

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

| | | |
|------------------------------------|---|---------------------|
| IN THE MATTER OF: |) | |
| |) | R 2025- |
| STANDARDS FOR THE PLACEMENT |) | (Rulemaking – Land) |
| OF LIMESTONE RESIDUAL MATERIALS: |) | |
| PROPOSED NEW 35 Ill. ADM. CODE 706 |) | |

NOTICE OF FILING

TO: Mr. Don A. Brown,
Clerk of the Board
Illinois Pollution Control Board
60 E Van Buren Street, Suite 630
Chicago, Illinois 60605

VIA ELECTRONIC MAIL)

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board, **THE CITY OF AURORA’S AND HOLCIM’S PROPOSAL FOR REGULATIONS OF GENERAL APPLICABILITY, ENTRIES OF APPEARANCE, MOTION FOR WAIVER OF SIGNATURE REQUIREMENT, MOTION FOR WAIVER OF COPY REQUIREMENTS, and PROPOSED NEW 35 ILL. ADM. CODE 706 RULE LANGUAGE**, copies of which are hereby served upon you.

Respectfully submitted,

HOLCIM US, NORTH CENTRAL REGION

Dated: February 4, 2025

By: /s/ Alec Messina
One of Holcim’s Attorneys

Alec Messina
Melissa S. Brown
HEPLERBROOM, LLC
4340 Acer Grove Drive
Springfield, Illinois 62711
Alec.Messina@heplerbroom.com
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(217) 528-3674

Respectfully submitted,

CITY OF AURORA

Dated: February 4, 2025

By: /s/ Dennis G. Walsh
One of its Attorneys

Dennis G. Walsh
Klein Thorpe & Jenkins, Ltd.
15010 S Ravinia Ave, Ste 10
Orland Park, Illinois 60462
dgwalsh@ktjlaw.com
(708) 349-3888

CERTIFICATE OF SERVICE

I, the undersigned, on oath state the following: That I have caused to be served the attached: **THE CITY OF AURORA'S AND HOLCIM'S PROPOSAL FOR REGULATIONS OF GENERAL APPLICABILITY, ENTRIES OF APPEARANCE, MOTION FOR WAIVER OF SIGNATURE REQUIREMENT, MOTION FOR WAIVER OF COPY REQUIREMENTS, and PROPOSED NEW 35 ILL. ADM. CODE 706 RULE LANGUAGE**, on February 4, 2025 to the following:

Don Brown
Clerk of the Board
Illinois Pollution Board
60 E Van Buren Street, Suite 630
Chicago, Illinois 60605
don.brown@illinois.gov

via electronic mail; and upon:

Division of Legal Counsel
Illinois Environmental Protection Agency
2520 W Iles Avenue
P.O. Box 19276
Springfield IL 62794-9276
epa.dlc@illinois.gov

via electronic mail and depositing said documents in the United State Mail, proper postage prepaid, in Springfield; and upon:

Division Chief of Environmental
Enforcement
Office of the Attorney General
100 West Randolph St., Suite 1200
Chicago IL 60601
enviro@atg.state.il.us

via electronic mail and depositing said documents in a UPS drop box, proper delivery charge prepaid, in Springfield; and upon:

Office of Legal Services
Illinois Department of Natural Resources
One Natural Resources Way
Springfield IL 62702-1271

**via depositing said documents in a UPS
drop box, proper delivery charge prepaid,
in Springfield.**

That my email address is Alec.Messina@heplerbroom.com

That the number of pages in the email transmission is 95.

That this email transmission took place before 4:30 p.m. on February 4, 2025.

Date: February 4, 2025

/s/ Alec Messina
Alec Messina

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
STANDARDS FOR THE PLACEMENT) R 2025-
OF LIMESTONE RESIDUAL MATERIALS:) (Rulemaking – Land)
PROPOSED NEW 35 Ill. ADM. CODE 706)

ENTRY OF APPEARANCE OF ALEC MESSINA

NOW COMES Alec Messina of the law firm HeplerBroom, LLC, and hereby enters his appearance in this matter on behalf of Holcim US, North Central Region.

Respectfully submitted,

By: /s/ Alec Messina

Dated: February 4, 2025

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Ph. 217-528.3674
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OF LIMESTONE RESIDUAL MATERIALS:) (Rulemaking – Land)
PROPOSED NEW 35 Ill. ADM. CODE 706)

ENTRY OF APPEARANCE OF MELISSA S. BROWN

NOW COMES Melissa S. Brown of the law firm HeplerBroom, LLC, and hereby enters her appearance in this matter on behalf of Holcim US, North Central Region.

Respectfully submitted,

By: /s/ Melissa S. Brown

Dated: February 4, 2025

Melissa S. Brown
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4340 Acer Grove Drive
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Melissa.Brown@heplerbroom.com

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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STANDARDS FOR THE PLACEMENT) R 2025-
OF LIMESTONE RESIDUAL MATERIALS:) (Rulemaking – Land)
PROPOSED NEW 35 Ill. ADM. CODE 706)

ENTRY OF APPEARANCE OF DENNIS G. WALSH

NOW COMES Dennis G. Walsh, of the law firm Klein Thorpe & Jenkins, Ltd, and hereby enters his appearance in this matter on behalf of the City of Aurora.

Respectfully submitted,

By: /s/ Dennis G. Walsh

Dated: February 4, 2025

Dennis G Walsh
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Orland Park, Illinois 60462
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dgwalsh@ktjlaw.com

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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STANDARDS FOR THE PLACEMENT) R 2025-
OF LIMESTONE RESIDUAL MATERIALS:) (Rulemaking – Land)
PROPOSED NEW 35 Ill. ADM. CODE 706)

MOTION TO WAIVE REQUIREMENT TO SUBMIT 200 SIGNATURES

The City of Aurora (“City”) and Holcim (US) Inc., Holcim – ACM Management, Inc., and their respective subsidiaries (“Holcim”), jointly, by and through the undersigned attorneys, hereby move the Illinois Pollution Control Board (“Board”) to waive the requirement, pursuant to Section 28(a) of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/28(a), and 35 Ill. Adm. Code 102.202(g), to submit 200 signatures with its Proposal for Regulations of General Applicability (“Proposal”). In support of this Motion to Waive Requirement to Submit 200 Signatures (“Motion”), the City and Holcim state as follows:

1. The City and Holcim sought changes to the Illinois Environmental Protection Act (“Act”) to authorize the Board to adopt rules for the placement of lime residual materials (“LRM”) generated from treatment of drinking water by a municipality into an underground limestone mine.

2. Public Act 103-0333 was signed into law on July 28, 2023 and promulgated a new Section 22.63 of the Act, which states:

Rules for placement of limestone residual materials. The Board shall adopt rules for the placement of limestone residual materials generated from the treatment of drinking water by a municipal utility in an underground limestone mine located in whole or in part within the municipality that operates the municipal utility. The rules shall be consistent with the Board’s Underground Injection Control regulations for Class V wells, provided that the rules shall allow for the limestone residual materials to be delivered to and placed in the mine by means other than an injection well. Rules adopted pursuant to this Section shall be adopted in accordance with the provisions and requirements of Title VII of this Act and the procedures for rulemaking in Section 5-35 of the Illinois Administrative Procedure

Act, provided that a municipality proposing rules pursuant to this Section is not required to include in its proposal a petition signed by at least 200 persons as required under subsection (a) of Section 28. Rules adopted pursuant to this Section shall not be considered a part of the State Underground Injection Control program established under this Act.

As used in this Section, "limestone residual material" means limestone residual generated from the treatment of drinking water at a publicly-owned drinking water treatment plant.

415 ILCS 5/22.63.

3. The City and Holcim are proposing rules to regulate the placement of LRM consistent with Section 22.63 of the Act. Simultaneous with the filing of this Motion, the City and Holcim are filing its Proposal for Regulations of General Applicability.

4. Section 28 of the Act and 35 Ill. Adm. Code 102.202(g) require proposals for regulations of general applicability to include a petition signed by at least 200 persons.

5. However, Section 22.63 of the Act states that "a municipality proposing rules pursuant to this Section is not required to include in its proposal a petition signed by at least 200 persons as required under subsection (a) of Section 28." 415 ILCS 5/22.63.

6. The City of Aurora, a municipality, is jointly proposing the Proposal for Regulations of General Applicability with Holcim.

7. Additionally, Section 28(a) of the Act provides, in pertinent part, as follows:

Sec. 28. Proposal of regulations; procedure.

(a) Any person may present written proposals for the adoption, amendment, or repeal of the Board's regulations, and the Board may make such proposals on its own motion. If the Board finds that any such proposal is supported by an adequate statement of reasons, is accompanied by a petition signed by at least 200 persons, is not plainly devoid of merit and does not deal with a subject on which a hearing has been held within the preceding 6 months, the Board shall schedule a public hearing for consideration of the proposal. If such proposal is made by the Agency or by the Department, the Board shall schedule a public hearing without regard to the above conditions. The Board may hold one or more hearings to consider both

the merits and the economics of the proposal. The Board may also in its discretion schedule a public hearing upon any proposal without regard to the above conditions.

415 ILCS 5/28(a) (emphasis added). As such, the Board may consider a rulemaking proposal under Section 28 of the Act without 200 signatures.

8. While 200 signatures are not required for a proposal filed by a municipality per Section 22.63 of the Act, the City's and Holcim's proposal is jointly filed. The City and Holcim request that the Board waive the 200-signature requirement in Section 28(a) of the Act and in 35 Ill. Adm. Code 102.202(g).

9. Granting this Motion is clearly within the Board's discretion to schedule a public hearing without regard to the 200-person signature condition based on the last sentence of Section 28(a). The Board has waived signature requirements in other rulemakings in the past. *See In the Matter of: Amendments to 35 Ill. Adm. Code Part 203: Major Stationary Sources Construction and Modification, 35 Ill. Adm. Code Part 204: Prevention of Significant Deterioration, and Part 232: Toxic Air Contaminants, PCB R 22-17 (Ill.Pol.Control.Bd. Sept. 9, 2021); see In the Matter of: Proposed Amendments to the Board's Special Waste Regulations Concerning Used Oil, 35 Ill. Adm. Code 739, 808, 809, PCB R 06-20(A) (Ill.Pol.Control.Bd. Jan. 5, 2006); see In the Matter of: Proposed Amendments to Dissolved Oxygen Standard 35 Ill. Adm. Code 302.206, PCB R 04-25 (Ill.Pol.Control.Bd. May 6, 2004); see In the Matter of: Proposed Amendments to Ammonia Nitrogen Standards 35 Ill. Adm. Code 302.100, 302.212, 302.213, and 304.122, PCB R 02-19 (Ill.Pol.Control.Bd. Jan. 24, 2002).*

WHEREFORE, for the above and foregoing reasons, the City and Holcim hereby respectfully request the Illinois Pollution Control Board waive the requirement to submit 200 signatures in support of its Proposal for Regulations of General Applicability.

Respectfully submitted,
HOLCIM US, NORTH CENTRAL REGION

Dated: February 4, 2025

By: /s/ Alec Messina
 One of Holcim's Attorneys

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Respectfully Submitted,
CITY OF AURORA

Dated: February 4, 2025

By: /s/ Dennis G. Walsh
 One of its Attorneys

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STANDARDS FOR THE PLACEMENT) R 2025-
OF LIMESTONE RESIDUAL MATERIALS:) (Rulemaking – Land)
PROPOSED NEW 35 Ill. ADM. CODE 706)

MOTION FOR WAIVER OF COPY REQUIREMENTS

The City of Aurora (“City”) and Holcim (US) Inc., Holcim – ACM Management, Inc., and their respective subsidiaries (“Holcim”), jointly, by and through the undersigned attorneys, hereby move that the Illinois Pollution Control Board (“Board”), pursuant to 35 Ill. Adm. Code 101.500, 102.202, and 102.402, waive the requirement that the City and Holcim provide copies of documents incorporated by reference in its proposal for regulations of general applicability.

In support of this motion, the City and Holcim state as follows:

1. The Board’s procedural rules at 35 Ill. Adm. Code 102.202 require that a proposal for a regulation of general applicability include “any material to be incorporated by reference within the proposed rule pursuant to Section 5-75 of the [Illinois Administrative Procedure Act].” 35 Ill. Adm. Code 102.202(d). Section 27(a) of the Illinois Environmental Protection Act (“Act”) also requires that a petitioner provide information supporting a regulatory proposal. 415 ILCS 5/27(a).

2. The City’s and Holcim’s proposal incorporates by reference the following documents:

“Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” USEPA, SW-846 Update V, Revision 8 (July 2014).

“Handbook for Sampling and Sample Preservation of Water and Wastewater,” USEPA, EPA-600/4-82-029 (Sept. 1982).

3. USEPA’s “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” is a compendium of documents that contains over 200 documents. The compendium of

documents is publicly available and readily accessible online on USEPA's website at

<https://archive.epa.gov/epawaste/hazard/testmethods/web/html/index-3.html>.

4. USEPA's "Handbook for Sampling and Sample Preservation of Water and Wastewater" is over 400 pages in length. The document is publicly available and readily accessible via download from USEPA's website at

https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=NERL&dirEntryId=40765.

5. Given the volume and ease of accessibility of the documents listed above, the City and Holcim request that the Board waive the requirement that it provide copies of such documents.

WHEREFORE, for the above and foregoing reasons, the City and Holcim hereby respectfully request that the Illinois Pollution Control Board waive the requirement to provide copies of the aforementioned documents.

Respectfully submitted,
HOLCIM US, NORTH CENTRAL REGION

Dated: February 4, 2025

By: /s/ Alec Messina
One of Holcim's Attorneys

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| PROPOSED NEW 35 Ill. ADM. CODE 706 |) | |

THE CITY OF AURORA’S AND HOLCIM’S PROPOSAL FOR REGULATIONS OF GENERAL APPLICABILITY

STATEMENT OF REASONS

I. INTRODUCTION

The City of Aurora (“City”) and Holcim (US) Inc., Holcim – ACM Management, Inc., and their respective subsidiaries (“Holcim”), jointly, by and through the undersigned attorneys, submit this Proposal for Regulations of General Applicability (“Proposal”) to the Illinois Pollution Control Board (“Board”) pursuant to Sections 27 and 28 of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/27 and 28, and 35 Ill. Adm. Code 102.200 and 102.202. This Statement of Reasons is submitted in support of creating 35 Ill. Adm. Code Part 706, Placement of Limestone Residual Materials, as required by 415 ILCS 5/22.63 (Public Act 103-0333). The regulations in this new Part set forth the requirements and authorizations for placement of limestone residual materials (“LRM”) in a facility as defined in the proposed Part.

Holcim operates the Conco Underground site, an active underground limestone mine. The City of Aurora Water Treatment Plant (“WTP”), owned by the City, generates LRM at its site located in the City of Aurora. The City and Holcim submit this Proposal to create a regulatory mechanism whereby Holcim can be authorized to permanently place the LRM generated at the WTP in the portion of the Conco underground mine that is owned by and located in the City of Aurora.

The City and Holcim sought the changes contained within Public Act 103-0333, which created Section 22.63 of the Act, allowing for the placement of LRM generated from the treatment of drinking water by a municipal utility in an underground limestone mine located in whole or in part within the municipality that operates the municipal utility. The Illinois Environmental Protection Agency (“Illinois EPA” or “Agency”) aided in the creation of the amendments to the Act and participated in the legislative process leading to its ultimate adoption. Holcim and the City submit this Proposal to adopt new regulations to allow for the permanent placement of lime residual materials into certain authorized facilities.

