217/782-2113

LIFETIME GENERAL OPERATING PERMIT FOR GRAIN ELEVATOR-NSPS Source (With Some Dump Pits Controlled by Baghouse(s) with <100 TPY total emissions)

PERMITTEE

Applicant Name
Attn: _____
Street Address
City, State Zip Code

Application No.: _____ I.D. No.: _____
Applicant's Designation: _____ Date Received: _____, 200_
Subject: _____
Date Issued: Expiration Date: See Condition 1.
Location: Street Address, City, County, (Zip Code if in Cook County)

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Grain elevator as specified below in Findings.

Findings

1. This permit is applicable to a grain elevator that meets all the following criteria:

   a. The elevator is located outside a Major Population Area as defined in 35 Ill. Adm. Code 211.3610 (See Attachment B);

   b. The elevator is not subject to 35 Ill. Adm. Code 212.462 requirements since its operation satisfies the exemptions in Section 9(f) of the Illinois Environmental Protection Act (Act);

   c. The elevator receives no more than 35,000,000 bushels of grain per year and some of the dump pits controlled by baghouse(s);

   d. The permanent storage capacity of the elevator as defined at 40 CFR 60.301 is greater than 2,500,000 bushels;

   e. Grain drying does not exceed 10,500,000 bushels per year;

   f. Grain cleaning does not exceed 3,500,000 bushels per year;

   g. Grain is only received and shipped by road or rail vehicles, not by water; and

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h. A petroleum bulk plant (SIC 5171), animal feed plant (SIC 2048) or other plant or operation requiring a permit from the Illinois EPA is not associated with the elevator.

2. For the purposes of this permit, a grain elevator includes up to eight (8) dump pits with some controlled by baghouse(s), internal transfer (e.g., totally enclosed headhouse, conveyors, legs, drags), grain storage (e.g., bins, buildings, silos, and any grain storage piles with permanent (non-portable) or portable grain-handling equipment), cleaning and separation, up to six (6) column grain dryers, and shipping/load-out.

3a. This permit imposes conditions on activities at a grain elevator to assure compliance with applicable requirements of 35 Ill. Adm. Code Part 212 Subparts B (Visible Emissions), K (Fugitive Particulate Matter), and S (Agriculture), and 40 CFR Part 60 Subparts A and DD.

b. This permit does not excuse the Permittee from obtaining a Construction Permit and/or an Operating Permit for any additional emission units in excess of the maximum number of units specified in Finding 2 or for any modification or addition that will create an exceedance of any of the Criteria in Finding 1.

4. The Illinois EPA will only authorize operation pursuant to this permit if an application includes the following items:

a. The location of and detailed description of the grain elevator.

b. A statement certifying that the grain elevator meets the criteria in Findings 1 and 2.

c. A request for authorization to operate pursuant to this general permit.

d. A statement that the grain elevator is, and will be, operated to comply with the applicable portions of 35 Ill. Adm. Code Part 212 Subparts B, K and S, 40 CFR Part 60 Subparts A and DD, and the Conditions of this permit.

e. A signed certification by the applicant that the information contained in the application is accurate.

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Conditions

1a. This permit shall expire 180 days after the Illinois EPA sends a written request for the renewal of this permit.

b. This permit shall terminate if it is withdrawn or is superseded by a revised permit.

c. This permit allows the construction and operation of additional emission units of a grain elevator such that the maximum number of units identified in Finding 2 will not be exceeded and such that the construction and/or operation of the units will not cause an exceedance of any of the Criteria in Finding 1.

d. This permit does not exempt the Permittee from obtaining a Construction and/or Operating Permit for any additional emission units in excess of the maximum number of units in Finding 2 or for any modification or addition that would result in an exceedance of any of the Criteria in Finding 1, unless such emission units, operations, modifications or additions are exempt from permitting requirements pursuant to 35 IAC 201.146 and does not affect the source's status with respect to the applicability of Section 39.5 of the Illinois Environmental Protection Act (Act).

