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November 1, 2019

**VIA ONLINE SUBMISSION**

Regional Freedom of Information Officer

U.S. EPA, Region 9

75 Hawthorne Street (ORC-1)

San Francisco, CA 94105

Re: Freedom of Information Act Request

Dear FOIA Administrator:

This letter is submitted pursuant to the Freedom of Information Act, 5 U.S.C. § 552 and the United States Environmental Protection Agency ("EPA") Freedom of Information Act Regulations, in particular 40 CFR §§ 2.101(a) and 2.102, and requests copies of any and all public records (as hereinafter defined) that fall in the categories specified below and which are in the custody, control, or possession of the EPA Region 9 and/or any public official, employee, agent, contractor, or anyone acting on behalf of the EPA.

The term "**records**" shall mean any and all public records, including without limitation reports, records, drafts, letters, memoranda, notes, communications, inspection reports, logs, tables, spreadsheets, books, photographs, electronic files, emails, facsimiles, diagrams, documents, and every other means of recording upon any tangible thing any form of communication or representation. The terms "**relating to**" or "**concerning**" mean in whole or in part to discuss, describe, reflect, memorialize, contain, analyze, study, report on, comment on, evidence, constitute, embody, identify, state, consider, recommend, set forth, concern, address, deal with or in any way pertain to. Further, for the purposes of this request, (1) the terms "**and**" and "**or**" are terms of inclusion and not of exclusion and shall have both conjunctive and disjunctive meanings; and (2) the terms "**any**" and "**all**" mean each and every.

For purposes of this request, the "**Permits**" collectively, and each individually a "**Permit**" shall mean The Underground Injection Control Permits Class VI, IL-137-6A-0001, IL-137-6A-0002, IL-137-6A-0003, and IL-137-6A-0004 for Well # 1, Well #2, Well #3 and Well #4 respectively, each issued to FutureGen 2.0 under the EPA Underground Injection Control Program. The Permit is attached hereto as Exhibits A-1 through A-4.

**Records Requested**: As identified in the administrative record for each FutureGen 2.0 Permit attached hereto as Exhibits B-1 through B-4, *to the extent the documents differ between permits*, the following documents are requested: Document Numbers 1 through 14; 16 through 17; 23; 511; and 594, including attachments.

If, for any reason, EPA Region 9 decides to withhold or otherwise redact information contained in its files relating to the public records described above on the basis of privilege or otherwise, please provide a statement describing the nature of any such material and the basis for any such decision, citing the legal authorities on which EPA Region 9 relies. Please also set forth any appeal procedures available under law.

We hereby agree to pay copying costs and other reasonable costs necessary for the above requested documents up to five hundred dollars ($500). In the event such fees may be in excess of this amount, please contact me prior to incurring any costs. In the alternative, we are amenable to electronic disclosure of the records requested to the extent that such disclosure is more convenient and may be made in a more expeditious fashion. To the extent any of the records responsive to this request are stored in electronic format, please also provide a copy of the records in their native electronic format on CD-ROM or other media that will enable us to load the records onto a computer. When providing electronic records, please include metadata. To the extent that certain reports and/or data are available before others, we ask that you please provide such documents on a rolling basis.

If you have any questions about this request, please contact me at robert.fernandez@thomsonreuters.com. Thank you for your time and attention to this matter.

Very truly yours,

/s/ Robert Fernandez

Robert Fernandez
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# Exhibit A-1

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U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDERGROUND INJECTION CONTROL PERMIT

CLASS VI

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BOULEVARD
CHICAGO, IL 60604-3590



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND INJECTION CONTROL PERMIT: CLASS VI

**Permit Number: IL-137-6A-0001**
**Facility Name: FutureGen Industrial Alliance, Inc.**

Pursuant to the Safe Drinking Water Act and Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 124, 144, 146, and 147,

**FutureGen Industrial Alliance, Inc. of Jacksonville, Illinois**

hereinafter, the permittee, is hereby authorized to construct and operate a Class VI injection well located in the State of Illinois, Morgan County, Township 16N, Range 9W, Section 26, latitude 39.80111°N and longitude 90.07491°W, for injection of the carbon dioxide ($CO_2$) stream generated by an oxy-combustion power plant in Meredosia, Illinois and as characterized in the permit application and the administrative record as a liquid, supercritical fluid, or gas into the Mount Simon and Eau Claire Formations at depths between 3785 feet and 4432 feet below ground surface upon the express condition that the permittee meet the restrictions set forth herein. The designated confining zone for this injection well is identified as the upper part of the Eau Claire Formation formed by the upper part of the Lombard Member and the Proviso Member. Injection shall not commence until the operator has received written authorization from the Director of the Water Division of EPA Region 5, in accordance with Section Q of this permit.

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit is effective. The following attachments are incorporated into this permit as enforceable conditions: A, B, C, D, E, F, G, H and I.

This permit shall become effective on OCT 14 2014, and shall remain in full force and effect during the operating life of the facility and the post-injection site care period until site closure is authorized and completed, unless this permit is revoked and reissued, terminated, or modified pursuant to 40 CFR 144.39, 144.40, or 144.41. This permit shall also remain in effect upon delegation of primary enforcement responsibility to the State of Illinois until such time as the State issues its own permit to the permittee or the State chooses to adopt this permit as a State permit. The permit will expire in one year if the permittee fails to commence construction, unless a written request in electronic format for an extension of this one-year period has been approved by the Director. The permittee may request an expiration date sooner than the one-year period, provided no construction on the well has commenced. This permit will be reviewed at least every five years from the effective date specified above.

Signed and Dated: August 29, 2014

Tinka G. Hyde

Tinka G. Hyde
Director, Water Division

## PERMIT CONDITIONS

### A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. Notwithstanding any other provisions of this permit, the permittee authorized by this permit shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection, annulus or formation fluids into underground sources of drinking water (USDWs) or any unauthorized zones. The objective of this permit is to prevent the movement of fluids into or between USDWs or into any unauthorized zones consistent with the requirements at 40 CFR 146.86(a). Any underground injection activity not specifically authorized in this permit is prohibited. For purposes of enforcement, compliance with this permit during its term constitutes compliance with Part C of the Safe Drinking Water Act (SDWA). Such compliance does not constitute a defense to any action brought under Section 1431 of the SDWA or any other common or statutory law other than Part C of the SDWA. 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 State or local laws or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

### B. PERMIT ACTIONS

1. **Modification, Revocation and Reissuance, and Termination** – The Director of the Water Division of Region 5 of the U. S. Environmental Protection Agency (EPA), hereinafter, the Director, may, for cause or upon request from any interested person, including the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR 124.5, 144.12, 146.86(a), 144.39, and 144.40. The permit is also subject to minor modifications for cause as specified in 40 CFR 144.41. The filing of a request 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.