II. STATEMENT OF FACTS

a. Conco Underground Mine Reclamation Site

Holcim operates the Conco underground limestone mine located at 105 Conco Street, North Aurora, Illinois, 60542. The site is an active underground limestone mine that historically included a mine stabilization operation for completed portions of the mine, using bottom ash and limestone screening fines. After mining was completed in segments of the site, bottom ash, a Coal Combustion By-Product (“CCB”), was delivered to the site in dump trucks, mixed with limestone screening fines from on-site crushing operations, and then hauled underground by mining trucks to designated mined-out locations. This mix was first used as a structural fill embankment to facilitate mining activities, but then at full depth added structural support to mitigate the potential for long-term mine subsidence or collapse. To conduct this operation, the facility was classified and regulated by the Agency. The portion of the Conco underground mine that is owned by and located in the City of Aurora will be used for the permanent placement for the LRM.

b. City Water Treatment Plant

The City owns and operates a WTP located at 1111 Aurora Avenue in Aurora, Illinois 60505. The WTP generates lime residual material as a byproduct of the treatment of drinking water for human consumption. Raw groundwater is pumped from shallow and deep aquifer systems and sent to the WTP, and raw surface water is pumped from the Fox River to the WTP. The groundwater and surface water are blended together and receive water treatment, which includes unslaked lime (CaO). The unslaked lime is slaked onsite to create a pumpable slurry, and the lime slurry is pumped into the blended raw water and enters the Claricone vessels to complete the lime softening process. Then this softened water flows to recarbonation tanks to stabilize the water. Water is then filtered in dual media filters with sand and granular activated carbon, and after a few other necessary steps, the water can be pumped to City of Aurora customers. Through the Claricone process, particles coagulate together, settle out via gravity, and as they build up, they are removed from the vessels by opening a valve and letting the lime residual liquid flow out of the Claricone. The lime residual liquid flows via gravity to one of five dewatering lagoons. The dewatering lagoons are allowed to fill with liquid lime residual until full. This dewatering process takes from 30 to 60 days depending on the time of the year and weather conditions including temperature, precipitation, cloud cover, and wind. Once the material passes a paint filter test procedure, the dewatered material is then removed from the lagoon via a long-reach backhoe and loaded into covered haul trucks, for final disposal via land application or landfill. Approximately 35,000 tons per year of this material is generated at the WTP.

c. Initial Efforts to Manage LRM

In November 2020, the City WTP and Holcim submitted an “Application to Request a Beneficial Use Determination” via form LPC-PA27 to the Agency in accordance with Section 22.54 of the Act to use lime sludge as a substrate for mine reclamation. An excerpt of the Beneficial Use Determination application is attached hereto as **Exhibit 1**. The WTP was previously granted a beneficial use authorization to utilize the lime sludge as a soil amendment. However, the City requested this new BUD because the other beneficial use as a soil amendment was limited due to several factors, including weather conditions and other land application restrictions and timing considerations. When conditions are not suitable for applying the lime sludge as a soil amendment, the WTP discards the material into a landfill. The WTP and Holcim, in lieu of this alternative, applied for this BUD to reuse the lime sludge at the Holcim’s Conco mine as a substrate for mine reclamation. In that application, Holcim notes that the chemical composition of the lime sludge is very similar to the limestone that is currently being mined at the Holcim mine.

The WTP had previously been issued a Class V Non-Hazardous UIC Area Permit by the Illinois EPA to construct four underground injection wells to allow direct injection of the material into the subsurface caverns. The UIC Area Permit is attached hereto as **Exhibit 2**. The City and Holcim determined that the dewatered lime sludge would provide a superior option for mine reclamation at the Holcim mine. However, after the granting of the UIC Area Permit for injection into the subsurface caverns, the decision was ultimately made that building a pipeline from the WTP to the mine could pose challenges, including potential impacts on underground limestone reserves, high cost for construction and maintenance, and inefficiencies relative to existing processes.

d. LRM Management Legislation

After the decision was made to rule out injection of LRM into the mine due to the previously mentioned considerations, Holcim and the City attempted to work with the Illinois EPA to allow for the placement of the LRM in the mine via other means. However, the existing materials management programs implemented by the Agency did not provide a regulatory structure to allow for the placement of LRM in the mine once injection was rejected as an option. Holcim and the City then proceeded with the legislative process that led to the creation of Section 22.63 of the Act, which allows for the permanent placement of LRM in a facility.

In the 103rd Illinois General Assembly, House Bill 3095 passed both the House and the Senate and became Public Act 103-0333. Effective on January 1, 2024, Section 22.63 of the Act provides as follows:

Rules for placement of limestone residual materials. The Board shall adopt rules for the placement of limestone residual materials generated from the treatment of drinking water by a municipal utility in an underground limestone mine located in whole or in part within the municipality that operates the municipal utility. The rules shall be consistent with the Board's Underground Injection Control regulations for Class V wells, provided that the rules shall allow for the limestone residual materials to be delivered to and placed in the mine by means other than an injection well. Rules adopted pursuant to this Section shall be adopted in accordance with the provisions and requirements of Title VII of this Act and the procedures for rulemaking in Section 5-35 of the Illinois Administrative Procedure Act, provided that a municipality proposing rules pursuant to this Section is not required to include in its proposal a petition signed by at least 200 persons as required under subsection (a) of Section 28. Rules adopted pursuant to this Section shall not be considered a part of the State Underground Injection Control program established under this Act.

As used in this Section, "limestone residual material" means limestone residual generated from the treatment of drinking water at a publicly-owned drinking water treatment plant.

415 ILCS 5/22.63.

Section 22.63 of the Act provides that the rules shall be consistent – *not identical* – with the Board’s Underground Injection Control (“UIC”) regulations for Class V wells in addition to allowing for LRM to be delivered and placed in the mine by means other than an injection well. *Id.* Additionally, Section 22.63 defines the term “limestone residual material” as “limestone residual generated from the treatment of drinking water at a publicly-owned drinking water treatment plant.” *Id.*

III. THE CITY’S AND HOLCIM’S REGULATORY PROPOSAL

The following is a section-by-section summary of the City’s and Holcim’s proposal. The proposed rule language is attached hereto as **Exhibit 3**.

a. Subpart A

Proposed Subpart A sets forth who is subject to these rules as well as generally applicable provisions.

i. Section 706.100

Proposed Section 706.100 sets forth the Purpose and Scope of the regulations in this Part, which provide the requirements for the placement of limestone residual materials and authorization requirements for a facility that receives limestone residual materials. These rules are intended to implement the requirements of Section 22.63 of the Act.

ii. Section 706.110

Proposed Section 706.110 sets forth the definition of words or terms used in the regulations in this Part, which shall be the same as those used in the Act, except as stated in this Section.

iii. Section 706.120

Proposed Section 706.120 incorporates by reference “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” USEPA, SW-846 Update V, Revision 8 (July 2014) and “Handbook for Sampling and Sample Preservation of Water and Wastewater,” USEPA, EPA-600/4-82-029 (September 1982).

iv. Section 706.130

Proposed Section 706.130 sets for the applicability of other regulations. It states that compliance with this Part “does not affect the need for the operator to comply with all other applicable federal, state, tribal, or local laws or other requirements.”

v. Section 706.140

Proposed Section 706.140 provides the rules to follow for appeals and review of Agency and Board Decisions.

b. Subpart B

Proposed Subpart B sets forth prohibitions against unauthorized placement.

i. Section 706.200

Proposed Section 706.200 provides that nothing in this Part prohibits otherwise authorized placement of LRM and that placement for permanent storage in the facility is prohibited unless an authorization has been issued pursuant to this Part.

c. Subpart C

Proposed Subpart C sets for the procedures for applying for authorization for placement of LRM.

i. Section 706.300

Proposed Section 706.300 explains that any person required to have an authorization for placement for permanent storage of LRM in a facility must complete, sign, and submit an application to the Agency as described in this Subpart.

ii. Section 706.310

Proposed Section 706.310 provides that the operator of the facility seeking authorization under this Part must submit an application for authorization for placement of LRM to the Agency and that the generator of LRM does not need to obtain an authorization for the placement of LRM.

iii. Section 706.320

Proposed Section 706.320 explains that the Agency must not issue an authorization unless it receives an application form and supplemental information that is completed to its satisfaction.

iv. Section 706.330

Proposed Section 706.330 provides that any person that applies for an authorization must submit an application to the Agency within a reasonable time before permanent placement of LRM is expected to begin.

v. Section 706.340

Proposed Section 706.340 sets forth the information requirements for an application for authorization for placement of LRM, which must be provided using the application form provided by the Agency.

vi. Section 706.350

Proposed Section 706.350 sets forth the recordkeeping requirements, providing that an applicant must keep records of all data used to complete the application for authorization and supplemental information for a period of at least three years from the date the application is submitted to the Agency.

vii. Section 706.360

Proposed Section 706.360 sets forth the signatories to applications for authorization and reports. It provides information regarding who should sign an application for authorization for a corporation, partnership or sole proprietorship or a municipality. All reports are required to be signed by a person described in subsection (a) of this section, or by a duly authorized representative of that person. A certification of any person signing a document must be provided.

d. Subpart D

Proposed Subpart D sets forth the conditions in an authorization for placement of LRM.

i. Section 706.400

Proposed Section 706.400 provides that all conditions applicable to authorizations must be incorporated into the authorizations either expressly or by reference.

ii. Section 706.410

Proposed Section 706.410 provides that the operator must comply with all conditions of its authorization.

iii. Section 706.420

Proposed Section 706.420 explains that the need to halt or reduce activity is not a defense for the operator in an enforcement action.

iv. Section 706.430

Proposed Section 706.430 sets forth the duty to mitigate stating that the operator must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with its authorization.

v. Section 706.440

Proposed Section 706.440 states that the operator must at all times operate and maintain the facility in accordance with the authorization.

vi. Section 706.450

Proposed Section 706.450 provides that the operator must furnish to the Agency copies of records required to be kept by the authorization.

vii. Section 706.460

Proposed Section 706.460 sets forth the requirements by the owner for inspection and entry for an authorized representative of the Agency, upon presentation of credentials and other documentation as may be required by law, to enter at a reasonable time, have access to and copy records and to inspect the facility, equipment, practices or operations of the facility.

viii. Section 706.470

Proposed Section 706.470 provides that annual testing shall be performed by the generator in a manner consistent with USEPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," USEPA, SW-846 Update V, Revision 8 (July 2014) and "Handbook for Sampling and Sample Preservation of Water and Wastewater," USEPA, EPA-600/4-82-029 (September 1982).

ix. Section 706.480

Section 706.480 sets for the maintenance of submission of records as the Agency deems necessary to determine whether the operator has acted or is acting in compliance with the Act and Board regulations.

x. Section 706.490

Proposed Section 706.490 provides that all applications and reports submitted to the Agency must be signed and certified in accordance with Section 706.360.

xi. Section 706.500

Proposed Section 706.500 sets forth the reporting requirements for deviations from the conditions of the authorization, annual reporting, requirements for modification of the authorization to change name of operator and if operator failed to submit relevant facts or submitted incorrect information in an application or report, the operator must promptly submit such facts or information to the Agency.

xii. Section 706.510

Proposed Section 706.510 sets forth the operating requirements stating that the authorization must establish and estimated maximum volume of LRM to be placed in permanent storage in the facility and any other operating requirements necessary to ensure compliance with this Part.

xiii. Section 706.520

Proposed Section 706.520 provides that the duration of authorization for placement of LRM shall have an indefinite term.

xiv. Section 706.530

Proposed Section 706.530 sets forth the procedures for cessation of placement of LRM at an authorized facility.

xv. Section 706.540

Proposed Section 706.540 provides that the operator is required to demonstrate and maintain financial responsibility and must show evidence of financial responsibility to the Agency.

e. Subpart E

Proposed Subpart E sets forth the effect, modification and revocation of an issued authorization for placement of LRM.

i. Section 706.600

Proposed Section 706.600 provides that the existence of an authorization does not constitute a defense to a violation of the Act and that issuance of an authorization does not authorize injury to persons or property or invasion of other private rights, nor does issuance authorize any infringement of State or local law or regulations.

ii. Section 706.610

Proposed Section 706.610 provides that an operator may seek to modify its authorization by submitting a modification to the Agency and the Agency shall approve any modification that is consistent with this Part.

iii. Section 706.620

Proposed Section 706.620 provides that the Agency may seek revocation of an authorization if it determines that the permanent placement of LRM in the facility endangers human health or the environment.

f. Subpart F

Proposed Subpart F sets forth the design and operational requirements of the facility.

i. Section 706.700

Proposed Section 706.700 provides that the design of the facility should comply with relevant mining regulations, as applicable.

ii. Section 706.710

Proposed Section 706.710 requires that the operator maintain an annual facility map that indicates where the LRM has been placed within the facility.

iii. Section 706.720

Proposed Section 706.720 sets forth the operational standards for acceptance of LRM, placement of LRM, size of working face, quantity of LRM, sampling of LRM, equipment, utilities, maintenance, dust control, noise control, LRM placement area, mud tracking, odor and nuisance, visual inspection, integrity and structural stability of facility, unintentional off-site migration, and groundwater monitoring.

iv. Section 706.730

Proposed Section 706.730 sets forth load verification requirements. This proposed section provides that the operator determines the quantity of LRM in wet tons and verify that the LRM has been generated by the generator approved from the authorization, if material other than LRM is found in delivery of a load, the operator must reject it and proper disposal of the material. It also states that the operator shall maintain records documenting the load verifications and shall retain these records for at least three years.

v. **Section 706.740**

Proposed Section 706.740 provides that unauthorized vehicular access to the working face of all active units and to all other areas within the boundaries of the facility must be restricted and that a permanent sign must be posted at the entrance to the facility or storage area stating that only LRM is accepted at the facility.

IV. PURPOSE AND EFFECT OF THE PROPOSAL

The purpose of this Proposal is to create a regulatory mechanism that will allow the placement of LRM in authorized facilities. The UIC and Beneficial Use Determination (“BUD”) programs are not suitable frameworks for facilitating the placement of LRM in authorized mines as envisioned by Holcim and the City under the proposed regulations as outlined in this Proposal. Because these process-based approaches did not contemplate this manner, the development of the regulations allowing the disposal of LRM in authorized mines allows entities like Holcim and the City the ability to place LRM in a facility rather than dispose in a landfill or land apply.

The effect of this Proposal is to provide a regulatory mechanism authorizing the placement of LRM into authorized facilities. The owner of the facility must apply for an authorization, and only after an authorization is granted may the facility place LRM into the mine. The Proposal relies on the existing UIC program and other relevant Board regulations, making this Proposal – should it be adopted by the Board – consistent with existing materials management programs implemented by the Agency.

V. GEOGRAPHIC REGIONS AND SOURCES AFFECTED

Holcim’s and the City’s proposed regulations on the placement of LRM in authorized facilities may apply to any municipal water treatment plant and underground limestone mine located in that same municipality that wishes to place their LRM in that mine. Thus, this

Proposal would geographically impact the entire State of Illinois, should any municipality and mine located in that municipality wish to place LRM in an authorized mine. Only those municipalities seeking to place LRM materials in an authorized mine in that municipality, as opposed to relying solely on land application or disposal in a landfill, would be subject to the regulations contained within the Proposal.

