INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
HAZARDOUS WASTE POST-CLOSURE PERMIT

Name of Permittee: Corning, Incorporated

Facility Location: Airport Road, Bluffton, Indiana

EPA Identification Number: IND005557244

Issuance Date: ________________

Expiration Date: ________________

Authorized Activities

Pursuant to the Indiana Environmental Statutes (IC 13) and the rules promulgated thereunder and codified in Title 329 of the Indiana Administrative Code, Article 3.1 (329 IAC 3.1), the State permit conditions (hereinafter called the permit) of the Resource Conservation and Recovery Act of 1976 (RCRA) permit are issued to Corning, Incorporated (hereinafter called the Permittee) to maintain and monitor a closed hazardous waste landfill located in Bluffton, Indiana, Section 12, Township 26N, Range 11E at latitude 40° 43' 36" N and longitude 85° 13' 23" W, Bluffton, Indiana Quadrangle, on the U.S. Geological Survey topographic map.

The State RCRA program is authorized under 40 CFR Part 271 and Section 3006 of RCRA to administer the hazardous waste management program in lieu of the Federal program.

The Permittee operated hazardous waste surface impoundments, that through closure, were converted to a landfill. The legal status of the unit hereafter is that of a landfill, however, the past status of the unit may still be referenced for clarity.

The Permittee is required to maintain and monitor the closed landfill for the duration of this permit.

Federal regulations 40 CFR Parts 260 through 270 have been incorporated by reference. Where exceptions to incorporated Federal regulations are necessary, these exceptions will be noted in the text of the State rule (329 IAC 3.1-1-7).
Applicable Regulations

The conditions of this post-closure permit were developed in accordance with the following applicable provisions of 329 IAC 3.1:

- ID & Listing of Hazardous Waste: 329 IAC 3.1-6, 40 CFR 261
- Standards for Owners and Operators of Treatment, Storage, and Disposal Facilities: 329 IAC 3.1-9, 40 CFR 264 Subpart A
- General Facility Standards: 329 IAC 3.1-9, 40 CFR 264 Subpart B
- Ground Water Protection: 329 IAC 3.1-9, 40 CFR 264 Subpart F
- Post-Closure: 329 IAC 3.1-9, 40 CFR 264 Subpart G
- Financial Requirements: 329 IAC 3.1-15
- Landfills: 329 IAC 3.1-9, 40 CFR 264 Subpart N
- Corrective Action for Solid Waste Management Units: 329 IAC 3.1-9, 40 CFR 264 Subpart S
- Inspection and Investigation: 329 IAC 3.1-1-3 and 329 IAC 3.1-1-4
- Enforcement: 329 IAC 3.1-1-5
Permit Approval

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any Attachments) and the applicable rules and requirements contained in 329 IAC 3.1 and 40 CFR 260 through 270 as specified in the permit. Applicable rules are those that are in effect on the date of issuance of this permit. 329 IAC 3.1-13; 40 CFR 270.32

This permit is based on the assumption that the information submitted in the permit application (VFC# 83022918), is accurate and that the facility has been or will be constructed and/or operated as specified in the application. The IDEM Virtual File Cabinet (VFC) may be viewed online from the IDEM homepage at www.IN.gov/idem.

Any inaccuracies found in the application may be grounds for the modification, revocation and reissuance, or termination of this permit (329 IAC 3.1-13-7), and potential enforcement action. The Permittee must inform the Indiana Department of Environmental Management (IDEM) of any deviation from, or changes in, the information in the application that would affect the Permittee's ability to comply with the applicable rules or permit conditions.

Pursuant to IC 13-15-5-3 and IC 4-21.5-3-5(f), this permit takes effect 15 days from receipt of this notice. If you wish to challenge this decision, IC 13-15-6-1 and IC 4-21.5-3-7 require that you file a Petition for Administrative Review. If you seek to have the effectiveness of the permit stayed during administrative review, you must also file a Petition for Stay. The petition(s) must be submitted to the Office of Environmental Adjudication, Government Center North, Room N103, 100 North Senate Avenue, Indianapolis, Indiana 46204, within 15 days after your receipt of this notice. The petition(s) must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision, or otherwise entitled to review by law. Identifying the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, or date of this notice will expedite review of the petition. Additionally, IC 13-15-6-2 requires that a Petition for Administrative Review must include:

1. The name and address of the person making the request.
2. The interest of the person making the request.
3. Identification of any persons represented by the person making the request.
4. The reasons, with particularity, for the request.
5. The issues, with particularity, proposed for consideration at the hearing.
6. Identification of the terms of the permit that, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing licenses of the type granted or denied by the Commissioner.

Pursuant to IC 4-21.5-3-1(f), any document serving as a petition for review or review and stay must be filed with the Office of Environmental Adjudication. Filing of such a document is complete on the earliest of the following dates:

1. the date the petition is delivered to the Office of Environmental Adjudication, Government Center North, Room N103, 100 North Senate Avenue, Indianapolis, Indiana 46204;

2. the date of the postmark on the envelope containing the petition, if the petition is mailed by United States mail; or

3. the date the petition is deposited with a private carrier, as shown by a receipt issued by the carrier, if the petition is sent by private carrier.

The portions of the permit for which a Petition for Stay has been filed will take effect at the expiration of the additional 15-day period unless or until an Environmental Law Judge stays the permit in whole or in part. This permit will remain in effect until the expiration date unless revoked and reissued, modified, or terminated (329 IAC 3.1-13-7), or continued in accordance with IC 13-15-6-3.

This permit terminates and supersedes any other State hazardous waste management permit.

Issued this ___ day of ______ 2021.

By _______________________________

Stephen D. Thill, Chief
Permits Branch
Office of Land Quality
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I. STANDARD CONDITIONS

A. EFFECT OF PERMIT

The Permittee is authorized to maintain and monitor a closed hazardous waste landfill in accordance with the conditions of this State hazardous waste management post-closure permit. Any management of hazardous waste not authorized in this permit or the regulations is prohibited.

Pursuant to 329 IAC 3.1 and 40 CFR 260 through 270 (for HSWA Provisions), compliance with the conditions of this State hazardous waste management permit generally constitutes compliance for purposes of enforcement, with the Indiana Environmental Statutes and Resource Conservation and Recovery Act (RCRA), as amended by Hazardous Solid Waste Amendments (HSWA), except for those requirements not included in the Permit that become effective by statute, or that are promulgated under 329 IAC 3.1 and 40 CFR Section 260 through 270, restricting the placement of hazardous wastes in or on the land.

Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of Federal, State, or local laws or regulations.

Compliance with the terms of this permit does not constitute a defense to any Order issued or any action brought under Section 3013 or Section 7003 of RCRA; Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601), commonly known as CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 9606(a)), commonly known as SARA, or any other law providing for protection of public health or the environment. 329 IAC 3.1-13; 40 CFR 270.4; IC 13

B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause as specified in 329 IAC 3.1-13-7. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.
C. **SEVERABILITY**

The provisions of the permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit will not be affected thereby. In the event that a condition of this permit is stayed for any reason, all provisions of the permit severable from the stayed provisions will take effect. With regard to stayed provisions of the permit, the Permittee shall continue to comply with the related applicable and relevant Permitted standards in 329 IAC 3.1-9 and 329 IAC 3.1-15 from the previously issued permit until final resolution of the stayed condition, unless the Commissioner of the Indiana Department of Environmental Management (Commissioner) determines that compliance with the related applicable and relevant standards would be technologically incompatible with other conditions of this permit that have not been stayed. 329 IAC 3.1-13; 40 CFR 270.32

D. **DUTIES AND REQUIREMENTS**

1. **Duty to Comply** The Permittee must comply with all conditions of the State permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of IC 13 and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. 329 IAC 3.1-13; 40 CFR 270.30(a); 270.61

2. **Duty to Reapply** The Permittee must submit a complete application for a new permit at least 180 days before this permit expires unless: a) the Permittee has been notified by the Commissioner that it is no longer required to have a State hazardous waste management permit; or b) permission for submittal on a later date has been granted by the Commissioner. The Commissioner will not grant permission for application to be submitted later than the expiration date of the existing permit. 329 IAC 3.1-13; 329 IAC 3.1-13-3(h); 40 CFR 270.30(b)

3. **Permit Expiration** The duration of this permit shall not exceed the expiration date of the permit, except as provided by 329 IAC 3.1-13-15. This permit, and all conditions herein, will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application for a new permit and through no fault of the Permittee, the Commissioner has not issued a new permit with an effective date under 329 IAC 3.1-13-14 on or before the expiration date of the previous permit. 329 IAC 3.1-13-16
4. **Need to Halt or Reduce Activity Not a Defense**  It shall not be a defense for the 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. 329 IAC 3.1-13; 40 CFR 270.30(c)

5. **Duty to Mitigate**  In the event of non-compliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. 329 IAC 3.1-13; 40 CFR 270.30(d)

6. **Proper Operation and Maintenance**  The Permittee shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that 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, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. 329 IAC 3.1-13; 40 CFR 270.30(e)

7. **Duty to Provide Information**  The Permittee shall furnish to the Commissioner, within a reasonable time, any relevant information that the Commissioner may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Commissioner, upon request, copies of records required to be kept by this permit. 329 IAC 3.1-13; 40 CFR 270.30(h); 264.74

8. **Inspection and Entry**  The Permittee shall allow the Commissioner, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

   a. Enter at reasonable times 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 (329 IAC 3.1-13; 40 CFR 270.30(i)(1));

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit (329 IAC 3.1-13; 40 CFR 270.30(i)(2));
c. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit (329 IAC 3.1-13; 40 CFR 270.30(i)(3)); and

d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by IC 13, any substances or parameters at any location (329 IAC 3.1-13; 40 CFR 270.30(i)(4)).