2a. This source is a grain terminal elevator as defined in the New Source Performance Standard (NSPS) for Grain Elevators, 40 CFR Part 60 Subparts A and DD. Affected facilities under this NSPS (e.g. each truck unloading station, truck loading station, barge and ship unloading station, barge and ship loading station, railcar loading station, railcar unloading station, grain dryer, and all grain handling operations, constructed, modified or reconstructed after August 3, 1978) are subject to the requirements of 40 CFR Part 60 Subparts A and DD. Please be advised that the USEPA has not yet determined whether grain storage pile systems with non-portable grain-handling equipment and flexible/removable covers are to be considered an affected facility as defined at 40 CFR 60.300 and the associated grain storage capacity designated as permanent storage capacity as defined at 40 CFR 60.301(d). Therefore, it is not known at this time if those types of grain storage pile systems are subject to the requirements of 40 CFR Part 60 Subparts A and DD. Should it be determined that those grain storage pile systems are affected facilities subject to the requirements of 40 CFR Part 60 Subparts A and DD, the Permittee shall submit the appropriate permit application(s) and request for permit modification to the Illinois EPA within 90 days of learning of such a determination in order to implement any needed revisions/additions to the source necessary to achieve compliance with 40 CFR Part 60 Subparts A and DD, and the conditions of this permit. The Illinois EPA is administrating NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

b. Pursuant to 40 CFR 60.302(a), on and after the 60th day of achieving

the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere any gases which exhibit greater than 0 percent opacity from any:

Column dryer with column plate perforation exceeding 2.4 mm diameter (ca. 0.094 inch) [40 CFR 60.302(a)(1)].

c. Pursuant to 40 CFR 60.302(b), on and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR Part 60 Subpart DD shall cause to be discharged into the atmosphere from any affected facility except a grain dryer any process emission which:

   i. Contains particulate matter in excess of 0.023 g/dscm (ca. 0.01 gr/dscf) [40 CFR 60.302(b)(1)].

   ii. Exhibits greater than 0 percent opacity [40 CFR 60.302(b)(2)].

d. Pursuant to 40 CFR 60.302(c), on and after the 60th day of achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup, no owner or operator subject to the provisions of 40 CFR Part 60 Subpart DD shall cause to be discharged into the atmosphere any fugitive emission from:

   i. Any individual truck unloading station, railcar unloading station, or railcar loading station, which exhibits greater than 5 percent opacity [40 CFR 60.302(c)(1)].

   ii. Any grain handling operation, which exhibits greater than 0 percent opacity [40 CFR 60.302(c)(2)].

   iii. Any truck loading station, which exhibits greater than 10 percent opacity [40 CFR 60.302(c)(3)].

e. Pursuant to 40 CFR 60.11(d), at all times, the Permittee shall, to the extent practicable, maintain and operate the grain terminal elevator, in a manner consistent with good air pollution control practice for minimizing emissions, pursuant to the New Source Performance Standard.

3. The grain elevator owner or operator must apply for a revised operating permit when any of the following situations occur:

   a. Area is presently designated as a Major Population Area (MPA) or the municipality’s boundaries are changed and now the area is designated as a MPA.

   b. An increase in annual grain throughput to greater than 35,000,000 bushels;

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c. A modification that will increase the emissions above the emission limits permitted herein;

d. A change in operations that will result in the source's noncompliance with conditions in the existing permit;

e. A change in ownership, company name, or address, so that the application or existing permit is not longer accurate; or

f. The grain elevator becomes subject to 35 Ill. Adm. Code 212.462 requirements pursuant to Section 9(f) of the Act.

4. For purposes of fees pursuant to Section 9.6 of the Environmental Protection Act, annual emissions of specified air contaminants, i.e., particulate matter, carbon monoxide, nitrogen oxide, volatile organic material, and sulfur dioxide, shall not exceed 99.50 tons, which shall be the permitted emissions of these pollutants.

5a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity that is visible by an observer looking generally toward the Zenith (that is, looking at the sky directly overhead) from a point beyond the property line of the emission source, pursuant to 35 Ill. Adm. Code 212.301.

b. The Permittee shall implement and perform the required housekeeping practices identified in 35 Ill. Adm. Code 212.461(b)(1) through (b)(5) and maintain a housekeeping check list for the grain elevator pursuant to 35 Ill. Adm. Code 212.461(b)(6). This checklist shall contain the applicable housekeeping practices described in the attached "Minimum Recommendations for Housekeeping Practices for Grain Handling Facilities."

c. The Permittee shall operate the facility in such a way that the opacity does not exceed the limits specified in 35 Ill. Adm. Code 212.123.