2. **Minor Modifications** – Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for minor changes in the permitted activity as listed in 40 CFR 144.41. Any permit modification not processed as a minor modification under 40 CFR 144.41 must be made for cause, and with part 124 draft permit and public notice as required in 40 CFR 144.39.

3. **Transfer of Permits** – This permit is not transferable to any person except in accordance with 40 CFR 144.38(a) and Section N(6)(b) of this permit.

### C. SEVERABILITY

The provisions of this 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 shall not be affected thereby.

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## D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 (Public Information) and 40 CFR 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential business information by the submitter. Any such claim must be asserted at the time of submission by clearly identifying each page with the words "confidential business information" on every page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2. Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee; and

2. Information which deals with the existence, absence or level of contaminants in drinking water.

## E. DEFINITION

All terms used in this permit shall have the meaning set forth in the SDWA and Underground Injection Control regulations specified at 40 CFR parts 124, 144, 146, and 147. Unless specifically stated otherwise, all references to “days” in this permit should be interpreted as calendar days.

## F. DUTIES AND REQUIREMENTS

1. **Duty to Comply** – The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.

2. **Duty to Reapply** – If the permittee wishes to continue an activity regulated by this permit after the expiration or termination of this permit, the permittee must apply for and obtain a new permit.

3. **Penalties for Violations of Permit Conditions** – Any person who violates a permit requirement is subject to civil penalties and other enforcement action under the SDWA. Any person who willfully violates permit conditions may be subject to criminal prosecution under the SDWA and other applicable statutes and regulations.

4. **Need to Halt or Reduce Activity Not a Defense** – It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. **Duty to Mitigate** – The permittee shall take all timely and reasonable steps necessary to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. **Proper Operation and Maintenance** – The permittee shall at all times properly operate and

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maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, among other things, 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 this permit.

7. **Duty to Provide Information** – The permittee shall furnish to the Director in an electronic format, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit or the UIC regulations. The permittee shall also furnish to the Director, upon request within a time specified, electronic copies of records required to be kept by this permit.

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

   (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where electronic or non-electronic records are kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any electronic or non-electronic records that are kept under the conditions of this permit;

   (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   (d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location, including facilities, equipment or operations regulated or required under this permit.

9. **Signatory Requirements** – All reports or other information, required to be submitted by this permit or requested by the Director shall be signed and certified in accordance with 40 CFR 144.32.

## G. AREA OF REVIEW AND CORRECTIVE ACTION

1. The Area of Review (AoR) is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and is based on available site characterization, monitoring, and operational data. The permittee shall maintain and comply with the approved Area of Review and Corrective Action Plan (Attachment B of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.84.

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2. At the fixed frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee must reevaluate the area of review and perform corrective action in the manner specified in 40 CFR 146.84 and update the Area of Review and Corrective Action Plan or demonstrate to the Director that no update is needed.

3. Following each AoR reevaluation or a demonstration that no evaluation is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the AoR results. Once approved by the Director, the revised Area of Review and Corrective Action Plan will become an enforceable condition of this permit.

## H. FINANCIAL RESPONSIBILITY

1. **Financial Responsibility** – The permittee shall maintain financial responsibility and resources to meet the requirements of 40 CFR 146.85 and the conditions of this permit. Financial responsibility shall be maintained through all phases of the project. The approved financial assurance mechanisms are found in Attachment H and in the administrative record of this permit.

   The financial instrument(s) must be sufficient to cover the cost of:

   (a) Corrective action (that meets the requirements of 40 CFR 146.84);

   (b) Injection well plugging (that meets the requirements of 40 CFR 146.92);

   (c) Post injection site care and site closure (that meets the requirements of 40 CFR 146.93);

   (d) Emergency and remedial response (that meets the requirements of 40 CFR 146.94).

2. **Cost Estimate Updates** – During the active life of the geologic sequestration project, the permittee must adjust the cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) and provide this adjustment to the Director in an electronic format. The permittee must also provide to the Director written updates in an electronic format of adjustments to the cost estimate within 60 days of any amendments to the Project Plans included as Attachments B – F of this permit, which address items (a) through (d) in Section H(1) of this permit.

3. **Notification** –

   (a) Whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the permittee, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial responsibility instruments to cover the increase. Whenever the current cost estimate decreases, the face amount of the financial assurance instrument may be reduced to the amount of the current cost estimate only after the permittee has received written approval from the Director.

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(b) The permittee must notify the Director by certified mail and in an electronic format of adverse financial conditions such as bankruptcy that may affect the ability to carry out injection well plugging, post-injection site care and site closure, and any applicable ongoing actions under Corrective Action and/or Emergency and Remedial Response.

(i) In the event that the permittee or the third party provider of a financial responsibility instrument is going through a bankruptcy, the permittee must notify the Director by certified mail and in an electronic format of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the permittee as debtor, within 10 days after commencement of the proceeding.

(ii) A guarantor of a corporate guarantee must make such a notification if he or she is named as debtor, as required under the terms of the guarantee.

(iii) A permittee who fulfills the requirements of paragraph (a) of this section by obtaining a trust fund, surety bond, letter of credit, escrow account, or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the trust fund, surety bond, letter of credit, escrow account, or insurance policy.

4. **Establishing Other Coverage** – The permittee must establish other financial assurance or liability coverage acceptable to the Director, within 60 days of the occurrence of the events in Section H(2) or H(3) of this permit.

## I. CONSTRUCTION

1. **Siting** – The permittee has demonstrated to the satisfaction of the Director that the well is in an area with suitable geology in accordance with the requirements at 40 CFR 146.83.

2. **Casing and Cementing** – Casing and cement or other materials used in the construction of the well must have sufficient structural strength for the life of the geologic sequestration project. All well materials must be compatible with all fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The casing and cementing program must prevent the movement of fluids into or between USDWs for the expected life of the well in accordance with 40 CFR 146.86. The casing and cement used in the construction of this well are shown in Attachment G of this permit and in the administrative record for this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

3. **Tubing and Packer Specifications** – Tubing and packer materials used in the construction of the well must be compatible with fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The permittee shall inject only through tubing with a packer set within the long string casing at a point within or below the confining zone immediately above the injection

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zone. The tubing and packer used in the well are represented in engineering drawings contained in Attachment G of this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

## J. PRE-INJECTION TESTING

1. Prior to the Director authorizing injection, the permittee shall perform all pre-injection logging, sampling, and testing specified at 40 CFR 146.87. This testing shall include:

   (a) Logs, surveys and tests to determine or verify the depth, thickness, porosity, permeability, lithology, and formation fluid salinity in all relevant geologic formations. These tests shall include:

      (i) Deviation checks that meet the requirements of 40 CFR 146.87(a)(1);

      (ii) Logs and tests before and upon installation of the surface casing that meet the requirements of 40 CFR 146.87(a)(2);

      (iii) Logs and tests before and upon installation of the long-string casing that meet the requirements of 40 CFR 146.87(a)(3);

      (iv) Tests to demonstrate internal and external mechanical integrity that meet the requirements of 40 CFR 146.87(a)(4); and

      (v) Any alternative methods that are required by and/or approved by the Director pursuant to 40 CFR 146.87(a)(5).