9. Monitoring and Reporting

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from 329 IAC 3.1-6; 40 CFR 261, Appendix I. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, (Third Edition as amended by updates) (as referenced in 40 CFR 260.11); Standard Methods for the Examination of Water and Wastewater, (the 19th Edition, 1995); or an equivalent method as specified in the attached Waste Analysis Plan. 329 IAC 3.1-13; 40 CFR 270.30(j)(1)

b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records 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 record or for a period of time greater than 3 years as specified elsewhere in this permit. This period may be extended by request of the Commissioner at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility. 329 IAC 3.1-13; 40 CFR 270.30(j)(2) and 40 CFR 264.74(b)

c. Records of monitoring information shall include:

i. The date(s), exact place, and times of sampling or measurements (329 IAC 3.1-13-1; 40 CFR 270.30(j)(3)(i));

ii. The individual(s) who performed the sampling or measurements (329 IAC 3.1-13-1; 40 CFR 270.30(j)(3)(ii));
iii. The date(s) analyses were performed (329 IAC 3.1-13-1; 40 CFR 270.30(j)(3)(iii));

iv. The individual(s) and laboratory who performed the analyses (329 IAC 3.1-13-1; 40 CFR 270.30(j)(3)(iv));

v. The analytical technique(s) or method(s) used. Analytical technique(s) or method(s) is defined as encompassing both the sampling technique (method) and method of chemical analysis used. This information must be provided in the Waste Analysis Plan (329 IAC 3.1-13-1; 40 CFR 270.30(j)(3)(v)); and

vi. The result(s) of such analyses, including QA/QC documentation (329 IAC 3.1-13-1; 40 CFR 270.30(j)(3)(vi)).

d. Monitoring results shall be reported to the Commissioner at the intervals specified elsewhere in this permit. 329 IAC 3.1-13; 40 CFR 270.30(l)(4)

10. Reporting Planned Changes The Permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. 329 IAC 3.1-13; 40 CFR 270.30(l)(1)

11. Transfer of Permits This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 329 IAC 3.1-13-1; 40 CFR 270.40(b) or 40 CFR 270.41(b)(2) to identify the new permittee and incorporate such other requirements as may be necessary under IC 13. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator, in writing, of the requirements of 329 IAC 3.1 and IC 13. 329 IAC 3.1-13-1; 40 CFR 270.40

12. Reporting Anticipated Noncompliance The Permittee shall give advance notice to the Commissioner of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. Such notification does not excuse the Permittee's duty to comply with permit requirements. 329 IAC 3.1-13-1; 40 CFR 270.30(l)(2)

13. Compliance Schedules Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. 329 IAC 3.1-13-1; 40 CFR 270.30(l)(5)
14. **Twenty-four Hour Reporting**  
The Permittee shall report to the Commissioner any noncompliance with the permit that may endanger health or the environment. Any such information must be reported orally to the IDEM 24-hour emergency telephone number (888) 233-7745, within 24 hours from the time the Permittee becomes aware of the circumstances. This report must include the following:

a. Information concerning the release of any hazardous waste that may endanger public drinking water supplies.

b. Information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, that could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:

   i. Name, address, and telephone number of the owner or operator;

   ii. Name, address, and telephone number of the facility;

   iii. Date, time, and type of incident;

   iv. Name and quantity of material(s) involved;

   v. The extent of injuries, if any;

   vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and

   vii. Estimated quantity and disposition of recovered material that resulted from the incident.

A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain: a description of the noncompliance and its cause; the period of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee need not comply with the 5-day written notice requirement if the Commissioner waives the requirement and the Permittee submits a written report within 15 days of the time the Permittee becomes aware of the circumstances. 329 IAC 3.1-13-1; 40 CFR 270.30(l)(6)
15. **Other Noncompliance** The Permittee shall report all instances of noncompliance not otherwise required to be reported under Permit Condition I.D. 12-14 at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in Permit Condition I.D.14. 329 IAC 3.1-13-1; 40 CFR 270.30(l)(10)

16. **Other Information** When the Permittee becomes aware that the facility failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Commissioner, the Permittee shall promptly submit such facts or information. 329 IAC 3.1-13-1; 40 CFR 270.30(l)(11)

17. **Submittal of Reports or Other Information** All reports or other information required to be submitted by the terms of this permit must be sent to:

Indiana Department of Environmental Management
Office of Land Quality
Attn: Chief Hazardous Waste Permit Section
IGCN 1101
100 North Senate Avenue
Indianapolis, IN  46204

18. All other requirements contained in 40 CFR 270.30 not set forth herein are hereby fully incorporated in this permit.

E. **SIGNATORY REQUIREMENT**

All reports or other information requested by the Commissioner shall be signed and certified. 329 IAC 3.1-13-1; 40 CFR 270.11

F. **CONFIDENTIAL INFORMATION**

The Permittee may claim confidential any information required to be submitted by this permit. Confidential claims must be submitted in accordance with 329 IAC 6.1. 329 IAC 3.1-13-4; IC 13-14-11-1

G. **DOCUMENTS TO BE MAINTAINED AT FACILITY SITE**

Except as noted, until the post-closure period is completed and certified by the owner/operator and a qualified professional engineer, the Permittee shall maintain at the facility the most recent version of the following documents required by this permit:
1. Ground Water Monitoring Plan and any document(s) referenced therein to describe on-site procedures (329 IAC 3.1-9, 40 CFR 264.97);

2. Ground water monitoring data (329 IAC 3.1-9, 40 CFR 264.97);

3. Post-Closure Plan (329 IAC 3.1-9, 40 CFR 264.118(c);

4. Inspection schedules (329 IAC 3.1-9, 40 CFR 264.15(b)(2)); and

5. Record of facility inspections kept for at least 3 years from the date of the inspection. 329 IAC 3.1-9; 40 CFR 264.15(b)(2); 264.15(d)
II. GENERAL FACILITY CONDITIONS

A. MAINTENANCE OF FACILITY

The Permittee shall maintain the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment.

B. SECURITY

The Permittee shall comply with the security provisions described in the Post-Closure Plan, Attachment C, which is incorporated herein by reference. 329 IAC 3.1-9; 40 CFR 264.14(b) and (c)

C. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedule in Attachment B, which is incorporated herein by reference. The Permittee shall remedy any deterioration or malfunction discovered by an inspection. 329 IAC 3.1-9; 40 CFR 264.15(c)

D. RECORDKEEPING AND REPORTING

If the Permittee is a generator of hazardous waste, it shall comply with the biennial report requirements of 329 IAC 3.1-9 and 40 CFR 264.75.

E. POST-CLOSURE

The Permittee shall maintain post-closure of the facility in accordance with the Post-Closure Plan, Attachment C, which is incorporated herein by reference. 329 IAC 3.1-9; 40 CFR 264.117

F. COST ESTIMATE FOR FACILITY POST-CLOSURE

The Permittee's post-closure cost estimate, prepared in accordance with 329 IAC 3.1-15-5, is specified in the Post-Closure Plan, Attachment C.

1. The Permittee must revise the post-closure cost estimate whenever there is a change in the facility's post-closure plan. 329 IAC 3.1-15-5(c)

2. The Permittee must keep at the facility the latest post-closure cost estimate. 329 IAC 3.1-15-5(d)
G. **FINANCIAL ASSURANCE FOR POST-CLOSURE CARE**

The Permittee shall demonstrate continuous compliance with 329 IAC 3.1-15-6 by providing documentation of financial assurance, as specified by 329 IAC 3.1-15-10, in at least the amount of the cost estimates required by Permit Condition II.F. Changes in financial assurance mechanisms must be approved by the Commissioner. 329 IAC 3.1-15-6

H. **INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS**

The Permittee shall comply with 329 IAC 3.1-15-9 whenever necessary.
III. LANDFILL CONDITIONS

A. WASTE IDENTIFICATION

The Permittee disposed of a total of 35,595 cubic yards of sludge and other materials consisting of the following waste.

<table>
<thead>
<tr>
<th>Waste Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D002</td>
<td>Calcium Fluoride Sludge</td>
</tr>
<tr>
<td>D008</td>
<td>Abrasive Solid Sludge</td>
</tr>
</tbody>
</table>

B. LOCATION INFORMATION

The landfill is located in the area as shown in Facility Description, Attachment A. incorporated herein by reference.

C. SURVEYING AND RECORD KEEPING

The owner or operator of a landfill must maintain the following items:

1. On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and

2. The contents of each cell and the approximate location of each hazardous waste type within each cell. 329 IAC 3.1-9; 40 CFR 264.309

D. POST-CLOSURE

The owner or operator must comply with all post-closure requirements contained in 329 IAC 3.1-9 and 40 CFR 264.117 through 40 CFR 264.120 and 40 CFR 264.310.

E. REPORTING

The Permittee shall submit inspection records to IDEM within 60 days of completing landfill inspections conducted in accordance with Attachment B. The Permittee shall notify IDEM within 60 days of completing any corrective measures identified in the inspection records.
IV. GROUNDWATER MONITORING CONDITIONS

IDEM and the Permittee are in agreement that the Permittee has demonstrated there is minimal potential for migration of hazardous wastes or hazardous waste constituents into groundwater at levels that may be harmful to human health or the environment, as long as the Permittee maintains the integrity of the landfill final cover system. Therefore, the Permittee may suspend groundwater monitoring during the extended post-closure period as long as the integrity of the final cover system continues uninterrupted.

