from the scrap tires. Processing includes but is not limited to: a controlled combustion process, mechanical process, thermal process, or chemical process that uses whole, split, or shredded scrap tires as a raw material. Scrap tire recovery facility includes any facility

that uses the controlled combustion of scrap tires in a manufacturing process to produce process heat or steam or any facility that produces usable heat or electric power through the controlled combustion of scrap tires in combination with another fuel.

(a) A "mobile scrap tire recovery facility" is a type of scrap tire recovery facility owned or operated by a person not otherwise licensed as a class I or class II scrap tire recovery facility in Ohio and means any unit for processing tires which is designed by the manufacturer for the regular movement from one operating site to another and which the owner or operator has used at more than one location during the prior year. "Mobile scrap tire recovery facility" specifically includes any tire cutting, baling, or shredding equipment that is moved from site to site for the purpose of processing scrap tires into a useable product at the site or before the scrap tires are removed from the site.

(b) A "class I scrap tire recovery facility" means a scrap tire recovery facility with a permitted daily design input capacity of two hundred tons of scrap tires per day or greater.

(c) A "class II scrap tire recovery facility" means a scrap tire recovery facility with a registered daily design input capacity of less than two hundred tons of scrap tires per day.

(14) "Scrap tire storage area" means that part of a premises including but not limited to a scrap tire collection, storage, or recovery facility where whole scrap tires are stored. At a scrap tire recovery facility the scrap tire storage area also means that part of the premises where processed scrap tires are stored.

(15) "Scrap tire storage facility" means any facility where whole scrap tires are stored prior to the scrap tires being transported to one of the destinations listed in paragraph (D)(8) of rule 3745-27-65 of the Administrative Code. A "class I scrap tire storage facility" means a scrap tire storage facility that has a permitted capacity of more than ten thousand square feet of effective scrap tire storage. A "class II scrap tire storage facility" means a scrap tire storage facility that has a registered capacity of not greater than ten thousand square feet of effective scrap tire storage.

[Comment: Division (C) of section 3734.71 of the Revised Code specifies that the owner or operator of a class I scrap tire storage facility must also be the owner or operator of a licensed scrap tire monocell, monofill, or recovery facility in Ohio, or a solid waste or scrap tire monocell, monofill, or recovery facility located in another state and operating in compliance with the laws of that state.]

(16) "Scrap tire storage pile" means an area where scrap tires are stored either indoors or outdoors on the floor, on the ground, or in racks. The dimensions of a scrap tire storage pile are determined by the location of fire breaks of at least the width specified in Chapter 3745-27 of the Administrative Code around the storage pile. A scrap tire

storage pile may consist of one or more separate racks. A scrap tire storage pile may consist of a combination of racks and on the floor or on ground storage of scrap tires.

(17) "Scrap tire submergence facility" is a type of scrap tire monofill facility and means a facility where only whole scrap tires are submerged in water in an engineered structure.

(18) "Scrap tire transporter" or "transporter" means the registrant for the scrap tire transportation business or anyone in the registrant's employ who signs the scrap tire shipping papers or operates the registrant's scrap tire transportation vehicles.

(19) "Seismic impact zone" means an area where the maximum horizontal acceleration in lithified earth material exceeds 0.10g.

(20) "Sewage sludge" is defined in rule 3745-27-03 of the Administrative Code.

(21) "Sharp objects" means any object that has the potential to puncture or lacerate, including but not limited to nails, sewing needles, straight pins, staples, metal screws, hard plastic, glass, broken ceramics, and infectious waste "sharps."

(22) "Significant zone of saturation" means a zone of saturation that may act as a preferential pathway of migration away from the limits of solid waste placement.