6a. i. Grain receiving in all dump pits shall be conducted in accordance with good operating practices to minimize particulate matter emissions.

ii. Each dump pit shall be inspected for proper operation while receiving is occurring, at least once each week (Monday through Sunday) when grain is received.

b. i. Grain drying shall be conducted in a column dryer with enclosed grain inlet and outlet and perforations in the external sheeting not exceeding 0.094 inch, pursuant to 35 Ill. Adm. Code 212.463(a).

ii. Each such dryer shall be inspected for any leaks in enclosures and proper condition of the external sheeting, on at least an annual basis prior to the harvest season.

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c. i. Grain transfer within the elevator (internal transfer), and any cleaning shall be conducted without visible emissions to the atmosphere, pursuant to 35 Ill. Adm. Code 212.461(b).

ii. The grain elevator shall be inspected for presence of visible emissions from internal transfer and cleaning, while such activity is occurring, at least once each week when such activity is performed.

d. i. Grain load-out shall be conducted with socks, sleeves or equivalent devices, extending to within at least 6 inches below the sides of the receiving vehicle except for topping off. Choke load-out may be performed as an equivalent method.

ii. Grain load-out socks, sleeves and equivalent devices shall be inspected for proper operation while load-out is occurring, at least once each week when grain load-out is performed.

7a. Within 180 days of initial startup of the permitted grain handling operations structures/equipment, the emissions of particulate matter and opacity shall be measured during conditions which are representative of maximum emissions as required by 40 CFR Part 60 Subparts A and DD.

b. The following methods and procedures shall be used for testing of process emissions from the baghouse(s), unless another method is approved by the Illinois EPA: Refer to 40 CFR Part 60, Appendix A, and 40 CFR Part 61, Appendix B, for USEPA test methods.

Location of sampling point	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Particulate Matter	USEPA Method 5
Opacity	USEPA Method 9

c. The following methods and procedures shall be used for testing of fugitive emissions from the legs, elevators, conveyors, loading and unloading stations and other permitted grain handling operations unless another method is approved by the Illinois EPA: Refer to 40 CFR Part 60, Appendix A, and 40 CFR Part 61, Appendix B, for USEPA test methods.

Opacity	USEPA Method 9

d. At least 30 days prior to the actual date of testing, a written test plan shall be submitted to the Compliance Section of the Division of Air Pollution Control for review. This plan shall describe the specific procedures for testing, including as a minimum:

i. The company/entity who will be performing sampling and analysis and their experience with similar tests.

ii. A detailed description of the equipment/emission units to be

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tested and the specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum operating practices and the means by which the operating parameters for the emission unit and any control equipment will be determined.

iii. The specific determinations of emissions and operation, which are intended to be made, including sampling and monitoring locations.

iv. The test method(s) which, will be used, with the specific analysis method, if the method can be used with different analysis methods.

v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

vi. Any proposed use of an alternative test method, with detailed justification.

vii. The format and content of the Source Test Report.

e. The Illinois EPA shall be notified in writing prior to these tests to enable the Illinois EPA to observe these tests. Notification of the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.

f. Copies of the Final Source Test Report(s) for these tests shall be submitted to the Illinois EPA within 60 days after the date of the final day of testing. The Final Report shall include as a minimum:

i. A descriptive and table summary of results.

ii. General information including but not limited to the name, location and identification of the emission source(s) tested, date(s) of testing, names of personnel and entities performing the tests, and Illinois EPA observers, if any.

iii. Description of test procedures and method(s), including description and map of emission sources and sampling points, sampling train, testing and analysis equipment, and test schedule.

iv. Detailed description of test conditions, including:

A. List and description of the equipment (including serial numbers or other equipment specific identifiers) tested and process information, i.e., mode(s) of operation, process rate/throughput, e.g. fuel or raw material consumption;

B. Control equipment information, i.e., equipment condition and operating parameters during testing; and

C. A discussion of any preparatory actions taken, i.e., inspections, calibration, maintenance and repair.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration. Identification of the applicable regulatory standards that the testing was performed to demonstrate compliance with, a comparison of the test results to the applicable regulatory standards, and a statement whether the test(s) demonstrated compliance with the applicable standards.

vi. An explanation of any discrepancies among individual tests, failed tests or anomalous data.

vii. The results and discussion of all quality control evaluation data, including a copy of all quality control data.

viii. The applicable operating parameters of the pollution control device(s) during testing (temperature, pressure drop, scrubbant flow rate, etc.), if any.