   (b) Whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone that meet the requirements of 40 CFR 146.87(b);

   (c) Records of the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone that meet the requirements of 40 CFR 146.87(c);

   (d) Tests as necessary to provide information about the injection and confining zones to allow determination or calculation of the fracture pressure and the physical and chemical characteristics of the injection and confining zones and the formation fluids in the injection zone that meet the requirements of 40 CFR 146.87(d); and

   (e) Tests to verify hydrogeologic characteristics of the injection zone that meet the requirements of 40 CFR 146.87(e), including:

      (i) A pressure fall-off test and

      (ii) A pumping test or injectivity tests.

2. The permittee shall submit to the Director for approval in an electronic format a schedule for logging and testing activities 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test. The permittee must provide

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the Director or their representative with the opportunity to witness all logging, sampling, and testing required under this Section.

## K. OPERATIONS

1. **Injection Pressure Limitation** – Except during stimulation, the permittee must ensure that injection pressure does not exceed 90 percent of the fracture pressure of the injection zone(s) so as to ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone(s). In no case shall injection pressure initiate fractures or propagate existing fractures in the confining zone or cause the movement of injection or formation fluids into a USDW. The maximum injection pressure limit is listed in Attachment A.

2. **Stimulation Program** – Pursuant to requirements at 40 CFR 146.82(a)(9), all stimulation programs proposed by the permittee must be approved by the Director as a permit modification and incorporated into Attachment I of this permit.

3. **Additional Injection Limitation** – No injectate other than that identified on page 1 of this permit shall be injected except fluids used for stimulation, rework, and well tests as approved by the Director.

4. **Annulus Fluid** – The permittee must fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the Director.

5. **Annulus/Tubing Pressure Differential** – Except during workovers or times of annulus maintenance, the permittee must maintain on the annulus a pressure that exceeds the operating injection pressure as specified in Attachment A of this permit, unless the Director determines that such requirement might harm the integrity of the well or endanger USDWs.

6. **Automatic Alarms and Automatic Shut-off System** –

   (a) The permittee must:

      (i) Install, continuously operate, and maintain an automatic alarm and an automatic shut-off system or, at the discretion of the Director, down-hole shut-off systems, or other mechanical devices that provide equivalent protection; and

      (ii) Successfully demonstrate the functionality of the alarm system and shut-off system prior to the Director authorizing injection, and at a minimum of once every twelfth month after the last approved demonstration.

   (b) Testing under this Section must involve subjecting the system to simulated failure conditions and must be witnessed by the Director or his or her representative unless the Director authorizes an unwitnessed test in advance. The permittee must provide notice in an electronic format 30 days prior to running the test and must provide the Director or their representative the opportunity to attend. The test must be documented using either a mechanical or digital device which records the value of

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the parameter of interest, or by a service company job record. A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

7. **Precautions to Prevent Well Blowouts** – At all times, the permittee shall maintain on the well a pressure which will prevent the return of the injection fluid to the surface. The well bore must be filled with a high specific gravity fluid during workovers to maintain a positive (downward) gradient and/or a plug shall be installed which can resist the pressure differential. A blowout preventer must be installed and kept in proper operational condition whenever the wellhead is removed to work on the well. The permittee shall follow procedures such as those below to assure that a backflow or blowout does not occur:

   (a) Limit the temperature and/or corrosivity of the injectate; and

   (b) Develop procedures necessary to assure that pressure imbalances do not occur.

8. **Circumstances Under Which Injection Must Cease** –

   Injection shall cease when any of the following circumstances arises:

   (a) Failure of the well to pass a mechanical integrity test;

   (b) A loss of mechanical integrity during operation;

   (c) The automatic alarm or automatic shut-off system is triggered;

   (d) A significant unexpected change in the annulus or injection pressure;

   (e) The Director determines that the well lacks mechanical integrity; or

   (f) The permittee is unable to maintain compliance with any permit condition or regulatory requirement and the Director determines that injection should cease.

9. **Approaches for Ceasing Injection** –

   (a) The permittee must shut-in the well by gradual reduction in the injection pressure as outlined in Attachment A of this permit; or

   (b) The permittee must immediately cease injection and shut-in the well as outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

## L. MECHANICAL INTEGRITY

1. **Standards** – Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the injection well must have and maintain mechanical integrity consistent with 40 CFR 146.89. To meet these requirements, mechanical integrity

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tests/demonstrations must be witnessed by the Director or an authorized representative of the Director unless prior approval has been granted by the Director to run an un-witnessed test. In order to conduct testing without an EPA representative, the following procedures must be followed.

(a) The permittee must submit prior notification in an electronic format within the time period specified in Section L(3) of this permit, including the information that no EPA representative is available, and receive permission from the Director to proceed;

(b) The test must be performed in accordance with the Testing and Monitoring Plan (Attachment C of this permit) and documented using either a mechanical or digital device that records the value of the parameter of interest;

(c) A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

2. **Mechanical Integrity Testing** – The permittee shall conduct a casing inspection log and mechanical integrity testing as follows:

(a) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate internal mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A pressure test with liquid or gas; and

(ii) A casing inspection log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(b) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A tracer survey such as an oxygen activation log; or

(ii) A temperature or noise log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(c) Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the permittee must continuously monitor injection pressure, injection rate, injection volumes; pressure on the annulus between tubing and long string casing; and annulus fluid volume as specified in 40 CFR 146.88(e), and 146.89(b).

(d) At least once per year, the permittee must perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.89(c):

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(i) An Administrator-approved tracer survey such as an oxygen-activation log; or

(ii) A temperature or noise log. The Director may require such tests whenever the well is worked over; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(e) After any workover that may compromise the internal mechanical integrity of the well, the well shall be tested by means of a pressure test approved by the Director and the well must pass the test to demonstrate mechanical integrity.

(f) Prior to plugging the well, the permittee shall demonstrate external mechanical integrity as described in the Injection Well Plugging Plan and that meets the requirements of 40 CFR 146.92(a).

(g) The Director may require the use of any other tests to demonstrate mechanical integrity other than those listed above with the written approval of the Administrator pursuant to requirements at 40 CFR 146.89(e).

3. **Prior Notice and Reporting** –

(a) The permittee shall notify the Director in an electronic format of his or her intent to demonstrate mechanical integrity in an electronic format at least 30 days prior to such demonstration. At the discretion of the Director a shorter time period may be allowed.

(b) Reports of mechanical integrity demonstrations which include logs must include an interpretation of results by a knowledgeable log analyst. The permittee shall report in an electronic format the results of a mechanical integrity demonstration within the time period specified in Section N(4) of this permit.