A. Upon identification of damage to the landfill cover system that provides a pathway for water infiltration into the landfill waste material, the Permittee will:

1. Within 30 days, reinitiate groundwater monitoring by sampling groundwater monitoring wells W-8S, W-9S, W-13S and W-14S in accordance with the sampling and analytical procedures described in the Sampling and Analysis Plan (VFC # 80606303 pp. 8-24). Alternatively, the Permittee may submit to IDEM for concurrence, supporting information demonstrating that the damage to the landfill cover system did not result in water infiltration into the landfill waste material.

2. Within 90 days of sampling conducted in accordance with Permit Condition IV.A.1., submit the sampling results, and a permit modification request proposing a groundwater monitoring program to IDEM for approval. The proposed program must include an updated sampling and analysis plan, laboratory quality assurance/quality control plan, and statistical evaluation plan.

3. Continue groundwater monitoring required pursuant to Permit Condition VI.A.1., on a semi-annual basis until receiving IDEM's approval for the new groundwater monitoring program described above. The results from any semiannual groundwater sampling will be submitted to IDEM within 60 days after receiving the results from the final laboratory report.

4. Redevelop groundwater monitoring wells prior to any required sampling if it has accumulated sediment in excess of 20 percent of the saturated screen length.
V. CORRECTIVE ACTION CONDITIONS

A. STANDARD REQUIREMENTS

1. Corrective Action At The Facility

   In accordance with Section 3004(u) of RCRA (IC13-22-2-5) and the regulations promulgated pursuant thereto, the Permittee must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste(s) and hazardous constituent(s) from any solid waste management unit (SWMU) or area of concern (AOC) at the facility, regardless of the time the waste was placed in such units.

2. Corrective Action Beyond The Facility Boundary

   In accordance with Section 3004(v) of RCRA (IC 13-22-2-5) and the regulations promulgated pursuant thereto, the Permittee must implement corrective action(s) beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to IDEM’s satisfaction that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied.

3. Applicable Guidance

   The Permittee shall use the principles and procedures set forth in IDEM’s 2012 Remediation Closure Guide, and all revisions and additions thereto, or other risk-based methodologies approved by IDEM's Office of Land Quality Permits Branch, as the basis for selecting risk-based endpoints that will be used for the investigations, studies, interim measures, and corrective measures under the permit. Additional guidance includes IDEM’s Remediation Program Guide, USEPA’s “Test Methods for Evaluating Solid Waste” (SW-846, the 3rd Edition, or most recent edition, and the most recent updates), and Standard Methods for the Examination of Water and Wastewater (the 23rd Edition, or most recent edition).

4. Notification

   a. Field Activities

      The Permittee must notify IDEM at least 7 days before engaging in any field activities, such as well drilling, installation of equipment, or sampling. At
IDEM’s request, the Permittee must provide IDEM or its authorized representative split samples of all samples collected by the Permittee pursuant to this permit. Similarly, at the Permittee’s request, IDEM will allow the Permittee or its authorized representatives to take split or duplicate samples of all samples collected by IDEM under this permit.

b. Submittals

One hard copy and one PDF copy on CD of all reports, plans, and other submissions relating to or required by this permit must be sent to:

Indiana Department of Environmental Management
Office of Land Quality
Hazardous Waste Permit Section
IGCN 1101
100 N. Senate Avenue
Indianapolis, IN 46204

B. IDENTIFICATION OF SWMUs

1. Definitions
   a. “Area of Concern (AOC)” means a unit or area, existing or historical, that could potentially produce unacceptable exposures or be a potential source of ground water contamination, but the unit or area does not meet the definition of a solid waste management unit.
   b. “Facility” means all contiguous property under the control of the owner/operator of a facility seeking a permit under RCRA Subtitle C.
   c. “Hazardous waste,” as defined in IC 13-11-2-99, means a solid waste or combination of solid wastes that may cause or significantly contribute to an increase in: mortality, serious irreversible illness, or an incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment. This term is further defined in 40 CFR Part 261.3.
   e. “Release” means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes or hazardous constituents into the
environment, including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents.

f. “Solid waste” means any garbage, refuse, sludge, or other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, or agricultural operations or from community activities. This term is further defined in 40 CFR Part 261.2.

g. “Solid Waste Management Unit (SWMU)” means any discernable unit, permitted or unpermitted, existing or historical, at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

2. SWMUs and AOCs Requiring Corrective Action

Based on the information contained in the administrative record, corrective action is not required at the facility at this time. However, if any corrective action for the regulated unit fails to be carried out pursuant to 40 CFR 264.100, or if a SWMU or AOC is created after this permit’s issuance, then the conditions in this section shall immediately be in effect.

C. CONDITIONS PERTAINING TO ALL SWMUs AND AOCs

1. Notification Requirements

The Permittee must notify IDEM, within 30 days of discovery, of the following information for any new SWMU or AOC identified at the facility, in accordance with 329 IAC 3.1-13-1 and 40 CFR 270.14(d):

a. the location of the unit on the site topographic map;

b. designation of the type of unit;

c. general dimensions and structural description (supply any available drawings);

d. when the unit was operated; and

e. specifications of all waste(s) that have been managed at the unit.
2. **Release Information**

The Permittee must submit to IDEM, within 30 days of discovery, all available information pertaining to any release of hazardous waste(s) and hazardous constituent(s) from any new or existing SWMU or AOC.

3. **Corrective Action**

IDEM will review the information provided as required in the above permit conditions, and may, as necessary, require investigations and/or corrective measures. The Permittee must submit a written RFI Work Plan to the Section Chief of the Hazardous Waste Permit Section in accordance with Permit Condition V.D.2.

D. **CORRECTIVE ACTION ACTIVITIES**

The major tasks and required submittal dates are shown below. Additional tasks and associated submittal dates may also be specified in the Corrective Action Activities Schedule (Condition V.F.).

1. **Interim Measures (IM)**

   a. The Permittee may undertake interim measure activities to prevent or minimize the further spread of contamination while long-term remedies are pursued. An IM Work Plan must be submitted to IDEM for approval before the Permittee initiates any remedial activity. The interim measure(s) must be capable of being integrated into any long-term solution at the facility.

   b. While performing work pursuant to Permit Condition V., if the Permittee identifies an immediate threat to human health or the environment, the Permittee must immediately notify the Section Chief orally and in writing within 7 days summarizing the immediacy and magnitude of the potential threat to human health or the environment.

   This notification should be made to:

   Indiana Department of Environmental Management  
   Office of Land Quality  
   Attn: Chief Hazardous Waste Permit Section  
   IGCN 1101  
   100 North Senate Avenue  
   Indianapolis, IN  46204  
   800-451-6027 or 317-232-8603
Upon receiving this information, IDEM will determine if an IM Work Plan is necessary. If one is necessary, the Section Chief will send a notice to the Permittee requiring the submission of an IM Work Plan. Within 21 days after receiving this notice, the Permittee must submit to the Section Chief a work plan for approval that identifies the interim measure(s).

The work plan should be consistent with and integrated into any long-term solution at the facility. In addition, the following Interim Measure schedule must be initiated:

i. Within 5 days of identifying an immediate threat to human health or the environment, the Permittee must provide an alternate water supply to parties that have a contaminated water supply well;

ii. Within 7 days of identifying an immediate threat to human health or the environment, the Permittee must submit a report to the Section Chief detailing the activity pursued and a plan for further Interim Measures activity;

iii. Within 7 days following the Section Chief’s transmission of comments, the Permittee must revise the plan in accordance with the comments; and

iv. Within 7 days following IDEM’s approval or modification of the plan, the Permittee must implement the revised plan in accordance with the schedule therein.

2. RCRA Facility Investigation (RFI)

The Permittee must conduct an RFI to thoroughly evaluate the nature and extent of the release of hazardous waste(s) and hazardous constituent(s) from all SWMUs and AOCs identified as requiring an RFI.

a. RFI Work Plan

The Permittee must submit a written RFI Work Plan to the Section Chief within 90 days after written notification by the Section Chief that further investigation is necessary.

IDEM will approve, modify and approve, or disapprove and provide comments on the work plan in writing to the Permittee. Within 60
days of receipt of such comments, the Permittee must provide a response to IDEM’s comments.

b. RFI Implementation

Within 30 days of IDEM’s written approval of the RFI Work Plan, the Permittee must implement the plan according to the terms and schedule contained therein.

c. RFI Report

Within 90 days after the completion of the RFI, the Permittee must submit an RFI Report to the Section Chief. The RFI Report must describe the procedures, methods, and results of the RFI. The report must contain adequate information to support further corrective action decisions at the facility. After the Permittee submits the RFI Report, IDEM will either approve or disapprove the report in writing. If IDEM disapproves the report, the Section Chief will notify the Permittee in writing of the deficiencies. The Permittee has 60 days after receipt of IDEM’s comments to submit a revised RFI Report to the Section Chief.

3. Determination of No Further Action

a. Permit Modification

After completion of the RFI, and based on its results and other relevant information, the Permittee may submit an application to the Section Chief for a permit modification under 40 CFR 270.42 to terminate the corrective action tasks of the Corrective Action Activities Schedule for all or a portion of the facility. Tasks identified in Permit Condition V.F. for the SWMUs, solid waste management areas (a group of SWMUs in an area to be addressed as a single unit), and/or the AOCs identified in the modification (for a determination of no further action) will be stayed pending a decision by IDEM. This permit modification must demonstrate that there are no releases of hazardous waste(s), including hazardous constituents, from SWMUs or AOCs that are the subject of the modification at the facility that pose a threat to human health or the environment.