(23) "Solid waste" means such unwanted residual solid or semisolid material, including but not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt and debris, as results from industrial, commercial, agricultural, and community operations, excluding earth or material from construction, mining, or demolition operations, or other waste materials of the type that normally would be included in demolition debris, nontoxic fly ash and bottom ash, including at least ash that results from combustion of coal, biomass fuels, and ash that results from the combustion of coal in combination with scrap tires where scrap tires comprise not more than fifty per cent of heat input in any month, spent nontoxic foundry sand, and slag and other substances that are not harmful or inimical to public health, and includes, but is not limited to, garbage, scrap tires, combustible and noncombustible material, street dirt, and debris. Solid waste does not include any material that is an infectious waste or a hazardous waste.

(24) "Solid waste disposal facility" means any site, location, tract of land, installation, or building used for incineration, composting, sanitary landfilling, or other approved methods of disposal of solid wastes.

(25) "Solid waste energy recovery facility" means any site location, tract of land, installation, or building where mixed solid waste or select solid waste streams, including scrap tires, is used as or intends to be used as fuel to produce energy, heat, or steam.

[Comment: A "solid waste energy recovery facility", which exclusively uses scrap tires and other approved rubber waste as fuel, may be regulated as a "scrap tire recovery facility."]

(26) "Solid waste management district" means a county which has established a resolution, or joint counties which have entered into an agreement, for the purposes of preparing, adopting, submitting, and implementing a solid waste management plan for the county or joint counties and for the purposes of providing for, or causing to be provided for, the safe and sanitary management of solid wastes within all of the incorporated and unincorporated territory of the county or joint counties and in compliance with Chapters 343. and 3734. of the Revised Code.

(27) "Solid waste management policy committee" means a committee established and convened by the board of county commissioners of a county solid waste management district or the board of directors of a joint solid waste management district to prepare the solid waste management plan of the solid waste management district and in compliance with division (B) of section 3734.54 of the Revised Code.

(28) "Solid waste transfer facility" or "transfer facility" means any site, location, tract of land, installation, or building that is used or intended to be used primarily for the purpose of transferring solid wastes that are generated off the premises of the facility from vehicles or containers into other vehicles or containers for transportation to a solid waste disposal facility. The term does not include any facility that consists solely of portable containers that have an aggregate volume of fifty cubic yards or less nor any facility where legitimate recycling activities are conducted. The term does not include any facility that accepts scrap tires other than scrap tires which are accepted incidental to a mixed solid waste shipment.

(29) "Source-separated" means feedstock types, authorized bulking agents, or additives that have been separated at the point of generation or at the point of collection from other solid wastes.

(30) "Source-separated yard waste" means yard waste that has been separated at the point of generation or at the point of collection from other solid wastes. Source separation includes, but is not limited to, such measures as placing yard waste in portable containers and compartments of portable containers dedicated to yard waste collection, and in vehicles dedicated to yard waste collection.

(31) "Surface water" means any water on the surface of the earth.

(T)

(1) "Tangible net worth" means the tangible assets that remain after deducting liabilities; such assets would not include such intangibles as goodwill and rights to patents or royalties.

(2) "Thermophilic stage" means a biological stage in the composting process characterized by a high rate of decomposition, large heat generation, and temperatures, generally above one hundred degrees Fahrenheit.

(3) "Tire" for purposes of fee collection only is defined in section 3734.90 of the Revised Code. "Tire" and "scrap tire" as used in Chapter 3745-27 of the Administrative Code and the definitions in this rule are not restricted to motor vehicle tires but includes all pneumatic tires.

[Comment: The definition of "tire" found in section 3734.90 of the Revised Code applies only to the collection of the state fee on the sale of new tires by a wholesaler.]

(4) "Tire adjustment center" means a premises to which defective new tires and tires returned for warranty adjustment are shipped for analysis of failure and final disposition.

(5) "Tire derived fuel" (TDF) or "tire derived chips" (TDC) means a uniformly shredded product obtained from whole tires where the maximum size of ninety-five per cent of the shreds are less than four inches in any dimension. TDC may be used as a civil engineering material or as feedstock for the manufacturing of crumb rubber or other tire derived material. TDC is defined using the ASTM "Standard Practice for Use of Scrap Tires in Civil Engineering Applications," (D6270-98) (www.astm.org), section 3.1.29, for x-minus classified, size reduced scrap tires.