4. **Gauge and Meter Calibration** – The permittee shall calibrate all gauges used in mechanical integrity demonstrations and other required monitoring to an accuracy of not less than 0.5 percent of full scale, within one year prior to each required test. The date of the most recent calibration shall be noted on or near the gauge or meter. A copy of the calibration certificate shall be submitted to the Director in an electronic format with the report of the test. Pressure gauge resolution shall be no greater than five psi. Certain mechanical integrity and other testing may require greater accuracy and shall be identified in the procedure submitted to the Director prior to the test.

5. **Loss of Mechanical Integrity** –

(a) If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or fails to maintain mechanical integrity during operation, or that a loss of mechanical integrity as defined by 40 CFR 146.89(a)(1) or (2) is suspected during operation (such as a significant unexpected change in the annulus or injection pressure), the permittee must:

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(i) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

(ii) Take all steps reasonably necessary to determine whether there may have been a release of the injected carbon dioxide stream or formation fluids into any unauthorized zone. If there is evidence of USDW endangerment, implement the Emergency and Remedial Response Plan (Attachment F of this permit);

(iii) Follow the reporting requirements as directed in Section N of this permit;

(iv) Restore and demonstrate mechanical integrity to the satisfaction of the Director and receive written approval from the Director prior to resuming injection; and

(v) Notify the Director in an electronic format when injection can be expected to resume.

(b) If a shutdown (*i.e.,* down-hole or at the surface) is triggered, the permittee must immediately investigate and identify as expeditiously as possible the cause of the shutdown. If, upon such investigation, the well appears to be lacking mechanical integrity, or if monitoring required indicates that the well may be lacking mechanical integrity, the permittee must take the actions listed above in Section L(5)(a)(i) through (v).

(c) If the well loses mechanical integrity prior to the next scheduled test date, then the well must either be plugged or repaired and retested within 30 days of losing mechanical integrity. The permittee shall not resume injection until mechanical integrity is demonstrated and the Director gives written approval to recommence injection in cases where the well has lost mechanical integrity.

6. **Mechanical Integrity Testing on Request From Director** – The permittee shall demonstrate mechanical integrity at any time upon written notice from the Director.

## M. TESTING AND MONITORING

1. **Testing and Monitoring Plan** –

(a) The permittee shall maintain and comply with the approved Testing and Monitoring Plan (Attachment C of this permit) and with the requirements at 40 CFR 144.51(j), 146.88(e), and 146.90. The Testing and Monitoring Plan is an enforceable condition of this permit. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Procedures for all testing and monitoring under this permit must be submitted to the Director in an electronic format for approval at least 30 days prior to the test. In performing all testing and monitoring under this permit, the permittee must follow the procedures approved by the Director. If the permittee is unable to follow the EPA approved procedures, then, the permittee must contact the Director at least 30 days prior to testing to discuss options, if any are feasible. When the test report is submitted, a full explanation must be provided as to why any approved procedures were

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not followed. If the approved procedures were not followed, EPA may take an appropriate action, including but not limited to, requiring the permittee to re-run the test.

(b) The permittee must update the Testing and Monitoring Plan as required at 40 CFR 146.90 (j) to incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Testing and Monitoring Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of monitoring wells or newly permitted injection wells within the AoR; or when required by the Director.

(c) Following each update of the Testing and Monitoring Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the results. Once approved by the Director, the revised Testing and Monitoring Plan will become an enforceable condition of this permit.

2. **Carbon Dioxide Stream Analysis** – The permittee shall analyze the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics, as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(a).

3. **Continuous Monitoring** – The permittee shall maintain continuous monitoring devices and use them to monitor injection pressure, flow rate, volume, the pressure on the annulus between the tubing and the long string of casing, annulus fluid level, and temperature. This monitoring shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(b). The permittee shall maintain for EPA's inspection at the facility an appropriately scaled, continuous record of these monitoring results as well as original files of any digitally recorded information pertaining to these operations.

4. **Corrosion Monitoring** – The permittee shall perform corrosion monitoring of the well materials for loss of mass, thickness, cracking, pitting, and other signs of corrosion on a quarterly basis using the procedures described in the Testing and Monitoring Plan and in accordance with 40 CFR 146.90(c) to ensure that the well components meet the minimum standards for material strength and performance set forth in 40 CFR 146.86(b).

5. **Ground Water Quality Monitoring**– The permittee shall monitor ground water quality and geochemical changes above the confining zone(s) that may be a result of carbon dioxide movement through the confining zone(s) or additional identified zones. This monitoring shall be performed for the parameters identified in the Testing and Monitoring Plan at the locations and depths, and at frequencies described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(d).

6. **External Mechanical Integrity Testing** – The permittee shall demonstrate external mechanical integrity as described in the Testing and Monitoring Plan and Section L of this permit to meet the requirements of 40 CFR 146.90(e).

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7. **Pressure Fall-Off Test** – The permittee shall conduct a pressure fall-off test at least once every five years unless more frequent testing is required by the Director based on site-specific information. The test shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(f).

8. **Plume and Pressure Front Tracking** –The permittee shall track the extent of the carbon dioxide plume and the presence or absence of elevated pressure (e.g., the pressure front) as described in the Testing and Monitoring Plan.

   (a) The permittee shall use direct methods to track the position of the carbon dioxide plume and the pressure front in the injection zone as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(1).

   (b) The permittee shall use indirect methods to track the position of the carbon dioxide plume and pressure front as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(2).

9. **Surface Air and/or Soil Gas Monitoring** – The permittee shall conduct any surface air monitoring and/or soil gas monitoring required by the Director to detect movement of carbon dioxide that could endanger a USDW at the frequency and locations described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(h).

10. **Additional Monitoring** – If required by the Director as provided in 40 CFR 146.90(i), the permittee shall perform any additional monitoring determined to be necessary to support, upgrade, and improve computational modeling of the AoR evaluation required under 40 CFR 146.84(c) and to determine compliance with standards under 40 CFR 144.12 or 40 CFR 146.86(a). This monitoring shall be performed as described in a modification to the Testing and Monitoring Plan.

## N. REPORTING AND RECORDKEEPING

1. **Electronic Reporting** – Electronic reports, submittals, notifications and records made and maintained by the permittee under this permit must be in an electronic format approved by EPA. The permittee shall electronically submit all required reports to the Director at:

   https://epa.velo.pnnl.gov/operators

2. **Semi-Annual Reports** – The permittee shall submit semi-annual reports containing:

   (a) Any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;

   (b) Monthly average, maximum, and minimum values for injection pressure, flow rate and daily volume, temperature, and annular pressure;

   (c) A description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;

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(d) A description of any event which triggers the shut-off systems required in Section(K)(6) of this permit pursuant to 40 CFR 146.88(e), and the response taken;

(e) The monthly volume and/or mass of the carbon dioxide stream injected over the reporting period and the volume and/or mass injected cumulatively over the life of the project;

(f) Monthly annulus fluid volume added or produced; and

(g) Results of the continuous monitoring required in Section M(3) including:

(i) A tabulation of: (1) daily maximum injection pressure, (2) daily minimum annulus pressure, (3) daily minimum value of the difference between simultaneous measurements of annulus and injection pressure, (4) daily volume, (5) daily maximum flow rate, and (6) average annulus tank fluid level; and

(ii) Graph(s) of the continuous monitoring as required in Section M(3) of this permit, or of daily average values of these parameters. The injection pressure, injection volume and flow rate, annulus fluid level, annulus pressure, and temperature shall be submitted on one or more graphs, using contrasting symbols or colors, or in another manner approved by the Director; and

(h) Results of any additional monitoring identified in the Testing and Monitoring Plan and described in Section M of this permit.