If, based upon review of the Permittee’s request for a permit modification, the results of the completed RFI, and other information, IDEM determines that releases or suspected releases that were
investigated either are nonexistent or do not pose a threat to human health or the environment, IDEM will grant the requested modification.

b. Further Investigations

A determination of no further action will not preclude IDEM from requiring further investigations, studies, or remediation at a later date, if new information (including different risk assumptions) or subsequent analysis indicates that a release or likelihood of a release from a SWMU or AOC at the facility is likely to pose a threat to human health or the environment. In such a case, IDEM will initiate a modification to the Corrective Action Activities Schedule to rescind the determination made in accordance with the above permit condition. Additionally, IDEM may determine that there is insufficient information on which to base a determination, and may require the Permittee to perform additional investigations as needed to generate the needed information.

4. Community Relations Plan

The Permittee must prepare and submit to IDEM for review and approval a Community Relations Plan for the dissemination of information to the public regarding investigation activities and results for offsite activities. The plan must be consistent with “IDEM’s Guide for Citizen Participation” and U. S. EPA’s “1996 RCRA Public Participation Manual.”

5. Corrective Measures Study (CMS) and Remedy Selection

If IDEM determines, based on the results of the RFI and other relevant information, that corrective measures are necessary, the Section Chief will notify the Permittee in writing that the Permittee must conduct a CMS. The purpose of the CMS is to develop and evaluate the corrective action alternative(s) that will satisfy the performance objectives specified by IDEM. The CMS must be conducted within 60 days of notification by the Section Chief that the CMS is required. This period of time may be extended by the Section Chief if necessary to adequately complete the CMS. Note that this process can be significantly shortened by the selection of presumptive remedies (i.e., remedies that are known to be effective). Additional tasks and associated submittal dates may also be specified in the Corrective Action Activities Schedule (Permit Condition V.F.).
a. CMS Report

Within 60 days after the completion of the CMS, the Permittee must submit a CMS Report to the Section Chief. The CMS Report must summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative. After the Permittee submits the CMS Report, IDEM will either approve, modify and approve, or disapprove the Report. If IDEM disapproves the report, the Section Chief will notify the Permittee in writing of the deficiencies. The Permittee has 60 days after receipt of IDEM’s comments to submit a revised CMS Report to the Section Chief. The CMS Report, as approved, becomes an enforceable condition of this permit.

b. CMS Remedy Selection

IDEM will approve a corrective measure for implementation based on the following factors. The corrective measure selected for implementation must: (1) be protective of human health and the environment; (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous waste(s) (including hazardous constituent(s)); (4) minimize the transfer of contamination from one environmental medium to another; and (5) comply with all applicable standards for management of wastes.

If two or more of the corrective measures studied meet the threshold criteria set out above, IDEM will choose among alternatives for implementation by considering remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the corrective measure will reduce the toxicity, mobility or volume; (3) the corrective measure’s short-term effectiveness; (4) the corrective measure’s implementability; and (5) the relative cost associated with the alternative. In selecting the corrective measure(s), IDEM may also consider such other factors as may be presented by site-specific conditions.

6. Permit Modification

Within 30 days of IDEM’s approval of a corrective measure, the Permittee will initiate a permit modification, pursuant to 40 CFR 270.41 or 40 CFR 270.42, respectively, for the implementation of the corrective measure(s) selected. No permit modification fees are required for any modifications submitted under this condition.
7. **Corrective Measures Implementation (CMI)**
   
a. If the corrective measure(s) recommended in the Corrective Measures Study Report is (are) not the corrective measure(s) approved by IDEM after consideration of public comments, the Section Chief will inform the Permittee in writing of the reasons for such decision. Within 30 days after the effective date of the permit modification, the Permittee must implement the corrective measure(s).

b. **Financial Assurance**

   As part of the permit modification of this permit to incorporate the CMI, the Permittee must provide financial assurance in the amount specified in the IDEM-approved CMS Report as required by 40 CFR 264.101(b) and (c).

8. **Incorporation of Plans and Reports**

   All approved plans and reports prepared for this permit will be incorporated into this permit on the date the Section Chief or his/her designee approves such plan or report.

E. **DISPUTE RESOLUTION**

1. If IDEM disapproves or modifies and approves any submission required by Condition V. of the permit, IDEM will provide the Permittee with a written notice setting forth the reasons for the disapproval or modification and approval.

2. If the Permittee disagrees, in whole or in part, with any written decision concerning IDEM's disapproval or modification and approval of any submission required by Condition V. of the permit, the Permittee must notify IDEM of the dispute. The Permittee and IDEM must informally, and in good faith, endeavor to resolve the dispute.

3. If the Permittee and IDEM cannot resolve the dispute informally, the Permittee may pursue the matter formally by submitting a written statement of position to the Commissioner or his/her designee, within 28 days of receipt of IDEM's written disapproval or modification and approval. The Permittee's statement of position must set forth the specific matters in dispute, the position that the Permittee asserts should be adopted as consistent with the requirements of the permit, the basis for the Permittee's position, and must include any supporting documentation. If the Permittee fails to follow any of
the requirements contained in this paragraph, then it will have waived its right to further consideration of the disputed issue. IDEM’s decision to discontinue further consideration under this condition will constitute a final agency action, which is subject to review under IC 4-21.5.

4. IDEM and the Permittee will have an additional 14 days from the date of the Commissioner’s receipt of the Permittee’s statement of position to meet or confer to attempt to resolve the dispute. This time period may be extended by mutual agreement of the Permittee and IDEM. If agreement is reached, the Permittee must submit a revised submission, if necessary, and must implement the submission in accordance with such agreement.

5. If IDEM and the Permittee are not able to reach agreement within the 14 day period, or such longer period corresponding to IDEM’s extension for good cause, the Permittee may submit any additional written arguments and evidence not previously submitted, or further explain any arguments or evidence previously submitted, to the Commissioner. Based on the record, the Commissioner, or delegate, will thereafter issue a written decision that will include a response to the Permittee’s arguments and evidence. This written decision will constitute a final agency action, which is subject to review under IC 4-21.5.

6. Notwithstanding the invocation of this dispute resolution procedure, the Permittee must proceed to take any action required by those portions of the submission and of the permit that IDEM determines are not substantially affected by the dispute. The activity schedule for those portions of the submission and of the permit that are substantially affected by the dispute will be suspended during the period of dispute resolution.

F. CORRECTIVE ACTION ACTIVITIES SCHEDULE FOR NEWLY IDENTIFIED SWMUs and AOCs

<table>
<thead>
<tr>
<th>Activity</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IM Work Plan</td>
<td>21 days after receiving IDEM’s notice</td>
</tr>
<tr>
<td>2. RFI Work Plan</td>
<td>90 days after receiving IDEM’s notice</td>
</tr>
<tr>
<td>3. Notification of newly identified SWMUs of AOCs</td>
<td>30 days after discovery</td>
</tr>
<tr>
<td>4. RFI Work Plan for newly identified SWMUs or AOCs</td>
<td>90 days after receiving IDEM’s notice</td>
</tr>
</tbody>
</table>
5. RFI Work Plan modification 60 days after receiving IDEM’s comments
6. RFI Implementation 30 days after RFI Work Plan approved
7. RFI Report 90 days after completion of RFI
8. RFI Report Modification 60 days after receiving IDEM’s comments
9. Progress Reports Semi-annually; to coincide with groundwater reporting if possible
10. CMS Report 60 days after receiving IDEM’s notification
11. CMS Report Modification 60 days after receiving IDEM’s comments
12. Permit Modification for Corrective Measure Implementation 30 days after receiving IDEM’s notification (modification may be a Class 1, 2, or 3 at IDEM’s discretion)
13. CMI Program Plan 30 days after effective date of permit modification
14. CMI Program Plan Modification 30 days after receiving IDEM’s comments
15. CMI Reports Semi-annually; to coincide with groundwater reporting if possible
16. CMI Report Modification 30 days after receiving IDEM’s comments
17. Operation and Maintenance Progress Reports Semi-annually; to coincide with groundwater reporting if possible

IDEM may, at the facility’s request, grant extensions to the time frames listed in this section. IDEM-approved time extensions will not require a permit modification.

G. FORCE MAJEURE

“Force Majeure,” for purposes of this Permit, is defined as any event arising from causes beyond the control of the Permittee that delays or prevents the performance of any obligation under this Permit despite Permittee's best efforts to fulfill the obligation. The requirement that the Permittee exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event as it is occurring and best efforts to address the effects of any potential force majeure event as it is occurring and following the potential force majeure event, such
that the delay is minimized to the greatest extent possible. "Force Majeure" does not include financial inability to complete the work required by this Permit nor any increases of costs to perform the work.

The Permittee must notify IDEM by calling within 3 calendar days and by writing no later than 7 calendar days after any event that the Permittee contends is a force majeure. Such notification must describe the anticipated length of the delay, the cause or causes of the delay, the measures taken or to be taken by the Permittee to minimize the delay, and the timetable by which these measures will be implemented. The Permittee must include with any notice all available documentation supporting its claim that the delay was attributable to a force majeure. Failure to comply with the above requirements will preclude the Permittee from asserting any claim of force majeure for that event. The Permittee will have the burden of demonstrating that the event is a force majeure. The decision of whether an event is a force majeure will be made by IDEM. Said decision will be communicated to the Permittee.