(6) "Tire manufacturing finishing center" means premises where tires are manufactured, inspected, and processed to either finished stock or scrap.

(7) "Tire retreading business" means premises where scrap tires are recycled by processing the scrap tire and attaching a new tread to the used tire casing.

(8) "Tire sidewall" means the flat circular part of a tire left after the tread has been cut away. Tire sidewall does not include a bagel cut tire or any cut tire where a portion of the tread remains attached to the sidewall.

(9) "Treat" or "treatment" when used in connection with infectious wastes, means any method, technique, or process designed to render the wastes noninfectious, including, without limitation, steam sterilization and incineration, or in the instance of wastes identified in division (R)(7) of section 3734.01 of the Revised Code, to substantially reduce or eliminate the potential for the wastes to cause lacerations or puncture wounds.

(U)

(1) "Unit" means a discrete area within the limits of waste placement of a sanitary landfill facility, for which the owner or operator is authorized to dispose of solid waste, that is delineated by the owner or operator for the purpose of complying with the siting,

construction, operational, closure/post-closure care ground water monitoring, and financial assurance requirements of Chapter 3745-27 of the Administrative Code.

(2) "Unstable area" means a location that is susceptible to natural or human induced events or forces capable of impairing the integrity of some or all of the structural components of a landfill that are responsible for preventing releases from the landfill and can include areas where on-site or local soil conditions result in significant differential settling; areas where the downslope movement of soil or rock due to gravitational influence occurs; or areas where the lowering or collapse of the land surface occurs either locally or over broad regional areas.

(3) "Used tire" means a whole scrap tire. A used tire remains a scrap tire until it has been reused by being installed on a vehicle or trailer.

(V)

(1) "Vertical expansion" means the extension of the vertical boundary of waste placement that occurs prior to beginning, or being required to begin, closure activities in accordance with rule 3745-27-11 of the Administrative Code. A vertical expansion is a "modification" as that term is defined in rule 3745-27-02 of the Administrative Code. A vertical expansion is not a "unit."

(W)

(1) "Waste handling area" means any area of a solid waste facility where solid wastes are stored, loaded, unloaded, baled, shredded, crushed, compacted, or otherwise processed or subjected to salvaging activities. Waste handling areas do not include vehicle staging or vehicle storage areas.

[Comment: For definitions of other types of waste handling areas please see "infectious waste handling area" and "scrap tire handling area."]

(2) "Water pollution" means the unpermitted release of sediment from disturbed areas, solid waste or waste-derived constituents, or leachate to the waters of the state.

(3) "Waters of the state" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, which are situated wholly or partly within, or border upon, this state or are within its jurisdiction, except those private waters which do not combine or effect a junction with natural surface or underground waters.

(4) "Wetland" means any area that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(5) "Windrow" means an elongated pile of solid waste constructed to promote composting.

(6) "Working face" means that portion of a sanitary landfill facility where solid wastes are unloaded for final deposition.

(X) [Reserved.]

(Y)

(1) "Yard waste" means solid waste that includes only leaves, grass clippings, brush, garden waste, tree trunks, tree stumps, holiday trees, and prunings from trees or shrubs. Yard waste does not include industrial or agricultural processing wastes.

[Comment: The intent of this definition is to identify a general type of vegetative waste resulting from the care and maintenance of landscaped areas, lawns, and gardens that has been collected for the purpose of disposal or composting. Vegetative waste resulting from the use of commercial products, such as discarded flowers, potted flowers, or grave blankets that do not include plastic, metal, styrofoam, or other non-biodegradable material would be considered a yard waste. Vegetative waste from industrial processing such as food processing waste is not a yard waste.]