3. **24-Hour Reporting** –

(a) The permittee shall report to the Director any permit noncompliance which may endanger human health or the environment and/or any events that require implementation of actions in the Emergency and Remedial Response Plan (Attachment F of this permit). Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such verbal reports shall include, but not be limited to the following information:

(i) Any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW, or any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW;

(ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;

(iii) Any triggering of the shut-off system required in Section (K)(6) of this permit (i.e., down-hole or at the surface);

(iv) Any failure to maintain mechanical integrity;

(v) Pursuant to compliance with the requirement at 40 CFR 146.90(h) for surface

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air/soil gas monitoring or other monitoring technologies, if required by the Director, any release of carbon dioxide to the atmosphere or biosphere; and

(vi) Actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

(b) A written submission shall be provided to the Director in an electronic format within five days of the time the permittee becomes aware of the circumstances described in Section(N)(3)(a) of this permit. The submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue as well as actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit); and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

4. **Reports on Well Tests and Workovers** – Report, within 30 days, the results of:

(a) Periodic tests of mechanical integrity;

(b) Any well workover, including stimulation;

(c) Any other test of the injection well conducted by the permittee if required by the Director; and

(d) Any test of any monitoring well required by this permit.

5. **Advance Notice Reporting** –

(a) **Well Tests** – The permittee shall give at least 30 days advance written notice to the Director in an electronic format of any planned workover, stimulation, or other well test.

(b) **Planned Changes** – The permittee shall give written notice to the Director in an electronic format, as soon as possible, of any planned physical alterations or additions to the permitted injection facility other than minor repair/replacement or maintenance activities. An analysis of any new injection fluid shall be submitted to the Director for review and written approval at least 30 days prior to injection; this approval may result in a permit modification.

(c) **Anticipated Noncompliance** – The permittee shall give at least 14 days advance written notice to the Director in an electronic format of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

6. **Additional Reports** –

(a) **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 in an electronic format by the permittee no

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later than 30 days following each schedule date.

(b) **Transfer of Permits** – This permit is not transferable to any person except after notice is sent to the Director in an electronic format at least 30 days prior to transfer and the requirements of 40 CFR 144.38(a) have been met. Pursuant to requirements at 40 CFR 144.38(a), the Director will require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

(c) **Other Noncompliance** – The permittee shall report in an electronic format all other instances of noncompliance not otherwise reported with the next monitoring report. The reports shall contain the information listed in Section N(3)(b) of this permit.

(d) **Other Information** – When the permittee becomes aware of failure to submit any relevant facts in the permit application or that incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such facts or corrected information in an electronic format within 10 days in accordance with 40 CFR 144.51(l)(8).

(e) **Report on Permit Review** – Within 30 days of receipt of this permit, the permittee shall certify to the Director in an electronic format that he or she has read and is personally familiar with all terms and conditions of this permit.

**7. Records** –

(a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit (including records from pre-injection, active injection, and post-injection phases) for a period of at least 10 years from collection.

(b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information (e.g. modeling inputs for AoR delineations and reevaluations, plan modifications) submitted under 40 CFR 144.27, 144.31, 144.39, and 144.41 for a period of at least 10 years after site closure.

(c) The permittee shall retain records concerning the nature and composition of all injected fluids until 10 years after site closure.

(d) The retention periods specified in Section N(7)(a) through (c) of this permit may be extended by request of the Director at any time. The permittee shall continue to retain records after the retention period specified in Section N(7)(a) through (c) of this permit or any requested extension thereof expires unless the permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

(e) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

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(ii) The name(s) of the individual(s) who performed the sampling or measurements;

(iii) A precise description of both sampling methodology and the handling of samples;

(iv) The date(s) analyses were performed;

(v) The name(s) of the individual(s) who performed the analyses;

(vi) The analytical techniques or methods used; and

(vii) The results of such analyses.

## O. WELL PLUGGING, POST-INJECTION SITE CARE, AND SITE CLOSURE

1. **Well Plugging Plan** – The permittee shall maintain and comply with the approved Well Plugging Plan (Attachment D of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.92.

2. **Revision of Well Plugging Plan** – If the permittee finds it necessary to change the Well Plugging Plan (Attachment D of this permit), a revised plan shall be submitted in an electronic format to the Director for written approval. Any amendments to the Well Plugging Plan must be approved by the Director and must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41.

3. **Notice of Plugging and Abandonment** – The permittee must notify the Director in writing in an electronic format pursuant to 40 CFR 146.92(c), at least 60 days before plugging, conversion or abandonment of a well. At the discretion of the Director, a shorter notice period may be allowed.

4. **Plugging and Abandonment Approval and Report** –

(a) The permittee must receive written approval of the Director before plugging the well and shall plug and abandon the well in accordance with 40 CFR 146.92, as provided in the Well Plugging Plan (Attachment D of this permit).

(b) Within 60 days after plugging, the permittee must submit in an electronic format a plugging report to the Director. The report must be certified as accurate by the permittee and by the person who performed the plugging operation (if other than the permittee.) The permittee shall retain the well plugging report in an electronic format for 10 years following site closure. The report must include:

(i) A statement that the well was plugged in accordance with the Well Plugging Plan previously approved by the Director (Attachment D of this permit); or

(ii) If the actual plugging differed from the approved plan, a statement describing the actual plugging and an updated plan specifying the differences from the plan previously submitted and explaining why the Director should approve such

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deviation. If the Director determines that a deviation from the plan incorporated in this permit may endanger underground sources of drinking water, the permittee shall replug the well as required by the Director.

5. **Temporary Abandonment** – If the permittee ceases injection into the well for more than 24 consecutive months, the well is considered to be in a temporarily abandoned status, and the permittee shall plug and abandon the well in accordance with the approved Well Plugging Plan, 40 CFR 144.52 (a)(6), and 40 CFR 146.92, or make a demonstration of non-endangerment of this well while it is in temporary abandonment status. During any periods of temporary abandonment or disuse, the well will be tested to ensure that it maintains mechanical integrity, according to the requirements and frequency specified in Section L(2) of this permit. The permittee shall continue to comply with the conditions of this permit, including all monitoring and reporting requirements according to the frequencies outlined in the permit.