If a delay is attributable to a force majeure, IDEM will extend, verbally or in writing, the time period for performance under this Permit by the amount of time that is attributable to the event constituting the force majeure. Any final determination by IDEM under this section will be reviewable under IC 4-21.5. However, if the Permittee appeals an IDEM decision concerning force majeure, such appeal will not toll the accrual of penalties during the review of that appeal.
A. FORMER FACILITY DESCRIPTION

This section presents general information about the former Corning Glass Works facility (also referred to herein as the “former facility”) and specific information about the hazardous waste management unit (HWMU) located on the former facility near Bluffton, Indiana. The information contained in this section is provided pursuant to the Indiana Department of Environmental Management’s (IDEM’s) Post-Closure Permit Application Guidance (revised 9/1999). This information is intended to provide the permit application reviewer with an overview of the former facility and the HWMU. More complete details about the HWMU can be found in other sections of this permit renewal application.

A-1 GENERAL DESCRIPTION: [40 CFR 270.14(b)(1)]

The HWMU is located at the former Corning Glass Works facility near Bluffton, Indiana. The former facility is located approximately 2 miles west of Bluffton, Wells County, Indiana in the northeast quarter of Section 12, Township 26 north, Range 11 east. The former facility property is bordered by Airport Road to the north, Maple Road to the south, Meridian Road to the east, and agricultural lands to the west. A portion of the United States Geological Survey (USGS) 7.5-minute topographic map (Bluffton, IN Quadrangle) provided in Figure A-1 identifies the location of the former facility and the HWMU.

The former Corning Glass Works facility comprised an area of about 100 acres and it operated from the early 1960s to 1983. Former operations included the manufacture and polishing of glass for various products including television picture tubes. The waste produced from the former facility operations included spent abrasive materials and abraded glass particles containing lead. Arsenic was also used in trace quantities as a finishing agent to minimize the entrainment of bubbles in the molten glass. Waste streams from the former facility operations were conveyed to several abrasive solids lagoons, where the materials were allowed to settle into the lagoons and the waste water was subsequently discharged.

In 1984, a Closure Plan was prepared by Corning Incorporated and approved by the Indiana State Board of Health (ISBH) to construct a controlled waste management unit at the facility. In accordance with this Closure Plan, waste materials in three settling lagoons located in the area occupied by the
present HWMU were stabilized in place using cement kiln dust (CKD). Additionally, waste materials and impacted soil in other facility lagoons were excavated and mixed with CKD for chemical/physical stabilization prior to placement in this same area. The stabilized materials were covered with a low permeability capping system. The waste management unit was fenced as a security measure to control unauthorized access (the original fence/gates were replaced in 2018 with IDEM’s approval as described below). ISBH approved the aforementioned closure activities in November 1985. Please note that in 1994, a new multi-layer cap (included a flexible membrane liner (FML) and overlying drainage layer) was installed at the HWMU in accordance with agreement reached with IDEM.

The Corning Glass Works Bluffton facility was sold in 1989, with the exception of an approximately 21.6-acre parcel containing the HWMU. This parcel is currently owned by Corning Incorporated. A copy of the survey plat with legal description of the property owned by Corning Incorporated is provided in Figure A-2.

As shown in Figure A-2, the property owned by Corning Incorporated includes a fenced area comprising approximately 8.7 acres. Figure A-2 reflects the locations of the new security fence and gates installed in 2018 to replace older fence and gates at the HWMU. Installation of the new security fence/gates was performed in accordance with a Class 1 Permit Modification Request (dated April 4, 2018) approved by IDEM on April 13, 2018. Additionally, under this IDEM approval, new well fencing enclosures were installed (for monitoring wells outside the main fenced area), the site access road was improved, and three new survey benchmarks were established for the HWMU. These site features are shown in Figure A-3.

The security fence line shown in Figures A-2 and A-3 (excluding the well fencing enclosures) defines the boundary of the post-closure care unit or HWMU. Within this fenced area, the footprint of the solid waste management area is approximately 5.5 acres. The approximate footprint of the waste management area and post-closure care unit is shown in Figure A-3.

Post-closure care activities have been performed by Corning Incorporated at the HWMU since its closure in 1985. The 30-year post-closure monitoring period for the HWMU ended in May 2015.
Figures A-3 and A-4 present topographic maps encompassing an area with a 1,000-foot radius around the former facility. The topographic map in Figure A-4 shows elevations in the referenced area surrounding the property owned by Corning Incorporated. The topography map for the property owned by Corning Incorporated is shown in Figure A-3. This survey map was developed in 2018 to update topographic contours and site features for the HWMU. Information such as the location of surface water run-off directions, drainage ditches, groundwater monitoring wells, and the point of compliance at the HWMU is presented in Figure A-3.

Access Control

The chain-linked security fence at the HWMU is 6-feet high and topped with three strands of barbed wire. The purpose of this fence is to prevent any unauthorized personnel from entering the HWMU. Access to the HWMU is provided by several gates, which are closed and locked at all times. Six-foot high, chain-linked fence enclosures (without barb wire at the top) are present around four monitoring wells (i.e., W-7S, W-10S, W-11S and W-12S) that are located outside the HWMU security fence. These well fencing enclosures are equipped with lockable access gates.

The roads on the sides of the former facility are two-lane, gravel- and/or asphalt-surfaced county roads. There are no traffic lights within several blocks of the former facility. The traffic volume is very light along West Maple Road (nearest public road to the HWMU access road). The types of vehicles that generally make up the traffic volume on West Maple Road are a mixture of light-duty trucks, passenger vehicles, and farm vehicles.

Injection and Withdrawal Wells

There are no injection or production wells at the HWMU. A description of production wells in the area, outside of the HWMU, is provided in Section A of the Hazardous Waste Post-Closure Permit, issued by IDEM on April 17, 2007. This information is contained in document no. 29501388 in the IDEM Virtual File Cabinet (VFC).

Surface Water
Subsequent to closure, the oil separation lagoon at the former facility was converted into a pond. This pond and the surface water drainage ditch located east to northeast of the former facility building are the only surface water bodies on the former facility property. Other local bodies of surface water include privately-owned ponds. Halls Creek is located approximately 1 mile north of the former facility and flows northward toward the Wabash River. This river is located approximately 3 to 5 miles northeast of the former facility and flows in a northwestwardly direction.

**Land Uses**

Land surrounding the former facility is primarily used for agricultural purposes. The former Corning Glass Works facility building is situated north of the HWMU. Residences are sparsely located around the former facility, as shown in Figure A-5. A single-family home, located east of the HWMU, is situated approximately 300 feet from the HWMU. A single-family home, located southwest of the HWMU, lies at a distance of approximately 850 feet from the HWMU. Figure A-5 illustrates the surrounding zoning and land use.

**Wind Rose**

Predominant wind direction and speed at the former facility are described in Section A of the *Hazardous Waste Post-Closure Permit* issued by IDEM on April 17, 2007. This information is contained in document no. 29501388 in the IDEM VFC.

**Storm and Sanitary Sewers**

As shown in Figure A-3, rainwater in excess of the infiltration capacity of the HWMU cover system flows away from the waste management area into the surrounding area, including the drainage ditch located south of the HWMU. Surface water runoff entering this ditch and other areas surrounding the HWMU either infiltrates or evaporates. Sanitary sewers are located outside the limit of the HWMU and are currently used by the current owner/operator of the facility building north of the HWMU.

**Fire Control Facilities**

No fire control facilities are necessary at the HWMU.
A-3  FLOODPLAIN STANDARD: [40 CFR 270.18(b)(11)(iii), 264.18(b)]

The former facility and the HWMU are not located within the 100-year floodplain, as determined by an examination of a Federal Emergency Management Agency (FEMA) map for the unincorporated area of Wells County, Indiana (Panel 205 of 350) Flood Insurance Rate Map No. 18179C0205D, dated October 16, 2014. A copy of the FEMA Map is presented in Appendix A.

A-3a  Flood Proofing and Flood Protection Measures: [40 CFR 270.14(b)(11)(iv)(A) and (B)]

The HWMU is not located in the 100-year floodplain; therefore, this section is not applicable.

A-3b  Floodplain Standard Waiver: [40 CFR 264.18(b)(1)(i) and (ii)]

The HWMU is not located in the 100-year floodplain; therefore, this section is not applicable.