8. The authorization to operate the equipment described in this operating permit shall terminate if the testing required by 40 CFR Part 60 Subparts A and DD is not performed as required or if satisfactory testing results demonstrating compliance with the applicable standards and permit conditions are not achieved and submitted to the Illinois EPA as required.

9a. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic inspections and maintenance on the equipment covered under this permit such that the equipment be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

b. Pollution control devices shall be in operation at all times when the associated emission unit(s) is in operation and emitting air contaminants.

10a. The amount of material handled by the elevator shall not exceed the following limits. Compliance with these annual limits shall be determined on a monthly basis from a running total of monthly data, that is, the total of the amount of material for the month and the preceding eleven months.

i. The amount of grain received, that is, unloaded in the dump pit areas at the elevator, shall not exceed 35,000,000 bushels per year.

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ii. The amount of grain dried shall not exceed 10,500,000 bushels per year.

iii. The amount of grain cleaned shall not exceed 3,500,000 bushels per year.

iv. The amount of grain shipped, that is, loaded into a vehicle in the load-out areas at the elevator, shall not exceed 35,000,000 bushels per year.

b. Natural gas, liquefied petroleum gas or propane shall be the only fuels fired in grain dryers.

11a. The Permittee shall maintain records of the following items for the grain elevator:

i. Records of housekeeping check lists completed by the elevator manager;

ii. Records for the inspections required by Condition 5(b), 6, and 9, with date, time and observations if such information is not incorporated in the housekeeping check list; and

iii. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.

b. The Permittee shall maintain monthly records of the following items for the source:

i. Total grain received, bushels/month and bushels/year (running total of 12 months data);

ii. Grain dried, bushels/month and bushels/year (running total of 12 months data);

iii. Grain cleaned, bushels/month and bushels/year (running total of 12 months data);

iv. Grain shipped, bushels/month and bushels/year (running total of 12 months data); and

v. PM emissions (tons/month, tons/year) with supporting calculations.

c. The Permittee shall maintain records for any deviation or exceedance from the requirements of this permit, as determined by the above records or by other means, with date, time, duration, description, corrective action, and measures to prevent future reoccurrences.

d. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from

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the date of entry and shall be made available for inspection and copying by the Illinois EPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.

12. The Permittee shall maintain records of any repairs or maintenance to the grain elevator as related to emissions of particulate matter with date and description of activity.

13. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois, and to the Illinois EPA Regional Office within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.

14. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the appropriate Illinois EPA Regional Office at the following address unless otherwise indicated:

Illinois Environmental Protection Illinois EPA
Division of Air Pollution Control – Region 1
9511 West Harrison
Des Plaines, Illinois 60016

Illinois Environmental Protection Illinois EPA
Division of Air Pollution Control – Region 2
5415 North University
Peoria, Illinois 61614

Illinois Environmental Protection Illinois EPA
Division of Air Pollution Control – Region 3
2009 Mall Street
Collinsville, Illinois 62234

If you have any questions concerning this permit, please contact _____ at 217/782-2113.

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Edwin C. Bakowski, P.E.
Acting Manager, Permit Section
Division of Air Pollution Control

Date Issued:_____

ECB:___:psj

cc: Region __

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Attachment A - Emissions Summary

This attachment provides the Illinois EPA's evaluation of the maximum particulate matter emissions of a grain elevator operating in compliance with the requirements of this permit. For the purpose of this evaluation, the Illinois EPA used the annual operating scenario which results in maximum emissions. This is receiving 35,000,000 bushels of grain by existing dump pits with some controlled by baghouse(s) and drying of only 10,500,000 bushels of grain. In addition, this scenario assumes drying is performed with a column dryer, which has a higher emission rate than a dryer equipped with a cyclone or filter. Actual emissions from a grain elevator should be less than predicted for this operating scenario to the extent that less grain is handled at an elevator and other control measures are more effective than required by rule.