6. **Post-Injection Site Care and Site Closure Plan** –

   (a) The permittee shall maintain and comply with the Post-Injection Site Care and Site Closure Plan, found as Attachment E of this permit, which meets the requirements of 40 CFR 146.93 and is an enforceable condition of this permit. The permittee shall:

      (i) Upon cessation of injection, either submit in an electronic format for the Director's approval an amended Post-Injection Site Care and Site Closure Plan or demonstrate through monitoring data and modeling results that no amendment to the plan is needed.

      (ii) At any time during the life of the project, the permittee may modify and resubmit in an electronic format the Post-Injection Site Care and Site Closure Plan for the Director's approval. The permittee may, as part of such modifications to the Plan, request a modification to the post-injection site care timeframe that includes documentation of the information at 40 CFR 146.93(c)(1).

   (b) The permittee shall monitor the site following the cessation of injection to show the position of the carbon dioxide plume and pressure front and demonstrate that USDWs are not being endangered, as specified in the Post-Injection Site Care and Site Closure Plan and in 40 CFR 146.90, and 40 CFR 146.93, including:

      (i) Ground water quality monitoring;

      (ii) Tracking the position of the carbon dioxide plume and pressure front including direct pressure monitoring and geochemical plume monitoring and the use of indirect methods;

      (iii) Any other required monitoring, e.g., soil gas and/or surface air monitoring described in the Post-Injection Site Care and Site Closure Plan;

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(iv) The permittee shall submit in an electronic format the results of all monitoring performed according to the schedule identified in the Post-Injection Site Care and Site Closure Plan; and

(v) The permittee shall continue to conduct post-injection site monitoring for at least 50 years or for the duration of any alternative timeframe approved pursuant to 40 CFR 146.93(c) and the Post-Injection Site Care and Site Closure Plan.

(c ) The post-injection monitoring must continue until the project no longer poses an endangerment to USDWs and the demonstration pursuant to 40 CFR 146.93(b)(2) and as described in Section O(6)(d) of this permit is approved by the Director.

(d) Prior to authorization for site closure, the permittee shall submit to the Director for review and approval, in an electronic format, a demonstration, based on information collected pursuant to Section O(6)(b) of this permit, that the carbon dioxide plume and the associated pressure front do not pose an endangerment to USDWs and that no additional monitoring is needed to ensure that the project does not pose an endangerment to USDWs, as required under 40 CFR 146.93(b)(3). The Director reserves the right to amend the post-injection site monitoring requirements (including extend the monitoring period) if there is a concern that USDWs are being endangered.

(e) The permittee shall notify the Director in an electronic format at least 120 days before site closure. At this time, if any changes to the approved Post-Injection Site Care and Site Closure Plan in Attachment E of this permit are proposed, the permittee shall submit a revised plan.

(f) After the Director has authorized site closure, the permittee shall plug all monitoring wells as specified in Attachment E of this permit – the Post-Injection Site Care and Site Closure Plan – in a manner which will not allow movement of injection or formation fluids that endangers a USDW. The permittee shall also restore the site to its pre-injection condition.

(g) The permittee shall submit a site closure report in an electronic format to the Director within 90 days of site closure. The report must include the information specified at 40 CFR 146.93(f).

(h) The permittee shall record a notation on the deed to the facility property or any other document that is normally examined during a title search that will in perpetuity provide any potential purchaser of the property the information listed at 40 CFR 146.93(g).

(i) The permittee shall retain for 10 years following site closure an electronic copy of the site closure report , records collected during the post-injection site care period, and any other records required under 40 CFR 146.91(f)(4). The permittee shall deliver the records in an electronic format to the Director at the conclusion of the retention period.

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## P. EMERGENCY AND REMEDIAL RESPONSE

1. The Emergency and Remedial Response Plan describes actions the permittee must take to address movement of the injection or formation fluids that may cause an endangerment to a USDW during construction, operation, and post-injection site care periods. The permittee shall maintain and comply with the approved Emergency and Remedial Response Plan (Attachment F of this permit), which is an enforceable condition of this permit, and with 40 CFR 146.94.

2. If the permittee obtains evidence that the injected carbon dioxide and/or associated pressure front may cause endangerment to a USDW, the permittee must:

   (a) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

   (b) Take all steps reasonably necessary to identify and characterize any release;

   (c) Notify the Director within 24 hours; and

   (d) Implement the Emergency and Remedial Response Plan (Attachment F of this permit) approved by the Director.

3. At the frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee shall review and update the Emergency and Remedial Response Plan as required at 40 CFR 146.94(d) or demonstrate to the Director that no update is needed. The permittee shall also incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Emergency and Remedial Response Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of injection wells; or when required by the Director.

4. Following each update of the Emergency and Remedial Response Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and confirmation of the results. Once approved by the Director, the revised Emergency and Remedial Response Plan will become an enforceable condition of this permit.

## Q. COMMENCING INJECTION

The permittee may not commence injection until:

1. Results of the formation testing and logging program as specified in Section J of this permit and in 40 CFR 146.87 are submitted to the Director in an electronic format and subsequently reviewed and approved by the Director;

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2. Mechanical integrity of the well has been demonstrated in accordance with 40 CFR 146.89(a)(1) and (2), and in accordance with Section L(1) through (3) of this permit;

3. The completion of corrective action required by the Area of Review and Corrective Action Plan found in Attachment B of this permit in accordance with 40 CFR 146.84;

4. All requirements at 40 CFR 146.82(c) have been met, including but not limited to reviewing and updating of the Area of Review and Corrective Action, Testing and Monitoring, Well Plugging, Post-Injection Site Care and Site Closure, and Emergency and Remedial Response plans to incorporate final site characterization information, final delineation of the AoR, and the results of pre-injection testing, and information has been submitted in an electronic format, reviewed and approved by the Director;

5. Construction is complete and the permittee has submitted to the Director in an electronic format a notice that completed construction is in compliance with 40 CFR 146.86 and Section I of this permit;

6. The Director has inspected or otherwise reviewed the injection well and all submitted information and finds it is in compliance with the conditions of the permit;

7. The Director has approved demonstration of the alarm system and shut-off system under Section K.6 of this permit; and.