(2) "Yard waste composting facility" means a composting facility receiving only yard wastes, bulking agents, or additives as specified in rule 3745-27-40 of the Administrative Code.

(Z)

(1) "Zone of saturation" means that part of the earth's crust, excluding the capillary zone, in which all voids are filled with water.

(2) "Zoonotic agent" means a type of microorganism, helminth, or virus that causes disease in vertebrate animals and that is transmissible to human beings and causes or significantly contributes to the cause of increased morbidity or mortality of human beings.

Effective:	11/01/2007
R.C. 119.032 review dates:	08/08/2007 and 11/01/2012

CERTIFIED ELECTRONICALLY

Certification

10/18/2007

Date

Promulgated Under:	119.03
Statutory Authority:	3734.02, 3734.021, 3734.028, 3734.12, 3734.50, 3734.70, 3734.71, 3734.72, 3734.73, 3734.74
Rule Amplifies:	3734.01, 3734.02, 3734.12, 3734.50, 3734.51, 3734.70, 3734.71, 3734.72, 3734.73, 3734.74, 3734.84, 3734.86
Prior Effective Dates:	07/28/1976, 03/01/1990, 05/31/1991, 06/01/1994, 02/01/1995, 12/25/1998, 01/28/2002, 08/15/2003, 07/01/2004

3745-42-03 **Requirements for applications and engineering plans.**

(A) Applications for both permits to install and plan approvals required by rule 3745-42-02 of the Administrative Code shall be made using forms prepared by Ohio EPA and shall contain such information as the director deems necessary to determine whether the criteria of rule 3745-42-04 of the Administrative Code are met.

(1) Any of the following must be signed and certified by a professional engineer licensed by the Ohio state board of registration for professional engineers and surveyors:

(a) Plans for disposal systems, treatment works or sewerage systems including, but not limited to:

(i) Sanitary sewer extensions;

(ii) Pump stations or distribution systems;

(iii) Prefabricated unit installations (e.g., small sewage treatment plants);

(iv) Sewage treatment plants;

(v) Land application systems;

(vi) Holding tanks;

(vii) Mound systems;

(viii) Septic tanks and leach fields;

(ix) Drip irrigation systems;

(x) Monofills (disposal sites for fly ash, foundry sand or other similar industrial wastes); and

(xi) Industrial or commercial treatment works;

(b) Reports on process evaluations at treatment works and sewerage systems including combined sewer overflow operational or long term control plan approvals, sewer system evaluations and infiltration/inflow analysis plans;

(c) Operation and maintenance manuals for disposal systems;

(d) POTW local limit technical justification submissions for approval in accordance with pretreatment rules in Chapter 3745-3 of the Administrative Code;

(e) General plans or facility plans, including feasibility and cost analysis;

(f) Impoundment closure plans; and

(g) Beneficial reuse or recycling plans that involve engineering calculations including, but not limited to, structural fill projects, building foundations and road beds.

(2) Applications for permits to install or plan approvals that are not required to be signed and certified by a professional engineer licensed by the Ohio state board of professional engineers and surveyorsinclude:

(a) Municipal sludge management plans using agronomically sound land application rates;

(b) Beneficial use or recycling projects using agronomically sound land application rates;

(c) Pretreatment program modification requests other than technical justification modification requests for local limits including, but not limited to, changes in sewer use ordinances, local laws and local regulations; and

(d) Groundwater monitoring plans.

(3) In addition to the specific types of documents in paragraph (A)(1) of this rule, the director may require other permit application documents to be prepared and sealed by a licensed professional engineer to protect public welfare or to safeguard life, health or property.