A-4  POST-CLOSURE NOTICES: [40 CFR 264.116, 265.119(a) and (b), 270.14(b)(14)]

A copy of the Post-Closure Notice may be found in the IDEM VFC (document no. 53470167).
ATTACHMENT A

FIGURES

Figure A-1: Site Location Map
Figure A-2: Site Map
Figure A-3: Site Topographic Map and Site Features
Figure A-4: Area Topographic Map
Figure A-5: Zoning and Land Use Map
BOUNDARY OF POST CLOSURE CARE UNIT (HWMU)
A PART OF A WARRANTY DEED RECORDED IN DEED BOOK 100, PAGE 60 IN THE OFFICE OF
THE RECORDER OF WELLS COUNTY, INDIANA, BEING LOCATED IN THE NORTHEAST QUARTER
OF SECTION 12, TOWNSHIP 26 NORTH, RANGE 11 EAST IN SAID COUNTY, BEING MORE
PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT A RAILROAD SPIKE AT THE NORTHWEST CORNER OF THE NORTHEAST
QUARTER OF SAID SECTION 12, AT A RAILROAD SPIKE AT THE NORTHWEST CORNER
OF THE NORTHEAST QUARTER OF SAID SECTION 12, THENCE SOUTH 01 DEGREE 02 MINUTES
01 SECONDS EAST (BEARING BASED UPON THE INDIANA STATE PLANE COORDINATE SYSTEM
– EAST ZONE) ALONG THE WEST LINE OF SAID NORTHEAST QUARTER A DISTANCE OF 2,648.56
FEET TO A 5/8 INCH REBAR AT THE CENTER OF THE RIGHT–OF–WAY OF A COUNTY
HIGHWAY KNOWN AS MAPLE ROAD, SAID POINT BEING 2.0 FEET NORTH OF THE SOUTHWEST
CORNER OF SAID EASTERN QUADRANT, THENCE NORTH 54 DEGREES 58 MINUTES 30
SECONDS EAST ALONG SAID CENTERLINE A DISTANCE OF 815.04 FEET TO THE SOUTHWEST
CORNER OF SAID WARRANTY DEED; THENCE NORTH 12 DEGREES 09 MINUTES 08 SECONDS
WEST A DISTANCE OF 20.98 FEET TO A FENCE CORNER AND THE POINT OF BEGINNING,
THE FOLLOWING FIVE (5) COURSES OF POINTS OF BEGINNING, THE FOLLOWING FIVE (5)
COURSES BEING ALONG AN EXISTING FENCE LINE: (1) THENCE NORTH 23 DEGREES 07 MINUTES 24 SECONDS WEST 226.68 FEET NORTH 23 DEGREES 07 MINUTES 24
SECONDS WEST 226.68 FEET TO A FENCE CORNER; (2) THENCE NORTH 25 DEGREES 17 MINUTES 20
SECONDS EAST 380.56 FEET TO A FENCE CORNER; (3) THENCE NORTH 83 DEGREES 23
MINUTES 38 SECONDS WEST 796.84 FEET TO A FENCE CORNER; (4) THENCE SOUTH 24
DEGREES 53 MINUTES 48 SECONDS EAST 302.82 FEET TO A FENCE CORNER; (5) THENCE
SOUTH 05 DEGREES 02 MINUTES 50 SECONDS WEST 1104.97 FEET TO THE POINT OF
BEGINNING, CONTAINING 377.78 SQUARE FEET, 8.67 ACRES, MORE OR LESS.

BOUNDARY OF CORNING INCORPORATED PROPERTY
A PART OF A WARRANTY DEED RECORDED IN DEED BOOK 100, PAGE 60 IN THE OFFICE
OF THE RECORDER OF WELLS COUNTY, INDIANA, BEING LOCATED IN THE NORTHEAST
QUARTER OF SECTION 12, TOWNSHIP 26 NORTH, RANGE 11 EAST IN SAID COUNTY, BEING
MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT A RAILROAD SPIKE AT THE NORTHWEST CORNER OF THE NORTHEAST
QUARTER OF SAID SECTION 12, THENCE SOUTH 01 DEGREE 02 MINUTES 01 SECONDS EAST (BEARING BASED UPON THE INDIANA
STATE PLANE COORDINATE SYSTEM – EAST ZONE) ALONG THE WEST LINE OF SAID
NORTHEAST QUARTER A DISTANCE OF 2,648.56 FEET TO A 5/8 INCH REBAR AT THE
CENTER OF THE RIGHT–OF–WAY OF A COUNTY HIGHWAY KNOWN AS MAPLE ROAD, SAID
POINT BEING 3.0 FEET NORTH OF THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER.
THENCE NORTH 54 DEGREES 58 MINUTES 30 SECONDS EAST ALONG SAID CENTERLINE A DISTANCE OF 815.04 FEET TO THE SOUTHWEST
CORNER OF SAID WARRANTY DEED, THENCE NORTH 12 DEGREES 09 MINUTES 08 SECONDS
WEST A DISTANCE OF 20.98 FEET TO A FENCE CORNER AND THE POINT OF BEGINNING,
The following three (3) COURSES BEING ALONG SOUTHERLY LINES: (1) THENCE NORTH 22 DEGREES 38
MINUTES 30 SECONDS WEST A DISTANCE OF 252.11 FEET TO A 5/8 INCH REBAR; (2) THENCE NORTH 01 DEGREE 39 MINUTES 18 SECONDS WEST A DISTANCE OF 826.34 FEET
TO A 5/8 INCH REBAR; (3) THENCE NORTH 88 DEGREES 20 MINUTES 43 SECONDS EAST
A DISTANCE OF 1,703.20 FEET TO A 5/8 INCH REBAR WITH YELLOW PLASTIC CAP
STAMPED "SCHNEIDER" FMM #0001 AT THE CENTER OF THE AFORESAID RIGHT–OF–WAY;
THENCE SOUTH 54 DEGREES 58 MINUTES 30 SECONDS WEST ALONG SAID CENTER
OF RIGHT–OF–WAY A DISTANCE OF 1,931.35 FEET TO THE POINT OF BEGINNING, CONTAINING
21.63 ACRES, (942,002 SQUARE FEET), MORE OR LESS.

BOUNDARY OF THE PROPERTY OWNED
BY CORNING INCORPORATED

LEGEND
W-105 SHALLOW MONITORING WELL
W-8 ABANDONED BEDROCK MONITORING WELL

FIGURE A-2

300 Plaza Circle
Suite 202
Mundelein, Illinois
60060

SITE MAP
FORMER CORNING GLASS WORKS FACILITY
Bluffton, Indiana
BENCHMARK DATA:

BM #1 - 5/8" rebar with red cap stamped "Schneider Random Point" set 3' southwest of centerline of driveway and 2' southwest of the centerline of West Maple Road. (N19°54'28", E16°04'28") Elevation = 842.24 (NGVD 88)

BM #2 - 5/8" rebar with red cap stamped "Schneider Random Point" set 3' southeast of drainage pipe (HWMU Boundary). 22' southwest of the centerline of West Maple Road. (N19°49'55", E44°56'43") Elevation = 848.28 (NGVD 88)

BM #3 - 5/8" rebar with red cap stamped "Schneider Random Point" set 3' southwest of a drain line (HWMU Boundary). 3' southeast of the centerline of West Maple Road. (N19°54'4", E44°54'36") Elevation = 842.44 (NGVD 88)

SOURCE:
THE SCHNEIDER CORPORATION, 8901 OTIS AVENUE, INDIANAPOLIS, IN 46216-1037, DATED 6/21/2018.
APPENDIX A

FEMA MAP
Without Base Flood Elevation (BFE)
Zone A, AE
With BFE or Depth
Zone AO, AH, VE, AR
Regulatory Floodway

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X

Future Conditions 1% Annual Chance Flood Hazard Zone X

Area with Reduced Flood Risk due to Levee. See Notes. Zone X

Area with Flood Risk due to Levee Zone D

Area of Minimal Flood Hazard Zone X

Area of Undetermined Flood Hazard Zone D

Channel, Culvert, or Storm Sewer
Levee, Dike, or Floodwall

Cross Sections with 1% Annual Chance Water Surface Elevation
Coastal Transect
Base Flood Elevation Line (BFE)
Limit of Study
Jurisdiction Boundary
Coastal Transect Baseline
Profile Baseline
Hydrographic Feature

Digital Data Available
No Digital Data Available
Unmapped

This map complies with FEMA’s standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA’s basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/21/2020 at 10:32 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.
B. POST-CLOSURE INSPECTION REQUIREMENTS [40 CFR 264.15, 264.118(b), and 270.14(b)(5)]

B-1 WRITTEN INSPECTION PLAN: [40 CFR 264.15(b), 270.21(d)]

The following inspection program is being conducted and will be continued by Corning Incorporated to ensure continued integrity and effective performance of the cover system and appurtenant structures. In general, the following areas will be inspected once a year (annually) during the post-closure period:

- Security fence and gates;
- Erosion damage;
- Cover settlement, subsidence, and displacement;
- Vegetative cover condition;
- Well conditions;
- Integrity of run-off control measures; and
- Benchmark integrity.

Because HWMU conditions have been stable for many years, the annual inspection frequency will be adequate to monitor for potential changes. If an inspection indicates the need for follow-up activity, the inspector will inform Corning Incorporated, who will then take appropriate measures as required.

Security Fence/Gates/Benchmark

During the annual inspection, the conditions of the fencing, gates, benchmarks, and the locks will be assessed. The inspection entails walking along the entire HWMU security fence checking its integrity and noting the conditions.

Maintenance of the security system may include repairing or replacing damaged, broken, rusted, or non-functioning fencing, gates, posts, or locks, as needed to ensure integrity of the system. The surveyed benchmarks shown in Figure A-3 will be maintained and will be cleaned of any grass or plants to prevent the benchmarks from being covered.

Final Cover System

The cover system for the HWMU is vegetated. The cover system will be inspected annually to detect signs of the following potential problems:

- Excessive or differential settlement and subsidence that may allow the ponding of water.
- Soil erosion gullies that penetrate the vegetative cover and topsoil.
• Inadequate, sparse, or stressed vegetation cover (bare spots).
• Impact to cover system integrity by burrowing animals or deep-rooted vegetation.

These inspections will encompass the full extent of the HWMU cover system. The criteria that will be used to assess whether or not corrective measures are required include:

• Observed settlement sufficient to allow the ponding of water on the cover system.
• Observed soil erosion gullies that penetrate (greater than 6 inches in depth) the vegetative cover and soil associated with the cover system.
• Observation of significant areas lacking vegetation on the cover system.
• Observed animal burrowing or tree growth within the cover system.