8. The Director has given written authorization to commence injection.

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## ATTACHMENTS

These attachments include, but are not limited to, permit conditions and plans concerning operating procedures, monitoring and reporting, as required by 40 CFR Parts 144 and 146. The permittee shall comply with these conditions and adhere to these plans as approved by the Director, as follows:

**A. SUMMARY OF OPERATING REQUIREMENTS**

**B. AREA OF REVIEW AND CORRECTIVE ACTION PLAN**

**C. TESTING AND MONITORING PLAN**

**D. WELL PLUGGING PLAN**

**E. POST-INJECTION SITE CARE AND SITE CLOSURE PLAN**

**F. EMERGENCY AND REMEDIAL RESPONSE PLAN**

**G. CONSTRUCTION DETAILS**

**H. FINANCIAL ASSURANCE DEMONSTRATION**

**I. STIMULATION PROGRAM**

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# Exhibit A-2

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U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDERGROUND INJECTION CONTROL PERMIT

CLASS VI

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BOULEVARD
CHICAGO, IL 60604-3590



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND INJECTION CONTROL PERMIT: CLASS VI

**Permit Number: IL-137-6A-0002**
**Facility Name: FutureGen Industrial Alliance, Inc.**

Pursuant to the Safe Drinking Water Act and Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 124, 144, 146, and 147,

**FutureGen Industrial Alliance, Inc. of Jacksonville, Illinois**

hereinafter, the permittee, is hereby authorized to construct and operate a Class VI injection well located in the State of Illinois, Morgan County, Township 16N, Range 9W, Section 26, latitude 39.80097°N and longitude 90.07491°W, for injection of the carbon dioxide ($CO_2$) stream generated by an oxy-combustion power plant in Meredosia, Illinois and as characterized in the permit application and the administrative record as a liquid, supercritical fluid, or gas into the Mount Simon and Eau Claire Formations at depths between 3785 feet and 4432 feet below ground surface upon the express condition that the permittee meet the restrictions set forth herein. The designated confining zone for this injection well is identified as the upper part of the Eau Claire Formation formed by the upper part of the Lombard Member and the Proviso Member. Injection shall not commence until the operator has received written authorization from the Director of the Water Division of EPA Region 5, in accordance with Section Q of this permit.

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit is effective. The following attachments are incorporated into this permit as enforceable conditions: A, B, C, D, E, F, G, H and I.

This permit shall become effective on OCT 14 2014, and shall remain in full force and effect during the operating life of the facility and the post-injection site care period until site closure is authorized and completed, unless this permit is revoked and reissued, terminated, or modified pursuant to 40 CFR 144.39, 144.40, or 144.41. This permit shall also remain in effect upon delegation of primary enforcement responsibility to the State of Illinois until such time as the State issues its own permit to the permittee or the State chooses to adopt this permit as a State permit. The permit will expire in one year if the permittee fails to commence construction, unless a written request in electronic format for an extension of this one-year period has been approved by the Director. The permittee may request an expiration date sooner than the one-year period, provided no construction on the well has commenced. This permit will be reviewed at least every five years from the effective date specified above.

Signed and Dated: August 29, 2014

Tinka G. Hyde
Director, Water Division

## PERMIT CONDITIONS

### A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. Notwithstanding any other provisions of this permit, the permittee authorized by this permit shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection, annulus or formation fluids into underground sources of drinking water (USDWs) or any unauthorized zones. The objective of this permit is to prevent the movement of fluids into or between USDWs or into any unauthorized zones consistent with the requirements at 40 CFR 146.86(a). Any underground injection activity not specifically authorized in this permit is prohibited. For purposes of enforcement, compliance with this permit during its term constitutes compliance with Part C of the Safe Drinking Water Act (SDWA). Such compliance does not constitute a defense to any action brought under Section 1431 of the SDWA or any other common or statutory law other than Part C of the SDWA. 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 State or local laws or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

### B. PERMIT ACTIONS

1. **Modification, Revocation and Reissuance, and Termination** – The Director of the Water Division of Region 5 of the U. S. Environmental Protection Agency (EPA), hereinafter, the Director, may, for cause or upon request from any interested person, including the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR 124.5, 144.12, 146.86(a), 144.39, and 144.40. The permit is also subject to minor modifications for cause as specified in 40 CFR 144.41. The filing of a request 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.

2. **Minor Modifications** – Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for minor changes in the permitted activity as listed in 40 CFR 144.41. Any permit modification not processed as a minor modification under 40 CFR 144.41 must be made for cause, and with part 124 draft permit and public notice as required in 40 CFR 144.39.

3. **Transfer of Permits** – This permit is not transferable to any person except in accordance with 40 CFR 144.38(a) and Section N(6)(b) of this permit.

### C. SEVERABILITY

The provisions of this 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 shall not be affected thereby.

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## D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 (Public Information) and 40 CFR 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential business information by the submitter. Any such claim must be asserted at the time of submission by clearly identifying each page with the words "confidential business information" on every page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2. Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee; and

2. Information which deals with the existence, absence or level of contaminants in drinking water.

## E. DEFINITION

All terms used in this permit shall have the meaning set forth in the SDWA and Underground Injection Control regulations specified at 40 CFR parts 124, 144, 146, and 147. Unless specifically stated otherwise, all references to “days” in this permit should be interpreted as calendar days.

## F. DUTIES AND REQUIREMENTS

1. **Duty to Comply** – The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.

2. **Duty to Reapply** – If the permittee wishes to continue an activity regulated by this permit after the expiration or termination of this permit, the permittee must apply for and obtain a new permit.

3. **Penalties for Violations of Permit Conditions** – Any person who violates a permit requirement is subject to civil penalties and other enforcement action under the SDWA. Any person who willfully violates permit conditions may be subject to criminal prosecution under the SDWA and other applicable statutes and regulations.

4. **Need to Halt or Reduce Activity Not a Defense** – It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. **Duty to Mitigate** – The permittee shall take all timely and reasonable steps necessary to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. **Proper Operation and Maintenance** – The permittee shall at all times properly operate and

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maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, among other things, 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 this permit.

7. **Duty to Provide Information** – The permittee shall furnish to the Director in an electronic format, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit or the UIC regulations. The permittee shall also furnish to the Director, upon request within a time specified, electronic copies of records required to be kept by this permit.

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

   (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where electronic or non-electronic records are kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any electronic or non-electronic records that are kept under the conditions of this permit;

   (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   (d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location, including facilities, equipment or operations regulated or required under this permit.

9. **Signatory Requirements** – All reports or other information, required to be submitted by this permit or requested by the Director shall be signed and certified in accordance with 40 CFR 144.32.

## G. AREA OF REVIEW AND CORRECTIVE ACTION

1. The Area of Review (AoR) is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and is based on available site characterization, monitoring, and operational data. The permittee shall maintain and comply with the approved Area of Review and Corrective Action Plan (Attachment B of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.84.

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2. At the fixed frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee must reevaluate the area of review and perform corrective action in the manner specified in 40 CFR 146.84 and update the Area of Review and Corrective Action Plan or demonstrate to the Director that no update is needed.

3. Following each AoR reevaluation or a demonstration that no evaluation is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the AoR results. Once approved by the Director, the revised Area of Review and Corrective Action Plan will become an enforceable condition of this permit.

## H. FINANCIAL RESPONSIBILITY

1. **Financial Responsibility** – The permittee shall maintain financial responsibility and resources to meet the requirements of 40 CFR 146.85 and the conditions of this permit. Financial responsibility shall be maintained through all phases of the project. The approved financial assurance mechanisms are found in Attachment H and in the administrative record of this permit.