VI. TECHNICAL FEASIBILITY, ECONOMIC REASONABLENESS, AND ENVIRONMENTAL AND ECONOMIC IMPACT

The placement of LRM in mines is technically feasible. Before proposing legislation authorizing such a means of managing LRM, both the City and Holcim thoroughly vetted the technical feasibility of managing LRM in the fashion articulated by the Proposal. Upon authorization granted by Illinois EPA, Holcim would complete the construction of one 6-foot diameter, steel lined drop shaft in their mine. The drop shaft would be used to place the LRM from the WTP into a subterranean limestone and dolomite mine cavity located 240 to 365 feet below ground surface. The lime sludge that is generated from the WTP would be transported to the mine via truck with sludge/mud locks, which is similar to how it is currently transported. The locations of the WTP and the mine are close in proximity (approximately 2 miles apart).

The authorization of placement of LRM in mines proposed herein would be economically reasonable for Holcim and the City's WTP. In the ordinary course, when a mine reaches the end of its useful life or market factors make it no longer economically viable, mine operators such as Holcim may elect to reclaim or repurpose the underground mine. To reclaim a subsurface mine, mine operators usually purchase suitable raw materials including clean fill, rock, or sand. These are valuable natural resources which are consumed in mine reclamation. However, if the mine operator is able to place the LRM in the mine, this use of the dewatered lime sludge will substantially reduce the need for these valuable resources but will still provide similar benefits.

Further, the transportation costs for placement of LRM in the mine would be less than what is already incurred as the material is transported to farmers for land application at sites that are often quite far from the location of the WTP. Similarly, transportation to a landfill along with additional disposal fees are also more costly to the WTP than placement of the LRM in the mine.

Placement of the LRM in an authorized mine would not cause environmental harm because, in terms of chemical composition, the lime sludge is chemically similar to the limestone that was previously mined from the site. Further, the LRM will provide strength and stability to the mine and will mitigate the possibility of a future mine subsidence event. Finally, the LRM is pliable and compactable, allowing it to be stacked in mined-out cavities, sealing off openings or paths that allow liquids to seep or transmigrate to limestone reserve areas.

In addition, placement of LRM in an authorized mine would have additional benefits relative to disposal of LRM in a landfill. Pursuant to Section 4 of the Illinois Solid Waste Management Act, the Illinois EPA prepares reports reflecting the available disposal capacity of permitted landfills in Illinois and the estimated life expectancy of those landfills. Illinois Landfill Disposal Capacity Report (2022)¹. During 2022, 36 landfills in the State reported receiving more than 42 million cubic yards of waste at the gate which equates to 17,812,887 in-place cubic yards after compaction. As of January 1, 2023, 36 active landfills had a combined remaining capacity of 420,302,975 in-place cubic yards. The report identified that at the average in-place disposal rate over the past five years, these landfills would have a cumulative life expectancy of approximately 19 years. Thus, avoiding disposal of the LRM in a landfill would allow for

¹ Publicly available at <https://epa.illinois.gov/content/dam/soi/en/web/epa/topics/waste-management/landfills/landfill-capacity/documents/landfill-capacity-report-2023.pdf>.

landfills to generally have more space to accept other wastes which would lead to landfills having greater life expectancy.

VII. OUTREACH

The City and Holcim worked closely with Illinois EPA in drafting the bill language that ultimately was adopted by the Illinois General Assembly as Public Act 103-0333. Additionally, during the Spring 2023 session, the bill was discussed by the General Assembly at two hearings. The bill was discussed at the House Energy and Environment Committee on March 7, 2023. The bill was also discussed at the Senate Environment and Conservation Committee on April 27, 2023.

After the legislation was adopted, Holcim and the City drafted the Proposal and rule language. Holcim and the City have sought input from the Agency on both the draft rule language and Statement of Reasons. In particular, Holcim and the City met with the Agency in May 2024 and again in August 2024 to discuss the draft rule language. In November 2024, Holcim and the City submitted the draft rule language and a draft of the Statement of Reasons to the Agency for review and comment.

VIII. SIGNATURE REQUIREMENT

Section 28(a) of the Act and Section 102.202(g) of the Board's procedural regulations requires that a rulemaking of general applicability include a petition signed by at least 200 persons. 415 ILCS 5/28(a); 35 Ill. Adm. Code 102.202(g). Pursuant to Section 22.63 of the Act, a municipality proposing rules for placement of LRM does not need to include in its proposal a petition signed by at least 200 persons. However, because the City is jointly filing this proposal with Holcim, the City and Holcim are simultaneously filing a Motion for Waiver of Signature Requirement.

IX. HEARING

Pursuant to Section 28(a) of the Act, “[n]o substantive regulation shall be adopted, amended, or repealed until after a public hearing within the area of the State concerned. In the case of state-wide regulations hearings shall be held in at least two areas.” 415 ILCS 5/28(a). Because the City’s and Holcim’s Proposal is a rulemaking proposal of general applicability, a public hearing is required and the hearings must be held in at least two areas because it is a proposal of state-wide applicability.

X. SYNOPSIS OF TESTIMONY

Section 102.202(c) of the Board’s procedural regulations requires that a proposal for regulations of general applicability include a synopsis of all testimony to be presented by the proponent at hearing. 35 Ill. Adm. Code 102.202(c). Holcim and the City anticipate that they will present the testimony of Alex Alexandrou, Robert Leible, and Randi Wille.

Mr. Alexandrou, Chief Management Officer for the City of Aurora, will discuss the City’s efforts to manage lime residual material over the last decade, the need for the City to find appropriate management tools for this material, and how this approach creates greater financial flexibility for the City.

Mr. Leible, Superintendent of Water Production for the Aurora Water Treatment Plant, will discuss how LRM is generated, how LRM is chemically and physically composed, and the analyses the City has prepared to determine its best options for LRM management.

Mr. Wille, Regional Manager for Land & Environment at Holcim, will talk about how Holcim intends to prepare each cell prior to LRM placement, the safety protections Holcim has put in place in the repository area, how Holcim will transport and place LRM at its mine, and

how Holcim intends to monitor for potential water migration on a real time basis within the mine.

XI. MATERIAL INCORPORATED BY REFERENCE

Pursuant to 35 Ill. Adm. Code 102.202(d), Holcim and the City reference in the Proposal, and thus propose to incorporate by reference the following material:

“Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” USEPA, SW-846 Update V, Revision 8 (July 2014).

“Handbook for Sampling and Sample Preservation of Water and Wastewater,” USEPA, EPA-600/4-82-029 (Sept. 1982).

Simultaneous with this filing, the City and Holcim are filing a Motion for Waiver of Copy Requirements requesting that the Board waive the requirement to provide copies of the materials incorporated by reference. As noted by the accompanying Motion, both documents are publicly accessible online.

XII. STUDIES OR REPORTS

Pursuant to 35 Ill. Adm. Code 102.202(e), a proposal for rulemaking must include a descriptive title or other description of any published study or research report used in developing the rule, as well as other related information. Holcim and the City did not utilize or depend on any published studies or research reports in developing its Proposal.

XIII. ELECTRONIC COPY

Pursuant to 35 Ill. Adm. Code 102.202(j), simultaneous with the filing of this Proposal, Holcim and the City are submitting an electronic version of the proposed rule language in Microsoft Word for Windows, version 6.0 or greater.

XIV. CERTIFICATIONS

Section 102.202(i) of the Board's rules requires, for a proposed rule that amends an existing rule, a written certification that the proposal amends the most recent version of the rule. 35 Ill. Adm. Code 102.202(i). Because this Proposal proposes a new Part and does not propose to amend an existing rule, this requirement is not applicable.

Section 102.202(h) requires a certification in accordance with Section 102.500 when the Agency proposes a rule it believes it is federally required. 35 Ill. Adm. Code 102.202(h). Because the City and Holcim are the rule proponents, this requirement is not applicable.

XV. CONCLUSION

For the foregoing reasons, the City and Holcim hereby submit this regulatory proposal and respectfully request that the Board adopt these regulations consistent with the proposal above.

Respectfully submitted,
HOLCIM US, NORTH CENTRAL REGION

Dated: February 4, 2025

By: /s/ Alec Messina
One of Holcim's Attorneys

Alec Messina
Melissa S. Brown
HEPLERBROOM, LLC
4340 Acer Grove Drive
Springfield, Illinois 62711
Alec.Messina@heplerbroom.com
Melissa.Brown@heplerbroom.com
(217) 528-3674

Respectfully Submitted,
CITY OF AURORA

Dated: February 4, 2025

By: /s/ Dennis G. Walsh
One of its Attorneys

Dennis G. Walsh
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(708) 349-3888



16252 Westwoods Business Park Dr, Ellisville, MO 63021 / P 636.530.4600 / F 636.256.7202 / trinityconsultants.com

November 24, 2020

Mr. Kenneth Smith
Section Chief – Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62794-9276

*Subject: Application to Request a Beneficial Use Determination LPC-PA-27
Lafarge Aggregates Illinois, Inc. – Elburn, Illinois
City of Aurora – Aurora, Illinois*

RECEIVED

NOV 25 2020

IEPA-BOL
PERMIT SECTION

Dear Mr. Smith:

I am submitting the enclosed completed LPC-PA-27, "Application to Request a Beneficial Use Determination", on behalf of Lafarge Aggregates Illinois, Inc. and the City of Aurora, Illinois. Please find enclosed one (1) original and three (3) copies of the LPC-PA-27 application.

If you have any questions regarding this submittal, please contact me at jschnarre@trinityconsultants.com or (636) 256-5655.

Sincerely,

TRINITY CONSULTANTS

John Schnarre
Senior Consultant

Attachments

cc: Mr. Randi Wille, Lafarge Aggregates Illinois, Inc.
Mr. Alex Alexandrou, City of Aurora
Mr. Peter Tomasi, Foley & Lardner

RECEIVED

AUG 03 2022

IEPA-BOL
PERMIT SECTION

HEADQUARTERS

12700 Park Central Dr, Ste 2100, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

EXHIBIT 1



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

LPC-PA27

Application to Request a Beneficial Use Determination

OFFICIAL USE ONLY

This form must be submitted with an application for a beneficial use in accordance with Section 22.54 of the Illinois Environmental Protection Act (Act). This application must include an original and three (3) photocopies of this form and all supporting information including any reports, plans specifications etc. necessary to fully describe the activities proposed and to demonstrate compliance with the Act. Incomplete applications will be rejected. Please refer to the instructions for further guidance. If there is not enough in the space provided on the form, attach your responses on a separate sheet of paper following the application format.

Section 22.54 can be viewed at <https://pcb.illinois.gov/SLR/TheEnvironmentalProtectionAct>.

I. General Information

Type of Beneficial Use: Raw Material

If the material is asphalt shingles, 39(i) form(s) must be submitted as part of this application, pursuant to Section 22.54(j).

Length of Time: We request this beneficial use determination be authorized for 5 years and 0 months.

(The Illinois EPA cannot authorize a time period greater than 5 years.)

Description of the Beneficial Use (Box will expand as needed)

The City of Aurora, Illinois Water Treatment Plant (WTP) generates lime sludge as a byproduct of the treatment of drinking water for human consumption. Approximately 35,000 tons per year (3,000 tons per month) are currently generated at the facility. The WTP was previously granted a beneficial use authorization to utilize the lime sludge as a soil amendment. This current option for beneficial use as a soil amendment is limited due to several factors, including rainfall and freezing conditions. When weather conditions are not suitable for applying the lime sludge as a soil amendment, the WTP discards the material into a landfill. In lieu of these alternatives, the City of Aurora WTP desires to beneficially reuse the lime sludge at the Lafarge Aggregates - Conco Quarry in North Aurora, Illinois as a substrate for mine reclamation. The chemical composition of the lime sludge is very similar to the limestone that is currently being mined at the Conco Quarry. The WTP was previously issued a Class V Non-Hazardous Underground Injection Control (UIC) Area Permit by the Illinois EPA to construct four (4) underground injection wells to allow direct injection of the material into the subsurface caverns. After further discussion, the WTP and Conco Quarry have determined that the dewatered lime sludge will provide a superior option for mine reclamation at the Conco Quarry.

The beneficial reuse of the lime sludge will significantly reduce the need for Lafarge Aggregates to purchase clean fill or another suitable raw material when the underground limestone mine rooms reach the end of their useful life. The WTP will first dewater the lime sludge to the consistency of a filter cake (approximately 60% moisture), removing any excess water. The beneficial reuse of the dewatered lime sludge will avoid the need for the construction of and disposal in the UIC wells, and the weather related limitations of utilizing the material as a soil amendment which necessitated disposal of some portion of the material in a landfill. When placed in the mine as reclamation material, the lime sludge will provide strength and stability to the excavated portions of the underground mine, mitigating the potential for a future subsidence event. In addition, the dewatered lime sludge will displace a valuable raw material (such as clean fill) resulting in an environmental benefit for both the WTP and Lafarge Aggregates.

II. Site Identification

A. Material Generator Information

Site Name: City of Aurora Water Treatment Plant Site # (IEPA): _____
 Physical Site Address: 1111 Aurora Avenue County: Kane
 City: Aurora State: IL Zip: 60505

Site Owner **Site Operator**
 Name: City of Aurora Name: City of Aurora
 Addr: 44 East Downer Place Addr: 1111 Aurora Avenue
 City: Aurora State: IL Zip: 60507 City: Aurora State: IL Zip: 60505
 Contact Name: Mr. Alex Alexandrou Contact Name: Mr. Alex Alexandrou
 Phone #: (630) 256-4636 Phone #: (630) 256-3250

B. Material User Information

Site Name: Lafarge Conco Quarry Site # (IEPA): _____
 Physical Site Address: 105 Conco Street County: Kane
 City: North Aurora State: IL Zip: 60542

Site Owner **Site Operator**
 Name: Lafarge Aggregates Illinois, Inc. Name: Lafarge Aggregates Illinois, Inc.
 Addr: 1S194 IL-47 Addr: 1S194 IL-47
 City: Elburn State: IL Zip: 60119 City: Elburn State: IL Zip: 60119
 Contact Name: Mr. Randi Wille Contact Name: Mr. Randi Wille
 Phone #: (847) 417-2658 Phone #: (847) 417-2658

III. Affidavits

The following affidavits must be included in your request:

- A. An affidavit or certification, from the generator, that the characteristics and method of generation of the material described in the application is accurate. (Original signatures required. Signature stamps or applications transmitted electronically or by facsimile are not acceptable.)
- B. An affidavit or certification from the product manufacturer or end user that the description of the storage and use of the material by the manufacturer or end user described in the application is accurate.
- C. If applicable, an affidavit or certification from the intermediate management facility such as a marketer that the description of the storage and use of the material by the intermediate facility described in the application is accurate.

See Attachment A.

IV. Process Generating the Material

Description of the process generating the material (Box will expand as needed)

In general, the water treatment process at the Aurora WTP can be described as follows:

1. Raw groundwater is pumped from shallow and deep aquifer systems and sent to the WTP.
2. Raw surface water is pumped from the Fox River to the WTP.
3. Both raw sources are blended together and all raw water receives the same surface water level treatment.
4. Several chemicals are used to flocculate and coagulate particles together as well as unslaked lime (CaO) to complete the lime softening process. The process takes place in a single vessel, the Claricone (there are five Claricone vessels in parallel being utilized). The treatment vessel is an upflow, solids contact clarifier.
5. The softened water flows to recarbonation tanks to stabilize the water.
6. Water is then filtered in dual media filters with sand and granular activated carbon.
7. The water is fluoridated per state law and disinfected with the proper contact time allotted.
8. Prior to pumping to customers, ammonia is added to convert the form of the disinfection chemical from free chlorine to combined chlorine (monochloramine).