Emission Source	Annual Throughput (Bushel*/Yr)	Emission Factors (Lb/Ton) PM	Emission Factors (Lb/Ton) PM_{10}	Emissions (Tons/Year) PM	Emissions (Tons/Year) PM_{10}
Controlled Dump Pits-Straight Truck**	10,000,000	0.18	0.059	0.50	0.17
Controlled Dump Pits-Hopper Truck/Rail**	10,000,000	0.035	0.0078	0.10	0.02
Uncontrolled Dump Pits-Straight Truck**	7,500,000	0.18	0.059	18.90	6.20
Uncontrolled Dump Pits-Hopper Truck/Rail**	7,500,000	0.035	0.0078	3.68	0.82
Grain Drying (Column Dryer)	10,500,000	0.22	0.055	32.34	8.09
Truck/Rail Loadout	35,000,000	0.086	0.029	21.07	7.11
Cleaning	3,500,000	0.075	0.019	3.68	0.93
Enclosed Internal Transfer	108,500,000	0.061	0.034	0.93	0.52
Storage Bin Vents	35,000,000	0.025	0.0063	12.25	3.09
			Totals	93.45	26.93

* One bushel equals 56 pounds

** The total amount of grain received and unloaded into the dump pit areas shall not exceed 35,000,000 bushels/year overall, with 20,000,000 bushels/year to controlled and 15,000,000 bushels/year to uncontrolled dump pits. While the above table shows a limit for each of straight trucks and hopper trucks/rail, only straight trucks are limited to 10,000,000 and 7,500,000 bushels/year due to their higher emission rate. The amount received via hopper trucks/rail may include the entire 20,000,000 and 15,000,000 bushels/year each to controlled and uncontrolled dump pits, reduced by the amount actually received via straight trucks in a given year. In addition, the amount received via controlled dump pits may include the entire 35,000,000 bushels/year reduced by the amount received in uncontrolled dump pits.

These emissions are based on AP-42 (Section 9.9.1-2003 update) emission factors based on 99% control efficiency for enclosed internal transfer via conveyors, drags, and legs, 98% control for baghouse controlled dump pits, and 50% control efficiency for truck/rail loadouts with socks/sleeves.

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Attachment B

Section 211.3610 Major Population Area (MPA)

“Major Population Area (MPA)” means areas of major population concentration in Illinois, as described below:

The area within the counties of Cook; Lake; DuPage; Will; the townships of Burton, Richmond, McHenry, Greenwood, Nunda, Door, Algonguin, Grafton and the municipality of Woodstock, plus a zone extending two miles beyond the boundary of said municipality located in McHenry County; the townships of Dundee, Rutland, Elgin, Plato, St. Charles, Campton, Geneva, Blackberry, Batavia, Sugar Creek and Aurora located in Kane County; and the municipalities of Kankakee, Bradley and Bourbonnais, plus a zone extending two miles beyond the boundaries of said municipalities in Kankakee County.

The area within the municipalities of Rockford and Loves Park, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Rock island, Moline, East Moline, Carbon Cliff, Milan, Oak Grove, Silvis, Hampton, Greenwood and Coal Valley, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Galesburg and East Galesburg, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Bartonville, Peoria and Peoria Heights, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Pekin, North Pekin, Marquette Heights, Creve Coeur and East Peoria, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Bloomington and Normal, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Champaign, Urbana and Savoy, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Decatur, Mt. Zion, Harristown and Forsyth, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the municipalities of Springfield, Leland Grove, Jerome, Southern View, Grandview, Sherman and Chatham, plus a zone extending two miles beyond the boundaries of said municipalities.

The area within the townships of Godfrey, Foster, Wood River, Fort Russell, Chouteau, Edwardsville, Venice, Nameoki, Alton, Granite City and Collinsville located in Madison County; and the townships of

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Stites, Canteen, Centreville, Caseyville, St. Clair, Sugar Loaf and Stookey located in St. Clair County.

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