The results of these inspections will be documented on the inspection sheets (Section B-3). The inspection sheets will be forwarded to Corning Incorporated.

Corrective measures may include, but are not limited to the following:

• If settlement and/or ponding is observed on the cover system, the ponded water will be removed and the depression will be filled with clean soil and revegetated.
• If soil erosion is observed on the cover system, erosion gullies greater than 6 inches in depth will be filled with soil and/or drainage media to maintain the cover’s original elevations. The area will then be re-vegetated as appropriate.
• If any significant area lacking vegetation is observed on the cover system, it will be covered with soil as needed and re-vegetated. Fertilization of the cover system will take place as needed. If stressed or thinning vegetative cover is observed, soil testing may be conducted to define fertilization needs. Mowing of the vegetative cover will be accomplished with a light tractor that will prevent damage to the cover system.
• If any animal burrow is observed on the cover system, the burrow will be filled with soil and the disturbed area revegetated. If burrowing persists, additional measures, including professional animal control, may be implemented.
• If trees are observed growing on the cover system, they will be removed during the scheduled mowing activities.

**Run-Off Control Measures**

The HWMU run-off control measures will be inspected annually to detect:

• Conditions that may cause erosion of cover soils.
- Possible blockage or excessive sedimentation of the drainage channel that may induce excessive backup or ponding of storm water runoff.

If these problems are observed, they will be corrected. Corrective measures that could be required may include, but are not limited to the following:

- Removal of excess sediments or other blockage of the drainage channel.
- Re-vegetation to re-establish vegetative growth within the drainage channel.

**Monitoring Wells**

The current groundwater monitoring network at the HWMU consists of eight shallow wells (W-7S, W-8S, W-9S, W-10S, W-11S, W-12S, W-13S, and W-14S) screened within the shallow sand and gravel deposits (i.e., the uppermost aquifer). The locations of these groundwater monitoring wells are shown in Figure A-3. Well abandonment and groundwater sampling activities completed under the most recent post-closure permit issued by IDEM on February 8, 2018 are described below:

**Completed Well Abandonments** - Bedrock groundwater monitoring wells at the HWMU (i.e., W-5, W-6, W-8, W-9 and W-10) were abandoned by Corning Incorporated in 2018. The locations of these abandoned monitoring wells are shown in Figure A-2.

Wells W-6, W-9 and W-10 were abandoned in May 2018 in accordance with procedures contained in a correspondence submitted to IDEM on February 2, 2018. These well abandonment procedures were approved by IDEM on February 13, 2018. Documentation relative to the abandonment of wells W-6, W-9 and W-10 was submitted to IDEM on June 14, 2018.

Bedrock monitoring wells W-5 and W-8 were abandoned in November 2018 in general accordance with procedures contained in the *Work Plan for Addressing Pipe Boots and Completing Well Abandonments, Bedrock Monitoring Wells W-5 and W-8 (Work Plan)* (dated September 2018), submitted to the Department of Natural Resources (DNR) and IDEM on September 5, 2018. The Work Plan was approved by DNR and IDEM on September 6, 2018, and October 5, 2018, respectively. Documentation relative to the abandonment of wells W-5 and W-8 and associated pipe boot repair activities was submitted to DNR and IDEM on December 10, 2018, and subsequently approved by IDEM on January 23, 2019.

**Biennial Groundwater Sampling** - Biennial groundwater sampling events were conducted in May 2018 and June 2020 at the Bluffton HWMU in accordance with the procedures contained in the most recent post-closure permit. These sampling events included the collection of groundwater samples from background monitoring well W-14S and compliance monitoring wells W-9S and W-13S (see well locations in Figure A-3). These groundwater samples and quality control samples (e.g., field blank) were analyzed for the permit-specified indicator parameters of dissolved arsenic and dissolved lead by Eurofins TestAmerica Laboratories, Inc. in University Park, Illinois. The results of the May 2018 and June 2020 biennial groundwater monitoring activities were submitted to IDEM on June 27, 2018, and July 9, 2020, respectively.
The May 2018 and June 2020 groundwater sampling results for the Bluffton HWMU continue to indicate no impacts to groundwater quality, consistent with previous groundwater sampling results for this closed landfill. Based on these favorable groundwater quality conditions at the HWMU, and the fact that groundwater monitoring has been conducted for more than 30 years at this closed landfill, Corning Incorporated requested that IDEM approve cessation of groundwater monitoring at the Bluffton HWMU.

**Monitoring Well Retention and Abandonments**

Corning Incorporated will retain shallow monitoring wells W-8S, W-9S, W-13S and W-14S. These wells will be inspected and maintained in accordance with the procedures described herein. The four remaining shallow monitoring wells (W-7S, W-10S, W-11S and W-12S) will be abandoned. These shallow wells are located outside the footprint of the capped waste management area, as shown in Figure A-3. As such, no flexible membrane cap liner is expected to be encountered during these well abandonments.

Shallow monitoring wells W-7S, W-10S, W-11S and W-12S at the Bluffton HWMU will be abandoned in place in accordance with the abandonment and record keeping procedures listed under 312 IAC 13-10-2. The well abandonment activities will include backfilling the shallow wells with bentonite chips from the measured base of the wells to near ground surface by an Indiana-licensed driller. Depth-of-hole measurements will be taken while placing the bentonite chips to ensure no “bridging” of the chips before reaching the bottom. Bentonite chips placed above the measured water level in the wells will be hydrated with potable water. Following emplacement of the bentonite chips, the concrete surface pads/protective casings will be removed and soil around the casings will be removed to a depth of approximately 2.5 feet below ground surface. The well casings will then be cut off two feet below ground surface. After the well components are removed to the specified depth, the wells will be plugged with concrete. After the concrete plugs cure overnight, the remaining space above the concrete plugs will be filled with clean soil and the disturbed areas seeded and covered with straw. Any fence enclosure surrounding these wells will be removed during the well abandonment process. Well abandonment notifications will be filed with the appropriate regulatory agencies.

**Inspection Documentation**

Completed inspection log sheets will be maintained at Corning Incorporated's offices in Corning, New York for a period of three years. A second set will be kept by the contractor retained by Corning Incorporated to perform the inspection activities.

**B-2 INSPECTION REMEDIAL ACTIONS: [40 CFR 264.15(c), 264.118(b)(2)]**

The annual HWMU inspections discussed in Section B-1 may determine that corrective measures are necessary. The inspector will notify the post-closure contact or other designated personnel of any corrective measure requirements and they will then initiate the appropriate corrective measure(s). IDEM will be notified within 60 days of completing any corrective measures identified in the inspection records.
B-3  **INSPECTION LOG: [40 CFR 264.15(d)]**

Inspection log sheets to be used during the completion of the inspection plan are provided in Appendix B. These inspection sheets have been cessation of groundwater monitoring and the well abandonments described in Section B-1 being completed at the time of the annual inspection. The inspection sheets will show the date and time of inspection, name of the inspector, a notation of the observations made, and the nature of any corrective measure. One set of completed inspection sheets (for at least a 3-year period) will be maintained at Corning Incorporated's offices in Corning, New York and a second set will be kept by the contractor retained by Corning Incorporated to perform the inspection activities. Inspection records will be provided to IDEM within 60 days of completing landfill inspections.
## Appendix B-1

### Annual Inspection Sheet

**Inspector:** ________________  
**Inspection Year:** ____________

<table>
<thead>
<tr>
<th>Inspection Criteria</th>
<th>Comments (✓) If Acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspect for any newly developed bare spots or new signs of erosion that penetrates the cover system</td>
<td></td>
</tr>
<tr>
<td>Inspect for any depressions or burrows or ruts on the cover system</td>
<td></td>
</tr>
<tr>
<td>Inspect for any areas of wet soil or water accumulation</td>
<td></td>
</tr>
<tr>
<td>Inspect for any areas of seepage or deep rooted vegetation</td>
<td></td>
</tr>
<tr>
<td>Inspect the condition of surrounding fence and posts</td>
<td></td>
</tr>
<tr>
<td>Inspect the condition of all gates and locks</td>
<td></td>
</tr>
<tr>
<td>Inspect condition of monitoring wells and concrete pads</td>
<td></td>
</tr>
<tr>
<td>Inspect the locks on monitoring wells</td>
<td></td>
</tr>
<tr>
<td>Inspect benchmark for integrity</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________


# Post-Closure Inspection Plan

**Former Corning Glass Works Facility**  
**Bluffton, Indiana**

## Inspected Item

### Cover System

<table>
<thead>
<tr>
<th>Problem Area</th>
<th>Acceptable Yes or No</th>
<th>Remedial Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetation</td>
<td></td>
<td>Mowing inside the fence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mowing outside the fence</td>
</tr>
<tr>
<td>Erosion</td>
<td></td>
<td>Cover bare spots with clean soil as needed and reseed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Erosion gullies exceeding a depth of 6 inches will be repaired and revegetated.</td>
</tr>
<tr>
<td>Burrows</td>
<td></td>
<td>Fill burrows with clean soil and reseed</td>
</tr>
<tr>
<td>Subsidence</td>
<td></td>
<td>Fill subsided area with clean soil and reseed</td>
</tr>
<tr>
<td>Damage</td>
<td></td>
<td>Cover damaged area with clean soil and repair if needed membrane using extrusion welding</td>
</tr>
</tbody>
</table>