The unslaked lime (calcium oxide; CaO) is slaked onsite to create a pumpable slurry. This lime slurry is pumped into the blended raw water as it enters one of the five Claricone vessels. This starts the lime softening process. As the process continues, particles coagulate together, settle out via gravity, and as they build up they are removed from the vessels by opening a valve and letting the lime residual liquid flow out of the Claricones. The lime residual liquid flows via gravity to 1 of 5 dewatering lagoons. The dewatering lagoons are allowed to fill with liquid lime residual until full. During the filling process, clear water is decanted off the top of the lagoons via a telescoping valve and that clear water is discharged via gravity to the sanitary sewer.

The water softening process at the Aurora WTP is illustrated in Attachment B.

V. Location of Intermediate Storage and Processing

Description of location of the intermediate storage and processing of the material (Box will expand as needed)

Once the lagoons at the Aurora WTP are full, the lime slurry is left to naturally dewater via gravity (through drains and piping located under the lagoons) and evaporation. This dewatering process takes from 30 to 60 days depending on time of year, depending upon weather conditions including temperature, precipitation, cloud cover and wind. Typically, the material will reach a level of 35% to 55% solids (annual average 39%). Once it passes a paint filter test procedure, and after any further dewatering, the dewatered material is then removed from the lagoon via a long-reach backhoe and loaded into covered haul trucks. In order to minimize environmental issues while transporting the dewatered lime sludge approximately 1.6 miles from the Aurora WTP to the Lafarge Aggregates site, covered haul trucks will be utilized.

Upon receipt at the Conco Quarry, the haul trucks will be unloaded directly into the mine.

Attachment C is a location map and projected haul route with a schematic design for the raise bore shaft installation. The shaft will be steel-lined and will include a control gate at the bottom so the material is released to the floor of the mine level when Lafarge Aggregates is ready to place the dewatered lime sludge into service.

VI. Justification of Legitimate and Effective Beneficial Use

Justification that the material is legitimately used beneficially as defined in Sec. 22.54(a)(3) of the Act and that it is used as an effective substitute for a commercially available material (Box will expand as needed)

In terms of chemical composition, the lime sludge is chemically similar to the limestone that was previously mined from the site. At this time, the limestone mine is still active. When the mine reaches the end of its useful life or market factors make it no longer economically viable, Lafarge Aggregates may choose to minimize their potential liability by reclaiming the underground mine. To reclaim the subsurface mine, Lafarge Aggregates will need to purchase suitable raw materials which include but are not limited to: clean fill, rock, and/or sand. These are valuable natural resources which will be consumed in the mine reclamation process. The use of dewatered lime sludge will substantially reduce the need for these valuable resources and will provide similar benefits.

The lime sludge will provide strength and stability to the mine, and will mitigate the possibility of a future mine subsidence event. The lime sludge is pliable and compactable, physical properties which make it ideal for placing into the mine to seal cracks and crevices which will help prevent liquid runoff from the mine seeping further down towards the water table.

VII. Hazardous Constituents and Explanation of No Negative Impact

Identification of any of the hazardous constituents and an explanation of why the concentration of each constituent and the material's management and use will not negatively impact human health, safety, and the environment (Box will expand as needed)

The City of Aurora has characterized the lime sludge (see Attachment D). The material is non-hazardous and contains trace amounts of metals, chlorides, and sulfates. These concentrations in the lime sludge have been determined to be in the parts per million (ppm) by weight. The trace metals, chlorides and sulfates in the beneficially reused lime sludge will not negatively impact human health or the environment because they will be contained underground in the limestone mine. This placement will not result in any impacts to the underground aquifer or the Fox River.

A toxicity characteristic leachate procedure (TCLP) was performed on the lime sludge for volatile organics, semi-volatile organics, pesticides, herbicides and metals. The results showed that the material was below regulatory limits for all compounds and the eight elemental metals. As such, the lime sludge does not pose a negative impact to the groundwater from leaching of the organics, pesticides, herbicides or metals. In addition, the lime sludge is being placed in the limestone caverns, with similar, related chemistry to the material currently being mined there.

VIII. Chemical and Physical Analysis

See Attachment D.

IX. Geology and Potential to Migrate to Groundwater

See Attachment E.

X. Volumes, Timeframes, and Justification

See Attachment F.

XI. Other Information

Not applicable.

XII. Signatures

(Original signatures required. Signature stamps or applications transmitted electronically or by facsimile are not acceptable.)

The application must be signed by the person responsible for using the material or processing the material into a product that is marketable to the general public. All applications shall be signed by the person designated below as a duly authorized representative of the applicant.

1. Corporation – By a principal executive officer of at least the level of vice president.
2. Partnership or Sole Proprietorship – By a partner or proprietor, respectively.
3. Government – by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative of the applicant only if: (1) they meet the criteria above or the authorization has been granted in writing by the person described above; and (2) is submitted with this application.

I hereby affirm that all information contained in this application is true and accurate to the best of my knowledge and belief. I do herein swear that I am duly authorized representative of the applicant and I am authorized to sign this application form.

Applicant

Company: Lafarge Aggregates Illinois, Inc.

Address: 1300 South IL-31

City: South Elgin State: IL Zip: 60177

Phone: (847) 417-2658

Name: Mr. Randi Wille

Title: Regional Manager, Environmental & Land Services

Signature: *Randi Wille*

Date: _____

Engineer

Company: Trinity Consultants, Inc.

Address: 16252 Westwoods Business Park Drive

City: Ellisville State: MO Zip: 63021

Phone: 636-530-4600

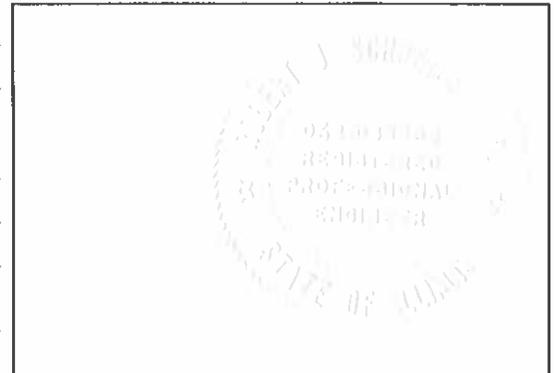
Name: Mr. Robert J. Schreiber, Jr., P.E.

Title: Principal Consultant

Signature: *Robert J. Schreiber, Jr.*

Date: _____

Seal



Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Mr. Alexandrou

0894075971 – Kane County
City of Aurora
Log No. UIC-147

Page 2

of 1989, the Professional Land Surveyor Act of 1989, the Professional Geologist Licensing Act and the Structural Engineering Licensing Act of 1989. This permit does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

If you have any questions regarding the geologic and hydrogeologic aspects of this permit, please contact Scott Kaufman at 217/785-6869. Questions regarding other aspects of this permit should be directed to Kelly Huser at 217/524-3867.

Sincerely,



Stephen F. Nightingale, P.E.
Manager, Permit Section
Bureau of Land

SFN:KDH:0894075971-UIC-UIC147-Approval.docx

KDH JKM TBM

Attachment: Attachment 1 – Changes to Permit Language
Non-Hazardous Waste Class V Underground Injection Control Area Permit

cc: Stephen Jann, UIC Branch Chief – USEPA Region V
Marc Fisher, Deuchler Environmental, Inc.
Phillippe Moreau, Deuchler Environmental, Inc.

Attachment 1
Changes to Draft Permit

1. Condition B.1.b; replaced “must be” with “is normally” in the third sentence.
2. Condition B.1.b; changed “north” to “south” in the fifth sentence. The Water Treatment Plant is south of the subject property.
3. Condition B.1.c; added “by visual observation of the manhole structure” to the end of the last sentence.
4. Attachment C; there were duplicate Attachment C’s, deleted one.
5. Attachment D; added information to headers and corrected page numbers.

Class V UIC Permit
Log No. UIC-147

0894075971 – Kane County
City of Aurora
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A. AUTHORIZATION FOR CONSTRUCTION

1. **Authorization for Construction.** The Permittee is hereby authorized to complete construction of four (4) Class V nonhazardous underground injection wells, identified as UIC Well #1, UIC Well #2, UIC Well #3, and UIC Well #4. The injection wells will eventually be used to dispose of lime sludge from the City of Aurora's Water Treatment Plant into a subterranean limestone and dolomite mine cavity located 240 to 365 feet below ground surface.
2. **Application and Plans.** The construction and, if later authorized, operation of the injection wells and associated monitoring systems shall be conducted in accordance with the terms and conditions of this permit, the approved permit application (identified in Attachment A of this permit), the Illinois Environmental Protection Act, Title 35 Illinois Administrative Code (Ill. Adm. Code) Sections 702, 704, 705 and 730, and subsequent approved modifications. In the event of a conflict between conditions of this permit and the approved permit application, the condition/requirements of the permit shall supersede the application.
3. **Well Location.** The injection will occur on City of Aurora property that is approximately fifty acres in size and is located at the southeast corner of the intersection of Illinois Route 25 and Mettel Road, Aurora, Illinois. The fifty acre property is located within the northwest quarter of Section 10, Township 38 North, Range 8 East of the Third Principal Meridian, Kane County, Illinois. (Fig. 2.2 and 2.3 in the approved permit application)
4. **Injection and Confining Layers.** The lime sludge will be injected into an injection zone that is located in a mine cavity from a depth of 240 to 365 feet below ground surface (ft-bgs) at the injection site. The geologic formations designated as the Ordovician Galena and Platteville Groups are located within this interval beyond the horizontal boundaries of the mine cavity.

The confining layer is located at a depth of approximately 64 ft-bgs and is comprised of the Maquoketa Shale. This formation has a thickness of approximately 144 feet in the vicinity of the injection site. The Maquoketa Shale is a formation with low permeability and uniform thickness making it an effective upper confining unit.

5. **Wellhead.** The wellheads will be located inside of a protective below-grade injection manhole structure. See Attachment B for construction details. Each injection well will have an air/vacuum release valve to allow air balancing during pumping of the lime sludge.

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6. Casing and Cementing (35 Ill. Adm. Code 730.112(b)). The casing and cementing details for each well are provided in Attachment B which contains:
 - An injection well schematic (same for each well);
 - An injection well manhole detail (same for each well);
 - Details of the casing strings used in the construction of each well; and
 - Specification for the cementing of the long string casing.

7. Tubing and Packer Specifications. The injection tubing shall be a 6-inch schedule 40 carbon steel pipe with threaded joints. All threaded joints will be bead welded. There is no packer for this injection well system as the lime sludge is being injected into an open cavity.

8. Well Completion Report. The Permittee shall submit a Well Completion Report (Attachment D) upon completion of each injection well. The report must present the information that has been obtained during construction of the injection wells; accurately document the as-built injection well system; document the geophysical and hydrological conditions present and provide appropriate operating limits for the system based on the evaluation of the information that has been collected. The report must also include the following:
 - a. A description of construction of each well, including driller's log, materials used (i.e., tubing and casing tallies), cement (and other) volumes, appropriate logs and other tests conducted during the drilling and construction.

 - b. Test and Logs during Construction. At a minimum, during drilling and construction of the injection well(s) system, a pressure test on each injection tubing/string and extraction tubing shall be performed. A cement bond log for all long string casings (injection and extraction wells) shall be performed. Additional test and geophysical logs identified in the approved permit application or required as a condition elsewhere in this permit shall be performed. The results from logs and tests including appropriate evaluations and interpretations of the results shall be included in the Well Completion Report. A descriptive report interpreting the results of the logs and tests that has been prepared by a knowledgeable log analyst shall be included. Reports prepared by log analysts must be signed by the analyst and include his/her phone number.

 - c. A revised Contingency Plan as required in Condition H.27.

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9. Reporting During Well Construction. During drilling and construction of the injection well(s) system, a weekly report shall be submitted to the Illinois EPA. The reports should describe the construction completed during the past week and the construction to be completed the following week at the well site. This report should include a list of all test and logs performed or to be performed on the well. These reports should be submitted electronically to: Gino.Bruni@Illinois.gov and Kelly.Huser@Illinois.gov. These reports are exempt from the signatory requirement in Condition H.11.
10. Authorization for Injection. The Permittee shall not commence operation of any injection well until they have received written authorization from the Illinois EPA to do so. Authorization to begin operation of an injection well shall not be granted until:
 - a. The Permittee has submitted a Well Completion Report, a permit modification request for authorization to operate injection wells UIC Well #1, UIC Well #2, UIC Well #3, and UIC Well #4 and other information as required demonstrating that the well(s) has been constructed in accordance with the approved permit.
 - b. The Illinois EPA Field Office Section has conducted an inspection of the newly constructed injection well systems to verify the completion of the injection wells.
 - c. The Agency has conducted a review of the Well Completion Report and other information as required by this permit and has determined that the report is complete, i.e., all of the required testing, logging, evaluations and inspections have been conducted in accordance with the approved permit.
 - d. The information provided demonstrates that the construction and operation of the injection well meets the requirements of the Illinois Environmental Protection Act and Title 35 Illinois Administrative Code Sections (Ill. Adm. Code) 702, 704, 705 and 730.
 - e. The Permittee has established financial resources to close, plug, and abandon all underground injection wells and extraction well at this facility as required in Condition H.16 of this permit. (35 Ill. Adm. Code 704.189)

B. OPERATING, MONITORING AND REPORTING REQUIREMENTS

1. Operating Requirements (35 Ill. Adm. Code 730.113(a), 704.185)
 - a. Flow rate. The approximate flow rate for each well is 800 gallons per minute.
 - b. Injection Fluid. The fluid injected into wells UIC Well #1, UIC Well#2, UIC Well #3, and UIC Well #4 shall only be lime sludge slurry generated from the

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City of Aurora Water Treatment Plant (WTP). Suspended and dissolved solids are removed from the water supply as part of the lime softening process. In this treatment process, lime (calcium oxide) in powder form is mixed with raw source water and forms a floc with the dissolved solids within five claricones at the WTP located at 1111 Aurora Ave., Aurora, Illinois. The lime sludge that is generated during the treatment process is normally removed from the claricones approximately every 3 hours. This is the source of the lime sludge slurry that will be injected into the underground mine through the four injection wells. The WTP is approximately 3500 feet north of the subject property. The lime sludge will be transported from the WTP to the injection wells by a forcemain.

- c. Annulus System. The annulus for this injection system has no annular fluid and is not pressurized (this is due to the fact that the lime sludge is being injected, mainly by gravity, into an open mine cavity). The injection well manholes will be inspected quarterly to insure the injection string is not leaking by visual observation of the manhole structure.

2. Monitoring Requirements (35 Ill. Adm. Code 730.113(b))

- a. Sampling. Grab samples of the injection fluid shall be collected in accordance with Condition B.3.
- b. Recording Devices. Recording devices or their equivalents shall be installed and used to monitor the forcemain pressure, flow rate to injection well(s), and volume injected. Information from the following continuous recording devices and/or manually read gauges/devices shall be utilized to monitor the operation of injection well system:
 - i. Continuous Sludge Level Measurement – Seimens, Model :SITRANS LR200
 - ii. Pump Station pressure gauge – Ashcroft, Model 1279 Duragauge
 - iii. Magnetic Flow meter – Toshiba, Model LF654 and LF622F.
 - iv. Volume - The injection volume will be calculated by the supervisory control and data acquisition (SCADA) system based on the magnetic flow meter.
- c. Range of Recording Device and Gauges. All recording devices and gauges shall be capable of recording or reporting values that exceed maximum permitted

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operating range by a minimum of 20%.