(B) Applications for permits to install and plan approvals shall be signed by the person, firm, agency or entity responsible for constructing or funding the construction of the disposal system. If, after construction, the disposal system will be turned over to a public entity or another party to own, operate and maintain, the director may require both persons responsible for construction and the future owner or operator to sign the permit application and be subject to the terms and conditions of the permit issued thereafter. The application shall be signed as follows:

(1) In the case of a corporation, by a principal executive officer of at least the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility;

(2) In the case of a partnership, by a general partner;

(3) In the case of sole proprietorship, by the proprietor; and

(4) In the case of a municipal, state, federal or other governmental facility, by the principal executive officer, the ranking elected official or other duly authorized employee.

(C) In the case of plan approval for the land application of sludge, the application shall be signed by either the president, vice-president or highest ranking corporate officer with offices located in the state, or the owner of the entity planning to apply the sludge, and the highest elected official of the municipality from which the sludge is generated.

(D) The signatures shall constitute personal affirmation that all statements or assertions of fact made in the application are true and complete and comply fully with applicable state requirements and shall subject the signatory to liability under section 2921.13 of the Revised Code.

(E) Before the director will review an application package, it shall contain:

(1) The appropriate application fees (Comment: See section 3745.11 of the Revised Code);

(2) Two copies of the permit to install application (e.g., Ohio EPA form 4309) with all blanks filled in and the form signed in accordance with paragraph (B) of this rule; and

(3) Four complete sets of the detailed plans and at least two copies of the contract specifications. The plans and specifications shall be submitted in accordance with the following requirements, as applicable.

(a) All detailed plan sheets shall be eleven inches by seventeen inches, twenty-two inches by thirty-four inches, or twenty-four inches by thirty-six inches. Each sheet shall have a sufficient margin to allow for proper binding and complete title blocks. Each set of plan sheets submitted on paper shall be bound together.

(b) Each set of detailed plans shall:

(i) State the name and type of building or project;

(ii) State the owner's name and address including the county and township or municipality;

(iii) Contain the name of the engineer preparing the plans, the original or an electronic signature of the engineer and the engineer's stamp on the title sheet of the detailed plans when required by paragraph (A) of this rule;

(iv) For projects that connect or discharge to the local sewer authority's disposal system, contain a cover sheet that has the local sewer authority's signature or a letter from the local sewer authority that expresses support for the project;

(v) Contain cross sections and plan and profile views of all the unit processes within the treatment system and their capacities, with all views drawn to scale and clearly labeled;

(vi) Identify the dimensions and relative elevations of structures;

(vii) Include, unless contained in a separate contract specification book, identification of the location and outline of equipment, and the location, size, and ASTM designation of piping and joints;

(viii) Contain a hydraulic profile of the flow of water through the unit processes that indicates points of chemical addition, control instrumentation, alarm levels, and monitoring equipment;

(ix) Include, unless contained in a separate contract specification book, the equipment or product specifications;

(x) Where applicable, describe the ultimate method of sludge disposal; and

(xi) Include, unless contained in a separate contract specification book, identification of stand-by equipment, including the number of each component and each components capacity, location, size, and intended operation.

(c) Each set of detailed plans shall contain a site plan showing, where applicable:

(i) Adjacent properties, storage areas, contours, existing and final grades and drainage courses, property lines, existing and proposed buildings, parking areas, drives, elevations, locations of proposed and existing treatment works, and all sewers that will collect and transport sewage or industrial waste;

(ii) Sanitary sewers, storm sewers, and water lines or locations of water wells, including manholes and pump stations;

(iii) The location of each entry to the public sewer;

(iv) Isolation distances from the treatment works to any water wells and property lines; and

(v) The north arrow.

(d) Each set of detailed plans shall contain a vicinity map showing surrounding roadways, railroad tracks, and major water courses.

(F) The director may waive submittal requirements identified in paragraph (E)(3) of this rule for specific technologies or project types, such as industrial projects that require a permit to install prior to funding procurement, as necessary to efficiently review the application package and administer this chapter.

(G) The director may allow electronic submittal of any document required to be submitted by this rule. If the director allows electronic submittal, he may allow the permittee to submit only one electronic copy of the document, even if the permittee would be required to submit more than one copy in non-electronic form by this rule.