### Drainage System

<table>
<thead>
<tr>
<th>Problem Area</th>
<th>Remedial Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td>Fill with soil as needed and reseed</td>
</tr>
<tr>
<td>Sedimentation</td>
<td>Remove excess sedimentation</td>
</tr>
<tr>
<td>Vegetation</td>
<td>Remove excess growth of vegetation</td>
</tr>
<tr>
<td>Debris</td>
<td>Clean debris from the drainage system</td>
</tr>
</tbody>
</table>

### Security System

<table>
<thead>
<tr>
<th>Problem Area</th>
<th>Remedial Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fencing/Posts</td>
<td>Patch broken fence, fix broken concrete posts</td>
</tr>
<tr>
<td>Gates</td>
<td>Check integrity of gates and repair as needed</td>
</tr>
<tr>
<td>Locks</td>
<td>Replace badly rusted locks</td>
</tr>
</tbody>
</table>

### Benchmark

<table>
<thead>
<tr>
<th>Problem Area</th>
<th>Remedial Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visible</td>
<td>Clean if benchmark is covered by grass or debris</td>
</tr>
</tbody>
</table>

---

**Date and Time of Inspection**

**Inspection Year**

**Name/Signature of Inspector**

**Date and Nature of Any Repair or Remediation Action**
## Appendix B-1

### Sheet 2

Post-Closure Inspection Plan
Former Corning Glass Works Facility
Bluffton, Indiana

<table>
<thead>
<tr>
<th>Well ID</th>
<th>Casing</th>
<th>Cover</th>
<th>Locks</th>
<th>Concrete Well Apron</th>
<th>Acceptable Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>W-9S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W-13S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W-14S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remedial Action (if appropriate)**

- W-9S: If damage ruins the integrity of well, notify Corning and replace.
- W-13S: Clean webs or debris. Painting with rust proof paint. If rusted badly then replace.
- W-14S: Lubricate locks. Replace if any lock is either very rusted or is difficult to open
- Inspect for visible cracks on concrete or between concrete pad and casing. Seal cracks. If cracks are recurring or if pad is significantly heaved, replace pad.

---

**Date and Time of Inspection**

**Name of Inspector**

**Signature of Inspector**

**Date and Nature of Any Repair or Remedial Action**
C. POST-CLOSURE PLAN

C-1 POST-CLOSURE CONTACT: [40 CFR 264.118(b)(3)]

The contact for questions concerning the HWMU during the post-closure care period is:

Mr. Luiz Ferri  
Corporate Environmental Control  
Corning Incorporated  
HP-ME-03-83  
Corning, New York 14831  
Phone: (607) 974-9183

Post-closure care activities will be completed by a contractor reporting directly to Corning Incorporated. This contractor can be contacted through Corning Incorporated's post-closure contact listed above.

C-2 POST-CLOSURE SECURITY: [40 CFR 264.14, 270.14(b)(4)]

Post-closure security and site access control for the HWMU is provided by a 6-foot high, chain-linked fence topped with barbed wire. Access for maintenance equipment and personnel is controlled by several gates, which are kept closed and locked. In the event that access to the HWMU is required by authorized personnel, Corning Incorporated’s post-closure contact should be contacted.

C-3 REQUEST FOR WAIVER OF PREPAREDNESS AND PREVENTION REQUIREMENTS: [40 CFR 264, SUBPART C]

The HWMU is inactive and located in an open field with no permanent personnel and no potential for fire or explosion. There is no equipment or buildings at the HWMU; therefore, no testing and maintenance of alarm systems, fire protection equipment, spill control equipment and decontamination equipment is required. Therefore, the requirements of 40 CFR 264.30 through 40 CFR 264.37 are not applicable. A waiver is requested to eliminate these sections from this post-closure permit application.

C-4 LANDFILL MAINTENANCE PLAN

C-4a List of Wastes: [40 CFR 270.21(a), 264.309]

A description of waste materials in the HWMU is provided in Attachment A.
C-4b  Liner and Cap System Description: [40 CFR 270.21(b)(1), 264.301, 264.310(b)(1)]

There is no engineered liner system associated with the HWMU; however, there is a natural silty clay layer below the HWMU. The silty clay soils are of glacial origin (ground moraine) and exhibit low permeability. The monitoring wells installed at the site indicate that 10 to 20 feet of undisturbed silty clay underlie the base of the HWMU.

The installation of a new cover system for the HWMU in 1994 included excavation of the topsoil and flow zone layers to the top of the clay layer overlying the stabilized waste and then subsequent installation of a drainage liner (i.e., FML or flexible membrane liner) overlain by a 12-inch thick flow zone (drainage layer) and 12-inch soil layer. Upon completion, the new cover system was re-vegetated. HWMU Cross Sections are shown in the Attachment C Figures. The new liner extends slightly beyond the waste management area.

C-4b(1)  Liner System Foundation Description: [40 CFR 270.21(b)(1), 264.301(a) or (b), 264.310(b)(1)]

There is no engineered basal liner system at the HWMU; therefore, this section is not applicable.

C-4b(2)  Leachate Collection/Detection System Operation and Design: [40 CFR 70.21(b)(1), 264.301(a) or (b), 264.310(b)(2)]

There is no designed leachate collection system at the HWMU; therefore, this section is not applicable.

C-4c  Run-On Control System: [40 CFR 270.21(b)(2) and (4), 264.301(g) and (h), 264.310(b)(5)]

The HWMU was completed above grade; therefore, this section is not applicable.

C-4d  Run-Off Control System: [40 CFR 270.21(b)(3) and (4), 264.301(g) and (h), 264.310(b)(5)]

The HWMU was constructed with slopes directing run-off away from the waste management area. This surface configuration and the cover system design minimize the possibility of water standing on the HWMU cover system. Precipitation that infiltrates the soil layer of the HWMU cover system will collect within the sand/gravel flow zone above the FML and gravity drain towards the toe of the slope.
The flow zone on the slope is currently covered with soil and vegetation. Water percolates from the flow zone through the soil and subsequently evaporates and/or infiltrates into the surrounding soil. The multi-layer cover with the FML and drainage layer flow zone improves the cap efficiency and maintains stability of the side slopes. The vegetated cover protects the cap from erosion damage.

C-4e  Cap Maintenance: [40 CFR 264.310(b)]

Corning Incorporated will continue to conduct an inspection program designed to ensure continued integrity and stability of the cover system and appurtenant structures. Rationale used for corrective action will include a review of the inspection sheet. The maintenance plan includes the preventative and corrective maintenance procedures with the cover system, as described in Section B-1.

Mowing of the HWMU cover system will be conducted approximately 4 to 5 times during the mowing season (i.e., the May to October period of each year).

C-5  POST-CLOSURE COST ESTIMATE: [329 IAC 3.1-15-5]

The post-closure cost estimates provided in this section presents the yearly costs of the 5-year post-closure period beginning in 2021 for the HWMU. The cost estimate for Year 2021 includes the costs for conducting the monitoring well abandonment activities discussed in Section B-1.

The post-closure cost estimates, assuming implementation by an independent third party, cover ongoing maintenance of the HWMU, annual inspections and reporting. The annual cost estimate was derived based on the costs incurred in recent years to complete post-closure care activities. The cost estimate for conducting the monitoring well abandonment activities is provided in the annual cost estimate for 2021. The annual cost estimates are presented below:
## Yearly Tasks

<table>
<thead>
<tr>
<th>Yearly Tasks</th>
<th>Yearly Post-Closure Costs ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-Closure Care: Project Management, Annual Site Inspection, Reporting, and Subcontractor Charges for Maintenance</td>
<td>25,800</td>
</tr>
<tr>
<td>Well Abandonments and Reporting (Year 2021 Only): Project Management, Field Oversight, Reporting, and Subcontractor Charges for Well Abandonments</td>
<td>21,600</td>
</tr>
</tbody>
</table>

**Total Estimated Yearly Cost**                                    **$25,800**

**Total Estimated Yearly Cost for 2021 (includes well abandonment activities)** **$47,400**

### C-6  FINANCIAL ASSURANCE FOR POST-CLOSURE CARE: [329 IAC 3.1-15-6]

Corning Incorporated will continue to utilize the financial test procedure as outlined in 329 IAC 3.1-15-6(g) as the financial assurance mechanism for post-closure care of the HWMU.
ATTACHMENT C

FIGURES

Figure 1: Location of Cross Sections A-A’ and B-B’
Figure 2: Cross Section A-A’
Figure 3: Cross Section B-B’
October 22, 2018

Mr. Jeff Workman
Indiana Department of Environmental Management
Office of Land Quality
Hazardous Waste Permits Section
ICCN 1101
100 N. Senate Avenue
Indianapolis, IN 46204

Re: Cross-Sections
Closed Waste Management Unit (WMU)
Former Corning Glass Works Facility, Bluffton, IN
EPA ID No.: IN045557244

Dear Mr. Workman:

On behalf of Corning Incorporated, Weston Solutions, Inc. (WESTON®) submits and encloses cross-sections of the Bluffton closed WMU pursuant to Condition VLB of the most recent post-closure permit. A map showing the plan view of these cross-sections is also enclosed.

Should you have any questions or comments concerning the enclosed information, please do not hesitate to contact me at (610) 701-3677 or Mr. Luiz Ferri of Corning Incorporated at (607) 974-9183.

Very truly yours,

Weston Solutions Inc.

Thomas A. Drew, P.G.
Project Manager

Enclosure

cc: Luiz Ferri, Corning Incorporated