3. Material Analysis Plan (35 Illinois Admn. Code 704.187). The Permittee shall follow the written Waste Sampling and Analysis Plan, Form 4e, Permit Item I of the approved permit application, as modified by this permit. A copy of the plan shall be kept at the facility. The Permittee shall collect and analyze the injection fluid in a manner consistent with US EPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" and "Handbook for Sampling and Sample Preservation of Water and Wastewater," U.S. Environmental Protection Agency EPA-600/4-82-029.
4. Groundwater Monitoring Plan (35 Ill. Adm. Code 730.113). The Illinois EPA approves herein a request for a waiver from the groundwater monitoring requirements based on information provided in Exhibit A of the approved UIC Permit Application. The waiver request approval may be terminated if: (1) the waste sludge is determined to be hazardous pursuant to Condition B.3 above, (2) the Illinois EPA acquires new information on the geology of the facility area, or (3) new regulations requiring groundwater monitoring are promulgated. If the Illinois EPA terminates the approval of the groundwater monitoring plan waiver based on determination that the sludge is hazardous, acquisition of new geologic information, or promulgation of new regulations, the modification procedures of 35 Ill. Adm. Code Part 702 will be followed.
5. Quarterly Reporting Requirements
 - a. Report submittal date. Quarterly monitoring reports are due by April 15th (First Qtr.), July 15th (Second Qtr.), October 15th (Third Qtr.), and January 15th (Fourth Qtr.). After two years of submitting quarterly reports, the Permittee may submit an annual report containing the information required in Conditions 5.b and 5.c below. The annual report must be submitted by February 1st of each year.
 - b. Contents of quarterly reports. The quarterly reports shall include:
 - i. Daily value for total volume injected and daily maximum, and minimum values for pump station pressure, and flow rate.
 - ii. Weekly averages for flow rate.
 - iii. Total volume injected to date
 - vi. Monthly summary of:

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- (a) maximum, minimum, and average values for pump station pressure, and flow rate
 - (b) total gallons of fluid injected
 - vii. Results of chemical analyses required by this permit.
- c. Other information in quarterly reports. The results of any of the following tests or work shall be reported with the quarterly report after completion of the test or work:
 - i. Copies of any logs run on the well, submitted with a log analysis.
 - iii. Any other test of the injection well conducted by the Permittee.
 - iv. Any well work over.
 - v. Maintenance performed on monitoring devices or well components.
 - vi. Changes of gauges, pipes, and other well components and monitoring devices.
- d. Illegible reports will be returned to the Permittee and deemed not filed. All graphs and charts must be labeled appropriately.
- e. Report submittal addresses. The cover letter for the quarterly report will indicate a copy of the report was submitted to each of the following addresses:
 - i. Illinois Environmental Protection Agency
Division of Land Pollution Control - #33
Permit Section
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
 - ii. Illinois Environmental Protection Agency
Division of Land Pollution Control
Field Operations Section
9511 Harrison St.
Des Plaines, IL 60016

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- C. EFFECT OF PERMIT.** The existence of a UIC permit shall not constitute a defense to a violation of the Environmental Protection Act or 35 Ill. Adm. Code Subtitle G except for development, modification or operation without a permit. Issuance of this permit does not convey property rights or any exclusive privilege. Issuance of this permit does not authorize any injury to persons or property or invasion of other private rights, or infringement of state or local law or regulations (35 Ill. Adm. Code 702.181).

The activity authorized by this permit shall not allow the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect the health of persons or the environment. Any underground injection activity not authorized in this permit or otherwise authorized by permit is prohibited. (35 Ill. Adm. Code 704.122)

Compliance with the terms of this permit does not constitute a defense to any action brought under Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health, or the environment. In the case of disagreement between the conditions of this permit and the application, the permit conditions shall govern.

- D. PERMIT ACTIONS.** This permit may be modified, reissued or revoked during its term for cause set forth in 35 Ill. Adm. Code 702.183 through 702.186. The filing of a request by the Permittee for a permit modification or revocation, or a notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition. (35 Ill. Adm. Code 702.146)
- E. SEVERABILITY.** The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit is held invalid, the application of such provision to other circumstances and to the remaining provisions of this permit shall not be affected thereby.
- F. CONFIDENTIALITY.** In accordance with Section 7 of the Illinois Environmental Protection Act and 2 Ill. Adm. Code 1828 allows certain information submitted to the Illinois EPA may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words “confidential business information” on each page containing such information. In addition, justification for the claim must also be made and all requirements of 2 Ill. Adm. Code 1828 must be followed. If no claim is made at the time of submission, the Illinois EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with Board and Agency procedures. (35 Ill. Adm. Code 130) (2 Ill.

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Adm. Code 1828) Claims of confidentiality for the following information will not be approved:

1. The name and address of any permit applicant or permittee;
2. The identity of substances being placed or to be placed in landfills or hazardous waste treatment, storage or disposal facilities (including injection wells);
3. Information, which deals with the existence, absence or level of contaminants in drinking water.

G. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS. Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the Safe Drinking Water Act (SDWA) and the Environmental Protection Act.

H. DUTIES AND REQUIREMENTS.

1. **Duty to Comply.** The Permittee shall comply with all applicable UIC program regulations and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by a temporary emergency permit under 35 Ill. Adm. Code 704.163. Any permit noncompliance constitutes a violation of the Illinois Environmental Protection Act and is grounds for enforcement action, permit revocation, modification, or denial of a permit renewal application. Such noncompliance may also be grounds for enforcement action under the Resource Conservation and Recovery Act (RCRA). (35 Ill. Adm. Code 702.141 and 35 Ill. Adm. Code 704.181(a)).
2. **Duty to Reapply.** If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must submit an application for a new permit at least 180 days before this permit expires. (35 Ill. Adm. Code 702.142)
3. **Need to Halt or Reduce Activity.** It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (35 Ill. Adm. Code 702.143)
4. **Duty to Mitigate.** The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from non-compliance with this permit. (35 Ill. Adm. Code 702.144)

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5. **Proper Operation and Maintenance.** The Permittee shall at all times properly operate and maintain all facilities, systems of treatment, and controls (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of backups, auxiliary facilities, or similar systems used only when necessary to achieve compliance with the condition of the permit. (35 Ill. Adm. Code 702.145)
6. **Property Rights.** Issuance of this permit does not convey any property rights of any sort, or any exclusive privilege. (35 Ill. Adm. Code 702.147)
7. **Duty to Provide Information.** The Permittee shall furnish to the Illinois EPA, within the specified times, any information which the Illinois EPA may request, to determine whether cause exists for modifying, revoking and reissuing, terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Illinois EPA, upon request, copies of records required to be kept by this permit. (35 Ill. Adm. Code 702.148)
8. **Inspection and Entry** (35 Ill. Adm. Code 702.149). The Permittee must allow an authorized representative of the Illinois EPA, upon the presentation of credentials and other documents, as may be required by law, and at reasonable times, to:
 - a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy any records that must be kept under the conditions of this permit;
 - c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;
 - d. Sample or monitor for the purposes of assuring permit compliance or as otherwise authorized by the appropriate Act, any substances or parameters at any location; and
 - e. Have access to witness the running of any logs or tests.

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9. Monitoring. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (35 Ill. Adm. Code 702.150(a))
10. Records (35 Ill. Adm. Code 702.150(b),(c) & 704.181(b))
 - a. The Permittee shall retain records of all monitoring information, including all calibration, maintenance records, original chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Illinois EPA at any time.
 - b. Retention of records. The Permittee shall retain records concerning the nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified under 35 Ill. Adm. Code 704.188 or under Subpart G of 35 Ill. Adm. Code 730, as appropriate. The Owner or Operator shall continue to retain the records after the three year retention period unless the Owner or Operator delivers the records to the Illinois EPA or obtains written approval from the Illinois EPA to discard the records.
 - c. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. A precise description sampling methodology and handling, including chain of custody procedures;
 - iv. The date(s) analyses were performed;
 - v. The individual(s) who performed the analyses;
 - vi. The analytical techniques or methods used; and
 - vii. The results of such analyses.
11. Signatory Requirements. All reports, application, or information submitted to the Illinois EPA shall be signed and certified as required in 35 Ill. Adm. Code 702.126. (35 Ill. Adm. Code 702.151)

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12. Reporting Requirements.

- a. Planned changes. The Permittee shall give written notice to the Permit Section, Division of Land Pollution Control within 15 days of any planned physical alterations or additions as to the permitted facility. (35 Ill. Adm. Code 702.152(a))
- b. Anticipated noncompliance. The Permittee shall give advance notice to the Permit Section, Division of Land Pollution Control, of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. (35 Ill. Adm. Code 702.152(b)).
- c. Other noncompliance. The Permittee shall report all instances of noncompliance not reported under 35 Ill. Adm. Code 702.152 paragraphs (d), (e) and (f) at the time monitoring reports are submitted. The reports shall contain the information required in 35 Ill. Adm. Code 704.181(d) (2). (35 Ill. Adm. Code 702.152(g))
- d. A summary of the reporting dates can be found in Attachment C for information required by this permit. This summary is provided as a convenience and is not necessarily complete, nor is it to be construed as a substitute for actual permit conditions.

13. Corrective Action Requirements (35 Ill. Adm. Code 704.193)

- a. The permitted well(s) shall be immediately shut-in and the Permit Section, Division of Land Pollution Control, shall be notified orally within twenty-four (24) hours if:
 - i. the discovery of upward fluid migration occurring through a previously unknown well bore, or other improperly sealed, completed or abandon wells in the area of review, due to injection of fluid into the Permittee's well(s), and/or
 - ii. any problems developed with the casing or components of the Permittee's own injection well(s).

Within five (5) days of an incident described above, the Permittee shall submit to the Permit Section, Division of Land Pollution Control a report containing the information specified by Conditions H.14.b. below.

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- b. Any improperly sealed, completed or abandoned wells within the injection well's area of review that penetrate the injection zone, the Permittee must also submit a plan consisting of such steps or modifications as necessary to prevent movement of fluid into USDWs ("corrective action"). A copy of the plugging affidavit(s) filed with the Illinois Department of Public Health and the Illinois Department of Natural Resources, Office of Mines and Minerals, Division of Oil and Gas must be submitted to the Permit Section, Division of Land Pollution Control.
- c. In case of well failure, the Permittee shall implement the contingency plan developed for the injection well. An investigation of the indicated well failure and plan of action to eliminate the problem must be conducted and the remedial work performed.

14. Twenty-four Hour Reporting. (35 Ill. Adm. Code 702.152(f))

- a. The Permittee shall report to the Permit Section, Division of Land Pollution Control, any noncompliance or well activity which may endanger health or the environment including but not limited to the following.
 - i. Any monitoring or other information which indicates any contaminant may cause an endangerment to underground sources of drinking water.
 - ii. Any noncompliance with a permit condition or malfunction of the injection well system which may cause fluid migration into or between underground sources of drinking water.

Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances.

- b. A written submission must also be provided to the Permit Section, Division of Land Pollution Control, within 5 days of the time the Permittee becomes aware of the circumstances. The written submission must contain:
 - i. a description of the noncompliance problem and its cause;
 - ii. the period of noncompliance including exact dates and times;
 - iii. if the noncompliance problem has not been corrected, the anticipated time it is expected to continue; and

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- iv. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance problem.

15. Transfer of Permit.

- a. Transfers. This permit is not transferable to any person except after notice to the Illinois EPA. The Illinois EPA may require modification of the permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the appropriate Act. (35 Ill. Adm. Code 702.152(c))
- b. Transfer by modification. A permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified or reissued (under Sections 704.261 through 704.264) to identify the new Permittee and incorporate such other requirements as may be necessary under the appropriate Act. The new owner or operator to whom the permit is transferred must comply with all the terms and conditions specified in such permit. (35 Ill. Adm. Code 704.260(a))
- c. Automatic transfers. (35 Ill. Adm. Code. 704.260(b)) As an alternative to transfers under condition 15(b), a UIC permit for a well not injecting hazardous waste may be automatically transferred to a new Permittee if each of the following conditions are fulfilled:
 - i. The current Permittee notifies the Illinois EPA at least 30 days in advance of the proposed transfer date, described in condition 15(c)(ii) of this section;
 - ii. The notice includes a written agreement between the existing and new Permittee containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee;
 - iii. The notice demonstrates that the financial responsibility requirements of 35 Ill. Adm. Code 704.189 will be met by the new Permittee and that the new Permittee agrees to comply with all the terms and conditions specified in the permit to be transferred under automatic transfer conditions; and
 - iv. The Illinois EPA does not notify the existing Permittee and the proposed new Permittee of its intent to modify the permit. A modification under this subparagraph may also be a minor modification under 35 Ill. Adm. Code 704.264. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in condition 15(c)(ii).

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16. **Financial Responsibility.** (35 Ill. Adm. Code 704.189) The Permittee shall maintain financial responsibility and resources to close, plug, and abandon all the underground injection wells and extraction well at this facility in a manner prescribed by the Illinois EPA, and Condition H.23 of this permit.
 - a. The Permittee must show evidence of financial responsibility to the Illinois EPA by the submission of a surety bond, other adequate assurance such as financial statements, or other materials acceptable to the Illinois EPA.
 - b. The financial documents submitted must be revised and maintained as specified in 35 Ill. Adm. Code 704 and 40 CFR 144.
 - c. Construction and/or operation of any injection well(s) and extraction well is prohibited unless the Permittee has adequate financial assurance as described in subpart (a) of this condition.

17. **Cost Estimates for Plugging and Abandonment.** (35 Ill. Adm. Code 702.160; 704.212)
 - a. The Owner or Operator must prepare a written estimate, in current dollars, of the cost of plugging the injection well(s) and extraction well in accordance with the plugging and abandonment plan as identified in Condition H.23. The cost estimate must equal the cost of plugging and abandonment at the point in the facility's operating life when the extent and manner of its operation would make plugging and abandonment the most expensive. The currently approved cost estimate for plugging and abandonment of the four injection wells and extraction well is \$243,000 (2015 dollars).
 - b. The Owner or Operator must adjust the cost estimate for inflation within 30 days after each anniversary of the date on which the first cost estimate was prepared. The adjustment must be made as specified in paragraphs (i) and (ii) of this condition, using an inflation factor derived from the annual Oil and Gas Field Equipment Cost Index. The inflation factor is the result of dividing the latest published annual Index by the Index for the previous years.
 - i. The first adjustment is made by multiplying the cost estimate by the inflation factor. The result is the adjusted cost estimate.
 - ii. Subsequent adjustments are made by multiplying the latest adjusted cost estimate by the latest inflation factor.