(H) In addition to the information contained in paragraphs (A) to (E) of this rule, applications for permits to install for industrial waste treatment works that have a direct discharge to waters of the state or are tributary to a treatment works shall include, as applicable, all of the following:

(1) Written approval from the sewer authority that will be responsible for treating the industrial waste. The application shall contain a statement by the sewer authority that it is aware of the proposed project and agrees to accept the treated industrial waste from the applicant's facility. The approval and statement may be in the form of a letter from the sewer authority, or each set of plans must be signed by the sewer authority. If the applicant is proposing to connect to, or construct or modify an existing sewerage system tributary to, a sanitary sewer that is not owned or operated by the sewer authority responsible for treating the industrial waste, then the connection, construction or modification shall be through an approved sewer tap to the sewerage system;

(2) Schematic diagrams of the processes that generate, collect, treat, and dispose of the industrial wastes. In the schematic diagram, the applicant shall:

(a) Clearly label each major process unit in sufficient detail to allow the agency to have a clear understanding of the types and quantities of pollutants that may be generated

(b) Identify the average and maximum flow rates (expressed as gallons per day) for each major process unit that generates industrial waste, and identify the frequency and volume of spent chemical dumps and the concentrations of pollutants in the influents and effluents for the pretreatment facility; and

(c) If the plans are for a modification to an existing, approved facility, distinguish between existing facilities and new facilities; and

(3) An engineering report. In the engineering report, the applicant shall:

(a) Provide a project summary that presents the objectives to be achieved by the proposed facility, and generally describes the means proposed to accomplish the objectives, and the anticipated results. The project summary shall also identify the appropriate categorical regulations, the appropriate local effluent limitations, and any applicable court orders or pretreatment standards;

(b) Briefly describe the manufacturing process or unit process generating the industrial waste stream, and:

(i) Delineate the process unit operations in the facility producing the waste streams and explain the relationship between these operations and how the waste streams will be treated;

(ii) Describe the operating schedules; and

(iii) Characterize each waste stream by its average and maximum flow values (expressed in gallons per minute and gallons per day) and chemical and physical characteristics, including the concentrations of pollutants and maximum allowable loadings of all pollutants that may be present in the waste stream. Particular emphasis shall be directed towards applicable standards, toxic pollutants, and pollutants that the industrial waste pretreatment facilities are designed to remove; and

(c) Briefly describe proposed and existing treatment facilities that will be used to treat the industrial waste streams described in paragraph (G)(3)(b) of this rule, as well as standby and auxiliary equipment for each treatment unit shown in the detail plans, and at a minimum:

(i) Describe the average and maximum flow rates (expressed in gallons per minute and gallons per day) that each treatment unit will process, excluding stand-by and auxiliary equipment, as well as the frequency and concentrations of pollutants in all dumps of the process line;

(ii) Describe the chemical and physical characteristics of the waste stream that each treatment unit will receive, including the concentrations of all pollutants that the unit is designed to remove or that may affect the operation of the unit;

(iii) Describe the chemical and physical characteristics of the treated waste stream for each treatment unit;

(iv) State the pertinent specifications of each treatment unit and each major equipment item, including stand-by and auxiliary equipment;

(v) State the criteria used to design or size each treatment unit and the associated equipment; and

(vi) Describe the ultimate means of disposal of residuals, sludges, and collected industrial wastes.

(I) The director may waive requirements identified in paragraphs (H)(1) to (H)(3) of this rule for specific technologies or project types as necessary to efficiently review the application and administer this chapter.

Effective: 12/1/2005

R.C. 119.032 review date: 10/17/2008

Promulgated Under: R.C. 119.03
Statutory Authority: R.C. 6111.03
Rule Amplifies: R.C. 6111.03, 6111.44, 6111.45, 6111.46
Prior Effective Dates: 1/1/1974, 8/15/1982, 9/18/1987, 10/17/2003