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- c. The Owner or Operator must review the cost estimate whenever a change in the plan increases the cost of plugging and abandonment. The revised cost estimate must be adjusted for inflation as specified in paragraph (b) of this condition.
 - d. The Owner or Operator must keep the following at the facility during the operating life of the facility:
 - i. the latest cost estimate prepared in accordance with paragraphs (a) and (c) of this condition and,
 - ii. the latest adjusted cost estimate prepared in accordance with paragraph (b) of this condition.
18. Incapacity (35 Ill. Adm. Code 702.160; 704.230)
- a. An owner or operator shall notify the Waste Reduction and Compliance Section, Division of Land Pollution Control, by certified mail of the commencement of a voluntary or involuntary proceeding under 11 U.S.C. (Bankruptcy), naming the owner or operator as debtor, within 10 business days after the commencement of the proceeding. A guarantor of a corporate guarantee as specified in 35 Ill. Adm. Code 704.219 must make such a notification if the guarantor is named as debtor, as required under the terms of guarantee in 35 Ill. Adm. Code 704.240.
 - b. An owner or operator who fulfills the requirements of 35 Ill. Adm. Code 704.213 by obtaining a letter of credit, surety bond or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy insolvency or a suspension or revocation of the license or charter of the issuing institution. The owner or operator must establish other financial assurance within 60 days after such an event.
19. Revocation of Permits. (35 Ill. Adm. Code 702.186) The Illinois Pollution Control Board will revoke a permit during its term in accordance with Title VIII of the Illinois Environmental Protection Act or the Illinois EPA will deny permit renewal for the following causes:
- a. The Permittee's violation of the Environmental Protection Act or regulations adopted thereunder;
 - b. Noncompliance by the Permittee with any condition of the permit;

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- c. The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time; or
 - d. A determination the permitted activity endangers human health, or the environment and can only be regulated to acceptable levels by permit modification or revocation.
- 20. State Mining Board Permits. Issuance of this permit does not relieve the Permittee of the responsibility of complying with the provisions of Illinois State Mining Board Rules and Regulations and an Act in Relation to Oil, Gas, Coal, and Other Surface and Underground Resources. (Rule II, Illinois Department of Natural Resources, Office of Mines and Minerals, Division of Oil and Gas, Rules and Regulations)
- 21. False or Omitted Information.
 - a. The Permittee shall not make any false statement, representation, or certification in any application, record, report, plan, or other document submitted to the Illinois EPA, the United States Environmental Protection Agency (USEPA), or required to be maintained under this permit.
 - b. If, or when, the Permittee becomes aware of a failure to submit any relevant facts in a permit application or incorrect information was submitted in a permit application or in any report to the Illinois EPA, the Permittee shall promptly submit such facts or correct information to the Permit Section, Division of Land Pollution Control within ten (10) days. (35 Ill. Adm. Code 702.152(h))
- 22. Restriction on Unpermitted Waste. Injection of waste other than those specified in the approved permit application is prohibited.
- 23. Plugging and Abandonment.
 - a. The Permittee shall notify the Permit Section, Division of Land Pollution Control, 60 days prior to abandonment of a well. The Permittee must submit significant changes to the plans for plugging and abandonment 180 days prior to abandonment. (35 Ill. Adm. Code 704.181(e))
 - b. The Permittee shall plug and abandon the injection well as provided in 35 Ill. Adm. Code 704.188 and 730.110 and in accordance with the schedule and provisions of the approved plugging and abandonment plan. The approved plan is contained in Form 4g, Plugging and Abandonment of the approved permit

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application, herein incorporated by reference and as modified by conditions of this permit. (35 Ill. Adm. Code 704.188).

- c. No later than 60 days after plugging and abandonment of any injection or extraction well, the Permittee shall submit a plugging report required by 35 Ill. Adm. Code 704.181 (g) to the Permit Section, Division of Land Pollution Control. The report shall be certified as accurate by the person who performed the plugging operation, and shall consist of:
 - i. A statement that the well was plugged in accordance with the plan most recently submitted to the Illinois EPA; or
 - ii. A statement defining the actual plugging and explaining why the Illinois EPA should approve such deviation, if the actual plugging differed from the approved plan. Any deviation from a previously approved plan which may endanger underground sources of drinking water is cause for the Illinois EPA to require the operator to re-plug the well; and
 - iii. Copy of well plugging affidavit submitted to the Illinois Department of Natural Resources, Office of Mines and Minerals, Division of Oil and Gas; and the Illinois Department of Public Health.
 - iv. If the approved plugging and abandonment plan requires a change, a revised plan shall be submitted to the Permit Section, Division of Land Pollution Control for approval. If approved, the revised plugging and abandonment plan shall be incorporated into the approved permit application as a permit modification.
24. Conversion of Wells (35 Ill. Adm. Code 704.181(e)) The Permittee shall notify the Permit Section, Division of Land Pollution Control, 45 days prior to conversion of any well. Plans for conversion must be submitted 180 days prior to actual conversion or abandonment. Injection into converted wells shall not be conducted until the Permittee receives written authorization for injection from the Illinois EPA.
25. Inactive Wells. (35 Ill. Adm. Code 704.188) After cessation of injection for two (2) years, the Permittee shall plug and abandon the well in accordance with Condition H.23 of this permit and 35 Ill. Adm. Code 730.110, unless the Permittee has:
 - a. Provided notice to the Permit Section, Division of Land Pollution Control; and

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- b. Described actions or procedures, which are deemed satisfactory to the Illinois EPA, to ensure the well will not endanger underground sources of drinking water during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells, including mechanical integrity testing, unless waived by the Illinois EPA in writing.
26. Duty to Establish and Maintain Mechanical Integrity (35 Ill. Adm. Code 704.181(h) and 704.190)
- a. The Permittee shall establish mechanical integrity as defined in 35 Ill. Adm. Code 730.108 prior to commencing injection.
 - b. A demonstration of mechanical integrity in accordance with Section 12.4 of the approved permit application shall be conducted after construction of each well. The Permittee must establish mechanical integrity prior to any injection into or extraction from any well. A descriptive report interpreting the results all logs and tests must be prepared by a knowledgeable log analyst and submitted to the Permit Section, Division of Land Pollution Control. This report shall be signed by the analyst and shall include his/her phone number.
 - c. The Permittee shall demonstrate the absence of significant leaks in the injection tubing by use of a pressure test. The pressure test shall be conducted in accordance with procedures contained Section 12.4.1 of the approved permit application.
 - d. The Permittee shall provide a Cement Bond Log for each well (injection and extraction) to demonstrate protection of underground sources of drinking water. A descriptive report interpreting the results of the Cement Bond Log must be prepared by a knowledgeable log analyst and submitted as part of the Well Completion Report (Att. D) for each well required by Condition A.8.
 - e. The Permittee shall cease injection if an apparent loss of mechanical integrity as defined by 35 Ill. Adm. Code 730.108, becomes evident during operation of the injection system. Operation shall not be resumed until the Permittee has complied with the provisions of this permit, and applicable regulations, regarding mechanical integrity demonstration and testing.
 - f. All gauges used in mechanical integrity demonstrations or in daily operations shall be calibrated according to the procedures of the National Bureau of Standards, initially and at least annually thereafter. A copy of the calibration

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- c. the owner or operator or officer of the owner, or operator, or any employee who has control over operating decisions regarding the facility has committed an act of gross carelessness or incompetence in handling, storing, processing, transporting or disposing of waste.
- d. a new person is associated with the owner or operator who can sign the application or who has control over operating decisions regarding the facility, such as a corporate officer or a delegated employee.

The certification shall describe the violation(s), convictions, carelessness or incompetence as outlined in a, b, or c above and must include the date that a new person as described in d above began employment with the applicant.

The 39i certification and supporting documentation shall be submitted to the address specified below:

Illinois Environmental Protection Agency
Bureau of Land #33
39(i) Certification
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

- 29. Other Permitting Requirements. The issuance of this UIC permit does not relieve the Permittee of the responsibility for obtaining other permits or authorizations required by the Illinois EPA Division of Water Pollution Control, Illinois EPA Division of Public Water Supplies, Illinois EPA Bureau of Air, Illinois Department of Natural Resources or other federal, state, or local agencies.

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ATTACHMENT A
APPROVED PERMIT APPLICATION

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APPROVED PERMIT APPLICATION

| <u>Document</u> | <u>Dated</u> | <u>Received</u> |
|----------------------------|--------------------|-------------------|
| Initial Permit Application | February 19, 2013 | February 26, 2013 |
| Additional Information | October 29, 2013 | October 31, 2013 |
| Additional Information | September 30, 2014 | October 1, 2014 |
| Additional Information | April 29, 2015 | April 30, 2015 |

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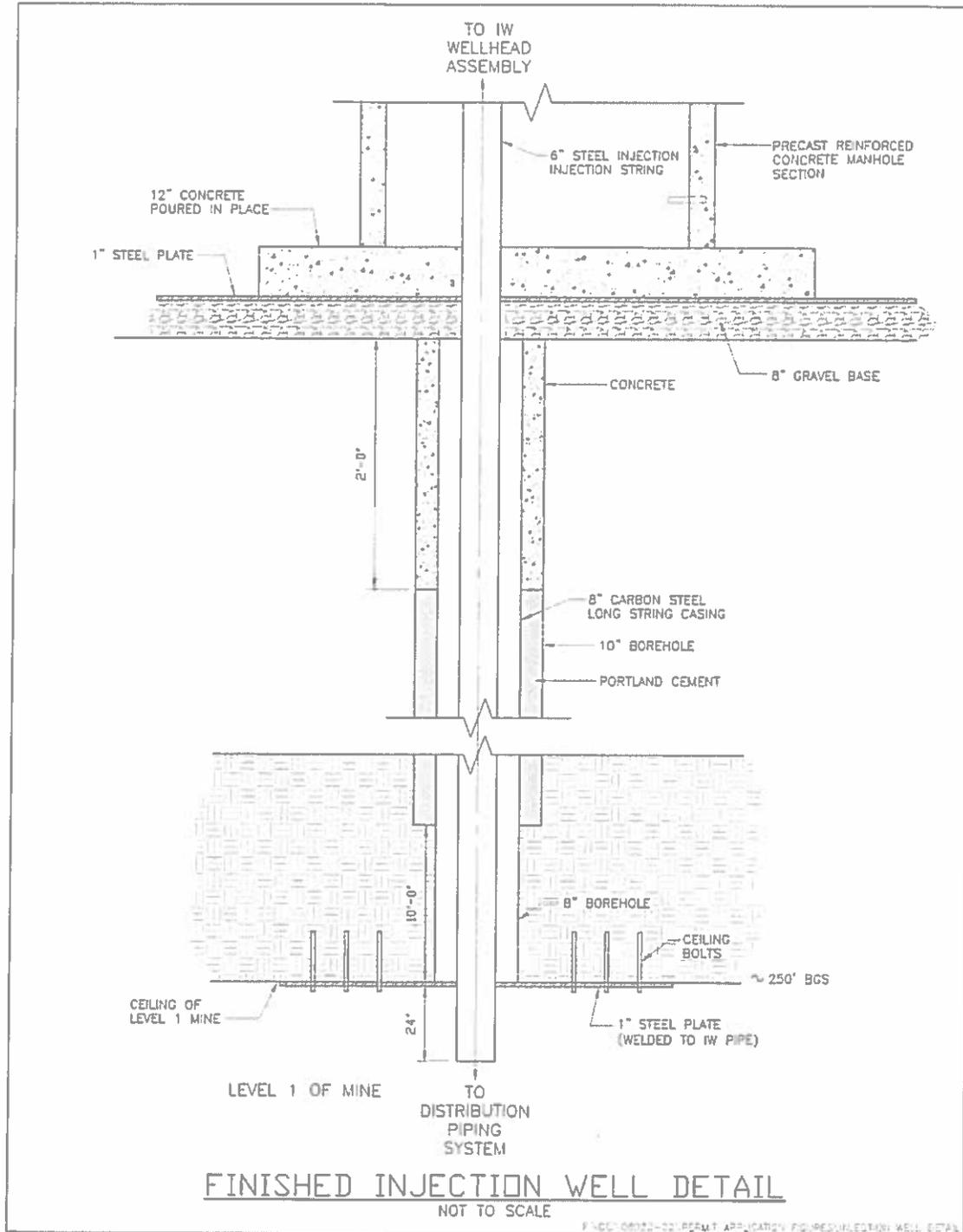
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ATTACHMENT B

**INJECTION WELL SCHEMATIC,
INJECTION MANHOLE DETAILS,
CASING AND CEMENTING SPECIFICATIONS
FOR
UNDERGROUND INJECTION WELLS UIC #1, #2, #3 & #4**

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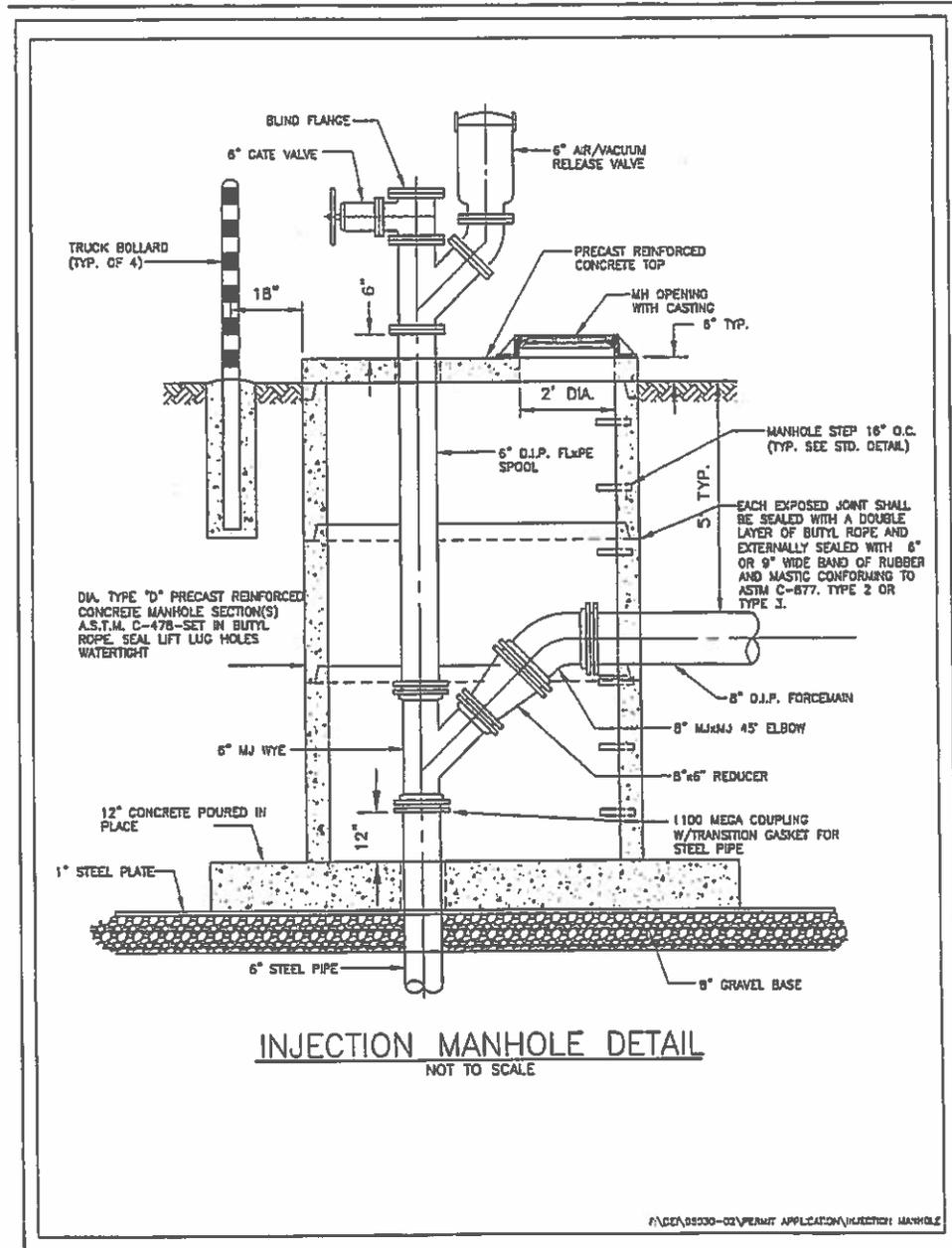
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F:\DCI\08123-22\REFM\APP\CDIV\FIG\REQ\INJECTION WELL DETAIL

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**Casing and Cementing Specifications for
Underground Injection Well UIC #1, #2, #3, & #4**

Long String Casing

8-inch diameter, schedule 40 carbon steel, coal tar epoxy exterior coating, with a weight of 28.5 lbs/ft.

Casing cemented from 290 ft. below ground surface to 2 feet below the bottom of the manhole excavation. The volume of cement to be used is 750 to 800 gallons of portland cement.

Cementing procedure: The portland cement will be installed via a tremie hose. The hose will be worked around the casing to insure even distribution and to avoid bridging.

Injection String

6-inch diameter, schedule 40 carbon steel, threaded, bead welded, with a weight of 19 lbs/ft.

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ATTACHMENT C

SUMMARY OF SUBMITTAL DATES

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The following is a summary of submittal dates for data required by this permit. This summary is provided to highlight some of the submittals required by this permit. The referenced condition must be consulted for complete details.

| <u>Condition</u> | <u>Submittal</u> | <u>Date Due</u> |
|------------------|--|--|
| A.8 | Well Completion Report | After completion of injection well and extraction well |
| A. 9 | Weekly Well Construction Reports | Weekly, during construction of injection well |
| B.5 | Quarterly Operation Reports | April 15 th , July 15 th , Oct. 15 th , Jan. 15 th |
| B. 7(c) | Results of test, maintenance, and changes of equipment | Next quarterly report after completion |
| H.2 | Duty to Reapply | 180 days prior to expiration |
| H. 12(a) | Planned Changes | 15 days prior to planned changes |
| H. 13(a) | Corrective Action Requirements by Telephone | 24 hours after the discovery |
| H. 13(a) | Corrective Action Requirements by Letter | 5 days after the discovery |
| H. 14 | Oral Notification of Endangerment of Environment | Within 24 hours of time of endangerment |
| H.14 | Notification by letter of Endangerment of Environment | Within 5 days of endangerment |
| H. 23(a) | Notice of well abandonment | 60 days prior to abandonment |
| H. 23(c) | Certification of Plugging and Abandonment | 60 days after plugging |
| H. 24 | Plans for Conversion | 180 days prior to actual conversion |
| H. 24 | Notify before Conversion or Abandonment | 45 days prior to conversion or abandonment |
| H. 26(g) | Gauge calibration | January 15 of each year |

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| <u>Condition</u> | <u>Submittal</u> | <u>Date Due</u> |
|------------------|------------------------|---|
| H. 27 | Final Contingency Plan | Included with the Well Completion Report |
| H. 28 | 39i Certification | Within 30 days of any event described in Condition H.28 |

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ATTACHMENT D

WELL COMPLETION REPORT INSTRUCTIONS
AND
WELL COMPLETION REPORT Form 4h

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FORM 4h - WELL COMPLETION REPORT INSTRUCTIONS

Use the space provided to indicate the location of each item in the application. The source of all data shall be referenced in the report.

Item I

Indicate the type of permit as either an individual or area permit, including whether it is an emergency, new or renewal request. For renewal requests, provide the permit number of the existing permit. Requests for area permits should indicate the well number and the name of the field in addition to the above information.

Item II

The location of the well is to be provided in the Township-Range-Section System of the Bureau of Land Management of the US Government, Latitude and Longitude coordinates (degrees, minutes, seconds). In addition, include the closest municipality name and county.

Items III, IV and V

Provide the surface elevation, referenced to mean sea level, in both feet and meters.
Provide the depth of the well in both feet and meters.
Provide the static water level, referenced to mean sea level, in both feet and meters.

Item VI

Provide the demonstrated fracturing pressure, if applicable, in psi or kg/cm². In addition, include information on the type of test used to determine the fracturing pressure.

Item VII

Indicate whether the well was completed as an open hole, fully cased and perforated, screen and gravel pack or other. If other, please specify.

Item VIII

Attach a schematic or other appropriate drawing of the surface and subsurface details of the well. If the schematic is not attached, please explain.

Item IX. A

Provide the depth interval, in feet, and the corresponding diameter, in inches, of the hole.

Item IX. B

For the annulus protection system, provide the following information:

1. Annular space(s), including the inner and outer diameter;

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2. Type of annular fluid;
3. Specific gravity of annular fluid;
4. Coefficient of annular fluid;
5. Packer(s), including:
 - type
 - name and model
 - setting depth, in both feet and meters
6. Indicate if fluid was spotted under the packer, including the type, frequency and quantity
7. Well driller information should include the following information:
 - data on the drilling firm, including name, address and contact person
 - drilling method

Item X

Include copies of all logs unless the logs have previously been submitted to the Agency. If the logs have been previously submitted, indicate the date(s) the logs were submitted.

Item XI. A

Provide the following information for each of the casing strings used:

- depth interval in feet
- outside diameter in inches
- inside diameter in inches
- weight in pounds per foot
- grade, API
- design coupling
- coupling outside diameter in inches
- thermal conductivity BTU, ft.hr.degrees F

Item XI. B

Provide the following information for the injection tubing:

- type/grade, API
- outside diameter in inches
- inside diameter in inches
- weight in pounds per foot
- joint specification
- depth interval in feet
- thermal conductivity BTU, ft.hr. Degrees F
- maximum allowable suspended weight based on joint strengths of injection tubing
- weight of injection tubing string (axial load) in air

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Item XI. C

Provide the following cementing information for each casing string:

- depth interval in feet
- type/grade
- additives
- quantity in cubic yards
- circulated, yes or no
- thermal conductivity BTU

Item XII

Provide the following information for all filters and injection pumps:

- location
- type
- name
- model number
- capacity (g.p.m.)
- pore size in microns

Item XIII

Revised copies of the form(s) are required following construction to account for any changes from the proposed well construction using actual data obtained during construction.

Item XIV

Provide the results of detailed testing on the compatibility of the injection fluid with each of the listed items at expected bottom hole pressures and temperatures. Include a discussion on corrosiveness, reactivity and by products of the injection fluid and formation fluids and minerals and well components expected to come in contact with the injected fluids.

Item XV

Attach a list of any changes in recording devices, specifying the location, name and model, mechanical or electrical if applicable, continuous or non-recording, and whether the gauge exceeds the maximum operating range by 20% from the devices approved in the approved permit, including:

- injection pressure gauges
- casing-tubing annulus pressure gauges
- flow meters
- pH recording devices
- temperature

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ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
UNDERGROUND INJECTION CONTROL PERMIT APPLICATION

FORM 4h - WELL COMPLETION REPORT

USEPA ID NUMBER _____
IEPA ID NUMBER _____
WELL NUMBER _____

I. Type of Permit

Individual: _____
Emergency _____
New _____
Renewal _____
Permit Number _____
Area: _____
Number of well _____
Name of Field _____
Emergency _____
New _____
Renewal _____
Permit Number _____

Location in Application

- _____ II. Location, see instructions
 - _____ A. Township-Range-Section
 - _____ B. Latitude/Longitude
 - _____ C. Closest Municipality
- _____ III. Surface Elevation
- _____ IV. Well Depth
- _____ V. Static Water Level
- _____ VI. Demonstrated Fracturing Pressure, if applicable
- _____ VII. Injection Well Completion
- _____ VIII. Well schematic or other appropriate drawing of surface and subsurface construction details
- _____ IX. Well Design and Construction
 - _____ A. Well hole diameters and corresponding depth intervals
 - _____ B. Annulus Protection System
 - _____ 1. Annular space, ID and OD
 - _____ 2. Type of annular fluid(s)
 - _____ 3. Specific gravity of annular fluid
 - _____ 4. Coefficient of annular fluid
 - _____ 5. Packer(s)

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- _____ a. Setting depth
- _____ b. Type
- _____ c. Name and model
- _____ 6. Description of fluid spotting frequency, type and quantity
- _____ 7. Information on well driller used for construction of this well
- _____ X. Tests and Logs
 - _____ A. During Drilling
 - _____ B. During and after casing installation
 - _____ C. Demonstrate mechanical integrity prior to operation
 - _____ D. Copies of logs and tests listed above
 - _____ E. Description of well stimulation
- _____ XI. Well Design and Construction
 - _____ A. Casings, see instructions
 - _____ 1. Conductive casing
 - _____ 2. Surface casing
 - _____ 3. Intermediate casing(s)
 - _____ 4. Long string casing
 - _____ 5. Other casing
 - _____ B. Injection Tubing, see instructions
 - _____ 1. Maximum allowable suspended weight based on joint strength
 - _____ 2. Weight of injection tubing string (axial load) in air
 - _____ C. Cement, see instructions
 - _____ 1. Conductive casing
 - _____ 2. Surface casing(s)
 - _____ 3. Intermediate casing
 - _____ 4. Long string casing
 - _____ 5. Other casing
- _____ XII. Surface Facilities, see instructions
 - _____ A. Filters(s)
 - _____ B. Injection pump(s)
- _____ XIII. Hydrogeologic Information
 - _____ A. Revised UIC Form 4a
 - _____ B. Revised UIC Form 4d using actual data on injection formation
 - _____ C. Revised UIC Form 4g
 - _____ D. Copy of well completion report submitted to the Department of Natural Resources (Formerly Mines and Minerals)
 - _____ E. Copy of any plugging affidavits on injection well filed with Department of Natural Resources
- _____ XIV. Injection Fluid Compatibility, see instructions
 - _____ A. Compatibility with injection zones fluid
 - _____ B. Compatibility with minerals in the injection zone
 - _____ C. Compatibility with minerals in confining zone
 - _____ D. Compatibility with injection well components

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- _____ 1. Injection tubing
- _____ 2. Long string casing
- _____ 3. Cement
- _____ 4. Annular fluid
- _____ 5. Packer(s)
- _____ 6. Well head equipment
- _____ 7. Holding tank(s) and flow lines
- _____ E. Full description of compatibility of injection fluid with items A through D
- _____ XV. Monitoring Program, see instructions
 - _____ A. Injection pressure gauge(s)
 - _____ B. Casing-tubing annular pressure gauge(s)
 - _____ C. Flow meter(s)
 - _____ D. pH recording device(s)
 - _____ E. Temperature

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name & Official Title

Phone Number

Signature

Date Signed

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE G: WASTE DISPOSAL
CHAPTER I: POLLUTION CONTROL BOARD
SUBCHAPTER b: PERMITS

PART 706
PLACEMENT OF LIMESTONE RESIDUAL MATERIALS

SUBPART A: GENERAL PROVISIONS

Section

| | |
|----------------|---|
| <u>706.100</u> | <u>Purpose and Scope</u> |
| <u>706.110</u> | <u>Definitions</u> |
| <u>706.120</u> | <u>Incorporations by Reference</u> |
| <u>706.130</u> | <u>Applicability of Other Regulations</u> |
| <u>706.140</u> | <u>Appeals and Review of Agency and Board Decisions</u> |

SUBPART B: PROHIBITIONS

| | |
|----------------|---|
| <u>706.200</u> | <u>Prohibition Against Unauthorized Placement</u> |
|----------------|---|

SUBPART C: APPLICATION FOR AUTHORIZATION FOR PLACEMENT OF LRM

| | |
|----------------|--|
| <u>706.300</u> | <u>Applying for an Authorization</u> |
| <u>706.310</u> | <u>Who Applies</u> |
| <u>706.320</u> | <u>Completeness</u> |
| <u>706.330</u> | <u>Time to Apply</u> |
| <u>706.340</u> | <u>Information Requirements</u> |
| <u>706.350</u> | <u>Recordkeeping</u> |
| <u>706.360</u> | <u>Signatories to Applications for Authorization and Reports</u> |

SUBPART D: CONDITIONS IN AN AUTHORIZATION FOR PLACEMENT OF LRM

| | |
|----------------|--|
| <u>706.400</u> | <u>Conditions Applicable to All Authorizations</u> |
| <u>706.410</u> | <u>Duty to Comply</u> |
| <u>706.420</u> | <u>Need to Halt or Reduce Activity Not a Defense</u> |
| <u>706.430</u> | <u>Duty to Mitigate</u> |
| <u>706.440</u> | <u>Operation and Maintenance</u> |
| <u>706.450</u> | <u>Duty to Provide Information</u> |
| <u>706.460</u> | <u>Inspection and Entry</u> |
| <u>706.470</u> | <u>Annual Testing</u> |
| <u>706.480</u> | <u>Maintenance and Submission of Records</u> |
| <u>706.490</u> | <u>Signature Requirements</u> |
| <u>706.500</u> | <u>Reporting Requirements</u> |
| <u>706.510</u> | <u>Operating Requirements</u> |
| <u>706.520</u> | <u>Duration of Authorization</u> |

EXHIBIT 3

706.530 Procedures for Cessation of Placement of LRM at an Authorized Facility
706.540 Financial Responsibility

SUBPART E: ISSUED AUTHORIZATION FOR PLACEMENT OF LRM

706.600 Effect of an Authorization
706.610 Modification
706.620 Revocation

SUBPART F: DESIGN AND OPERATIONAL REQUIREMENTS

706.700 Design of the Facility
706.710 Annual Facility Map
706.720 Operational Standards
706.730 Load Verification
706.740 Boundary Control

AUTHORITY: Implementing Section 22.63 and authorized by Sections 22.63, 27, and 28 of the Environmental Protection Act [415 ILCS 5/22.63, 27, and 28].

SOURCE: Adopted in R - at Ill. Reg. , effective .

SUBPART A: GENERAL PROVISIONS

Section 706.100 **Purpose and Scope**

- a) The regulations in this Part set forth the requirements for the placement of limestone residual materials. These rules are intended to implement the requirements of Section 22.63 of the Act.
- b) This Part sets forth authorization requirements for a facility that receives limestone residual material generated from a publicly owned drinking water treatment plant and permanently places the limestone residual material in the facility.

Section 706.110 **Definitions**

Except as stated in this Section, the definition of words or terms in this Part shall be the same as those used in the Act.

“Act” means the Illinois Environmental Protection Act [415 ILCS 5].

“Agency” means the Illinois Environmental Protection Agency.

“Application” means the Agency forms for applying for authorization for permanent placement of LRM in a facility.

“Applicant” means the operator of the facility who applies for the authorization for placement of LRM as authorized by this Part.

“Authorization” means the approval by the Agency for the permanent placement of LRM in the facility.

“Board” means the Illinois Pollution Control Board.

“Environmental Protection Agency” or “EPA” or “USEPA” means the United States Environmental Protection Agency.

“Facility” means the location where any placement of LRM for permanent storage occurs (including land or appurtenances thereto) that is subject to this Part.

“Generator of LRM” or “generator” means the person who generates the LRM material, resulting from the treatment of drinking water at a publicly owned drinking water treatment plant.

“Limestone residual materials” or “LRM” means limestone residual generated from the treatment of drinking water at a publicly owned drinking water treatment plant [415 ILCS 5/22.63].

“Operator” means a person that operates the facility where the permanent placement of the LRM occurs.

“Person” means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, municipality, state agency, or any other legal entity, or their legal representative, agency, or assigns.

“State” means the State of Illinois.

“Underground source of drinking water” or “USDW” has the same meaning as 35 Ill. Adm. Code 702.110.

Section 706.120 Incorporations by Reference

The following materials are incorporated by reference. These incorporations do not include any later amendments or editions.

- a) “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” USEPA, SW-846 Update V, Revision 8 (July 2014)

- b) “Handbook for Sampling and Sample Preservation of Water and Wastewater,” USEPA, EPA-600/4-82-029 (Sept. 1982)

Section 706.130 Applicability of Other Regulations

Compliance with this Part does not affect the need for the operator to comply with all other applicable federal, state, tribal, or local laws or other requirements.

Section 706.140 Appeals and Review of Agency and Board Decisions

- a) Any final Agency decision on an application for authorization made pursuant to this Part, and any final Agency decision made as to modification or revocation of an issued authorization made pursuant to this Part, may be appealed to the Board pursuant to Section 40 of the Act and 35 Ill. Adm. Code 105.
- b) Any final Board decision for review of a final Agency decision made pursuant to this Part may be appealed to the circuit court pursuant to Section 41 of the Act.

SUBPART B: PROHIBITIONS

Section 706.200 Prohibition Against Unauthorized Placement

- a) Nothing in this Part prohibits otherwise authorized placement of LRM.
- b) Placement for permanent storage in the facility is prohibited unless an authorization has been issued pursuant to this Part.

SUBPART C: APPLICATION FOR AUTHORIZATION FOR PLACEMENT OF LRM

Section 706.300 Applying for Authorization

Any person that is required to have an authorization for placement for permanent storage of LRM in a facility must complete, sign, and submit an application to the Agency as described in this Subpart.

Section 706.310 Who Applies

Any operator of the facility seeking an authorization under this Part must submit an application for authorization for placement of LRM to the Agency. The generator of LRM does not need to obtain an authorization for the placement of the LRM.

Section 706.320 Completeness

The Agency must not issue an authorization under this Part before receiving a complete application for authorization under this Part. An application for authorization under this Part is

complete when the Agency receives an application form and any supplemental information that is completed to its satisfaction.

Section 706.330 Time to Apply

Any person that applies for an authorization must submit an application to the Agency within a reasonable time before permanent placement of LRM is expected to begin.

Section 706.340 Information Requirements

An application for authorization for placement of LRM must provide the following information to the Agency, using the application form provided by the Agency. The application form shall require:

- a) The activities conducted by the operator that require it to obtain an authorization, including a description of the means of conveyance by which the LRM is placed underground before being placed in the facility.
- b) The name, mailing address, and location of the facility for which the application is submitted. This includes the name and address of a legal contact person for the facility owner, operator, and the generator of the LRM.
- c) The operator's and generator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.
- d) An application for authorization must contain a facility location map on the most recent United States Geological Survey (USGS) quadrangle of the area from the 7 ½ minute series (topographic) that clearly shows the following information:
 - 1) The facility boundaries and all adjacent property extending at least 1000 meters (3300 feet) beyond the facility boundaries;
 - 2) All surface waters within 1000 meters (3300 feet) of the facility boundaries;
 - 3) All potable water supply wells within 1000 meters (3300 feet) of the facility boundaries;
 - 4) All potable water supply well setback zones established pursuant to Section 14.2 or 14.3 of the Act;
 - 5) Any wellhead protection areas pursuant to Section 1428 of the Safe Drinking Water Act (SDWA) (42 USC 300f) and any sole source aquifer designated by the USEPA pursuant to Section 1424(e) of SDWA; and

- 6) All main service corridors, transportation routes, and access roads to the facility.
- e) A brief description of the nature of the business of the operator and the planned placement of LRM.
- f) A demonstration that the authorization will not endanger drinking water sources. A demonstration may include any monitoring or other information which indicates that the permanent placement of LRM in the facility will not cause an endangerment to underground sources of drinking water; and
- g) A list with the names and addresses for all owners of record of land within one-quarter mile (401 meters) of the facility boundary. This requirement may be waived by the Agency where the facility is located in a populous area such that the requirement would be impracticable.
- h) A copy of all analytical data of the LRM to be placed for permanent storage in the facility that is the subject of the authorization.

Section 706.350 Recordkeeping

An applicant must keep records of all data used to complete an application for authorization and any supplemental information submitted pursuant to this Part for a period of at least three years from the date the application is submitted to the Agency.

Section 706.360 Signatories to Applications for Authorization and Reports

- a) An application for authorization must be signed as follows:
 - 1) For a corporation: an application for authorization must be signed by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means either of the following persons:
 - A) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person that performs similar policy or decision-making functions for the corporation; or
 - B) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

- 2) For a partnership or sole proprietorship: an application for authorization must be signed by a general partner or the proprietor, respectively; or
 - 3) For a municipality, State, federal, or other public agency: an application for authorization must be signed by either a principal executive officer or ranking elected official. For purposes of this Section, a principal executive officer of a federal agency includes either of the following persons:
 - A) The chief executive officer of the agency, or
 - B) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA).
- b) All reports required by an application for authorization or other information requested by the Agency must be signed by a person described in subsection (a), or by a duly authorized representative of that person. A person is a duly authorized representative only if each of the following conditions are fulfilled:
- 1) The authorization is made in writing by a person described in subsection (a);
 - 2) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 - 3) The written authorization is submitted to the Agency.
- c) Any person signing a document pursuant to subsection (a) or (b) must make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SUBPART D: CONDITIONS IN AN AUTHORIZATION FOR PLACEMENT OF LRM

Section 706.400 Conditions Applicable to all Authorizations

The conditions of this Subpart apply to authorizations for placement of LRM in a facility as authorized by this Part. All conditions applicable to authorizations must be incorporated into the authorizations either expressly or by reference. If incorporated by reference, a specific citation to these regulations must be given in the authorization.

Section 706.410 Duty to Comply

The operator must comply with all conditions of its authorization.

Section 706.420 Need to Halt or Reduce Activity Not a Defense

It will not be a defense for the operator in an enforcement action that it would have been necessary to halt or reduce the permanent placement of LRM in the facility in order to maintain compliance with the conditions of its authorization.

Section 706.430 Duty to Mitigate

The operator must take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with its authorization.

Section 706.440 Operation and Maintenance

The operator must at all times operate and maintain the facility in accordance with the authorization.

Section 706.450 Duty to Provide Information

The operator must furnish to the Agency, upon request, copies of records required to be kept by the authorization.

Section 706.460 Inspection and Entry

The operator must allow an authorized representative of the Agency, upon the presentation of credentials and other documents as may be required by law, to do any of the following:

- a) Enter at reasonable times upon the facility where permanent placement of LRM is located or conducted, or where records must be kept under the conditions of this authorization;
- b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this authorization; and
- c) Inspect at reasonable times the facility, facility equipment (including monitoring and control equipment), or practices or operations of the facility as regulated or required under this authorization.

Section 706.470 Annual Testing

The generator shall perform annual testing of Toxicity Characteristic Leaching Procedure (TCLP) Volatiles, Semi-Volatiles, Pesticides, Herbicides and Metals in a manner consistent with USEPA publication SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" and "Handbook for Sampling and Sample Preservation of Water and Wastewater," USEPA, EPA-600/4-82-029 (incorporated by reference in Section 706.120).

Section 706.480 Maintenance and Submission of Records

The Agency must include, as a condition to an authorization under this Part, a requirement that the operator must establish and maintain such records, make such reports, conduct such monitoring, and provide such other information as the Agency deems necessary to determine whether the operator has acted or is acting in compliance with the Act and Board regulations.

Section 706.490 Signature Requirements

All applications and reports submitted to the Agency must be signed and certified in accordance with Section 706.360.

Section 706.500 Reporting Requirements

- a) The operator shall promptly notify the Agency within 30 days of deviations from the conditions of the authorization. The deviation report shall contain at a minimum the following information:
 - 1) Date and time of the deviation;
 - 2) Nature of the deviation;
 - 3) Duration of the event;
 - 4) Probable cause of the deviation; and
 - 5) Corrective actions or preventative measures taken.
- b) By March 1st of each year, an annual report, for the prior year, shall be submitted detailing the annual quantity of LRM, in wet tons, placed into the facility and any results of chemical analyses required by the authorization. The annual report shall also include a summary of the number of loads of LRM accepted and the number of loads rejected during the calendar year. Further, the annual report shall include the annual facility map required pursuant to Section 706.710.
- c) The authorization is not transferable to any person, except after notice to the Agency. The Agency may require modification of the authorization to change the

name of the operator and incorporate such other requirements as may be necessary in accordance with the Act or this Part.

- d) If the operator becomes aware that it failed to submit any relevant facts in an application for authorization or that it submitted incorrect information in an application for authorization or in any report to the Agency, the operator must promptly submit such facts or information to the Agency.

Section 706.510 Operating Requirements

The authorization must establish an estimated maximum volume of LRM to be placed for permanent storage in the facility, any requirements necessary to ensure that the LRM does not migrate into any USDW, and any other operating requirements necessary to ensure compliance with this Part.

Section 706.520 Duration of Authorization

The authorization for placement of LRM as authorized by this Part shall have an indefinite term.

Section 706.530 Procedures for Cessation of Placement of LRM at an Authorized Facility

- a) An operator may cease placement of LRM in the facility at any time. Cessation of placement of LRM does not mean that the operator needs to cease other operations at the facility, only that the operator needs to cease placement of LRM in the facility.
- b) Notice of cessation of placement of LRM at the facility by the operator shall be given to the Agency, which shall include a description of the operator's future use or abandonment of the conveyance.

Section 706.540 Financial Responsibility

- a) The operator is required to demonstrate and maintain financial responsibility and resources to cease the underground placement of LRM in the facility in a manner prescribed by the Agency until one of the following occurs:
- 1) The facility has followed the procedures for cessation of placement of LRM in accordance with Section 706.530; or
 - 2) The transferor of an authorization has received notice from the Agency that the operator receiving transfer of the authorization (the new operator) has demonstrated financial responsibility for the facility.
- b) The operator must show evidence of financial responsibility to the Agency by the submission of a surety bond or other adequate assurance, such as financial

statements or other materials acceptable to the Agency. The Agency may on a periodic basis require the holder of an authorization to submit an estimate of the resources needed to cease placement of LRM revised to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary.

SUBPART E: ISSUED AUTHORIZATION FOR PLACEMENT OF LRM

Section 706.600 Effect of an Authorization

- a) The existence of an authorization does not constitute a defense to a violation of the Act, except for violations alleging operation without an authorization.
- b) The issuance of an authorization does not authorize injury to persons or property or invasion of other private rights, nor does issuance authorize any infringement of State or local law or regulations.

Section 706.610 Modification

- a) An operator may seek to modify its authorization by submitting a modification request to the Agency.
- b) The Agency shall approve any modification to an authorization that is consistent with this Part, including, but not limited to, a transfer of an authorization to a new operator.

Section 706.620 Revocation

The Agency may seek revocation of an authorization if it determines that the permanent placement of LRM in the facility endangers human health or the environment and can only be regulated to acceptable levels by authorization modification, reissuance, or revocation.

SUBPART F: DESIGN AND OPERATIONAL REQUIREMENTS

Section 706.700 Design of the Facility

The design of the facility should comply with relevant mining regulations, as applicable.

Section 706.710 Annual Facility Map

The operator must maintain an annual facility map that indicates where the LRM has been placed within the facility in the proceeding calendar year.

Section 706.720 Operational Standards

- a) Acceptance of LRM. The operator may only accept LRM generated by a generator included within the authorization granted by the Agency or any modification to the authorization.
- b) Placement of LRM. LRM must be placed in a safe manner that protects human health and the environment in conformance with the provisions of the Act and the regulations adopted under the Act.
- c) Size of Working Face. The working face of the facility must be no larger than is necessary, based on the underground mine and equipment used in LRM placement, to conduct operations in a manner in conformance with the provisions of the Act and the regulations adopted under the Act.
- d) Quantity of LRM. The quantity of LRM, in wet tons, received and placed into the mine shall be recorded daily.
- e) Sampling of LRM. The LRM to be placed in the facility shall be sampled and analyzed by the generator on an annual basis, following these procedures:
 - 1) Radium 226 and Radium 228 shall be sampled in accordance with USEPA/USDOE radiochemical method GA-01-R, and the resulting data shall be submitted to both the Agency and the Illinois Emergency Management Agency.
 - 2) TCLP Volatiles, TCLP Semi-Volatiles, TCLP Pesticides, TCLP Herbicides, and TCLP Metals, including Mercury, shall be sampled in accordance with Section 706.470 of this Part and the resulting data shall be submitted to the Agency.
- f) Equipment. Equipment must be maintained and available for use at the facility during all hours of operation, so as to achieve and maintain compliance with the requirements of this Part.
- g) Utilities. All utilities, including, but not limited to, heat, lights, power, and communications equipment, necessary for safe operation in compliance with the requirements of this Part must be available at the facility at all times.
- h) Maintenance. The operator must maintain and operate all systems and related appurtenances and structures in a manner that facilitates proper operations in compliance with this Part. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, and appropriate quality assurance procedures. This subsection requires the operation of backups, auxiliary facilities, or similar systems used only when necessary to achieve compliance with the condition of the permit.

- i) Dust Control. The operator must implement methods for controlling dust to minimize off-site wind dispersal of particulate matter.
- j) Noise Control. The facility must be designed, constructed, and maintained to minimize the level of equipment noise audible outside the site. The facility must not cause or contribute to a violation of the Board's noise regulations or Section 24 of the Act.
- k) LRM Placement Area. The operator must place the LRM in the mine cavity below the ground surface.
- l) Mud Tracking. The operator must implement methods to minimize tracking of mud by hauling vehicles onto public roadways.
- m) Odor and Nuisance. The permanent storage of LRM in the facility shall be performed in a manner which minimizes the emission of foul odors or other nuisances to any nearby residents.
- n) Visual Inspection. The operator shall visually inspect the working face where LRM has been placed as well as any lower chambers, if any, immediately below where LRM has been placed in the facility.
- o) Integrity and Structural Stability of Facility. The operator shall ensure the integrity of the mine prior to, during, and after placement of LRM in the mine.
- p) Unintentional Off-Site Migration. The operator shall ensure that the placement of LRM in the mine does not result in unintentional off-site migration.
- q) Groundwater Monitoring. Monitoring of groundwater is not required, unless the Agency subsequently determines after an authorization has been granted any of the following:
 - 1) The LRM is deemed to be hazardous pursuant to federal Resource, Conservation, and Recovery Act (RCRA).
 - 2) The Agency acquires new information on the geology of the facility that may cause or contribute to an adverse impact on groundwater quality, or

Section 706.730 Load Verification

- a) In each load delivered to the facility, the operator must determine the quantity of LRM, in wet tons, and verify that the LRM has been generated by the generator approved from the authorization.
- b) If material other than LRM is found in the delivery of loads of LRM, the operator must reject the load and ensure the proper disposal of the material.

- c) The operator shall maintain records documenting the load verifications and shall retain these records for a period of at least three years from the date they are first created.

Section 706.740 Boundary Control

- a) Unauthorized vehicular access to the working face of all active units and to all other areas within the boundaries of the facility must be restricted.
- b) A permanent sign must be posted at the entrance to the facility or storage area stating that only LRM is accepted at the facility.