   The financial instrument(s) must be sufficient to cover the cost of:

   (a) Corrective action (that meets the requirements of 40 CFR 146.84);

   (b) Injection well plugging (that meets the requirements of 40 CFR 146.92);

   (c) Post injection site care and site closure (that meets the requirements of 40 CFR 146.93);

   (d) Emergency and remedial response (that meets the requirements of 40 CFR 146.94).

2. **Cost Estimate Updates** – During the active life of the geologic sequestration project, the permittee must adjust the cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) and provide this adjustment to the Director in an electronic format. The permittee must also provide to the Director written updates in an electronic format of adjustments to the cost estimate within 60 days of any amendments to the Project Plans included as Attachments B – F of this permit, which address items (a) through (d) in Section H(1) of this permit.

3. **Notification** –

   (a) Whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the permittee, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial responsibility instruments to cover the increase. Whenever the current cost estimate decreases, the face amount of the financial assurance instrument may be reduced to the amount of the current cost estimate only after the permittee has received written approval from the Director.

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(b) The permittee must notify the Director by certified mail and in an electronic format of adverse financial conditions such as bankruptcy that may affect the ability to carry out injection well plugging, post-injection site care and site closure, and any applicable ongoing actions under Corrective Action and/or Emergency and Remedial Response.

(i) In the event that the permittee or the third party provider of a financial responsibility instrument is going through a bankruptcy, the permittee must notify the Director by certified mail and in an electronic format of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the permittee as debtor, within 10 days after commencement of the proceeding.

(ii) A guarantor of a corporate guarantee must make such a notification if he or she is named as debtor, as required under the terms of the guarantee.

(iii) A permittee who fulfills the requirements of paragraph (a) of this section by obtaining a trust fund, surety bond, letter of credit, escrow account, or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the trust fund, surety bond, letter of credit, escrow account, or insurance policy.

4. **Establishing Other Coverage** – The permittee must establish other financial assurance or liability coverage acceptable to the Director, within 60 days of the occurrence of the events in Section H(2) or H(3) of this permit.

## I. CONSTRUCTION

1. **Siting** – The permittee has demonstrated to the satisfaction of the Director that the well is in an area with suitable geology in accordance with the requirements at 40 CFR 146.83.

2. **Casing and Cementing** – Casing and cement or other materials used in the construction of the well must have sufficient structural strength for the life of the geologic sequestration project. All well materials must be compatible with all fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The casing and cementing program must prevent the movement of fluids into or between USDWs for the expected life of the well in accordance with 40 CFR 146.86. The casing and cement used in the construction of this well are shown in Attachment G of this permit and in the administrative record for this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

3. **Tubing and Packer Specifications** – Tubing and packer materials used in the construction of the well must be compatible with fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The permittee shall inject only through tubing with a packer set within the long string casing at a point within or below the confining zone immediately above the injection

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zone. The tubing and packer used in the well are represented in engineering drawings contained in Attachment G of this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

## J. PRE-INJECTION TESTING

1. Prior to the Director authorizing injection, the permittee shall perform all pre-injection logging, sampling, and testing specified at 40 CFR 146.87. This testing shall include:

   (a) Logs, surveys and tests to determine or verify the depth, thickness, porosity, permeability, lithology, and formation fluid salinity in all relevant geologic formations. These tests shall include:

      (i) Deviation checks that meet the requirements of 40 CFR 146.87(a)(1);

      (ii) Logs and tests before and upon installation of the surface casing that meet the requirements of 40 CFR 146.87(a)(2);

      (iii) Logs and tests before and upon installation of the long-string casing that meet the requirements of 40 CFR 146.87(a)(3);

      (iv) Tests to demonstrate internal and external mechanical integrity that meet the requirements of 40 CFR 146.87(a)(4); and

      (v) Any alternative methods that are required by and/or approved by the Director pursuant to 40 CFR 146.87(a)(5).

   (b) Whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone that meet the requirements of 40 CFR 146.87(b);

   (c) Records of the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone that meet the requirements of 40 CFR 146.87(c);

   (d) Tests as necessary to provide information about the injection and confining zones to allow determination or calculation of the fracture pressure and the physical and chemical characteristics of the injection and confining zones and the formation fluids in the injection zone that meet the requirements of 40 CFR 146.87(d); and

   (e) Tests to verify hydrogeologic characteristics of the injection zone that meet the requirements of 40 CFR 146.87(e), including:

      (i) A pressure fall-off test and

      (ii) A pumping test or injectivity tests.

2. The permittee shall submit to the Director for approval in an electronic format a schedule for logging and testing activities 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test. The permittee must provide

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the Director or their representative with the opportunity to witness all logging, sampling, and testing required under this Section.

## K. OPERATIONS

1. **Injection Pressure Limitation** – Except during stimulation, the permittee must ensure that injection pressure does not exceed 90 percent of the fracture pressure of the injection zone(s) so as to ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone(s). In no case shall injection pressure initiate fractures or propagate existing fractures in the confining zone or cause the movement of injection or formation fluids into a USDW. The maximum injection pressure limit is listed in Attachment A.

2. **Stimulation Program** – Pursuant to requirements at 40 CFR 146.82(a)(9), all stimulation programs proposed by the permittee must be approved by the Director as a permit modification and incorporated into Attachment I of this permit.

3. **Additional Injection Limitation** – No injectate other than that identified on page 1 of this permit shall be injected except fluids used for stimulation, rework, and well tests as approved by the Director.

4. **Annulus Fluid** – The permittee must fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the Director.

5. **Annulus/Tubing Pressure Differential** – Except during workovers or times of annulus maintenance, the permittee must maintain on the annulus a pressure that exceeds the operating injection pressure as specified in Attachment A of this permit, unless the Director determines that such requirement might harm the integrity of the well or endanger USDWs.

6. **Automatic Alarms and Automatic Shut-off System** –

   (a) The permittee must:

      (i) Install, continuously operate, and maintain an automatic alarm and an automatic shut-off system or, at the discretion of the Director, down-hole shut-off systems, or other mechanical devices that provide equivalent protection; and

      (ii) Successfully demonstrate the functionality of the alarm system and shut-off system prior to the Director authorizing injection, and at a minimum of once every twelfth month after the last approved demonstration.

   (b) Testing under this Section must involve subjecting the system to simulated failure conditions and must be witnessed by the Director or his or her representative unless the Director authorizes an unwitnessed test in advance. The permittee must provide notice in an electronic format 30 days prior to running the test and must provide the Director or their representative the opportunity to attend. The test must be documented using either a mechanical or digital device which records the value of

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the parameter of interest, or by a service company job record. A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

7. **Precautions to Prevent Well Blowouts** – At all times, the permittee shall maintain on the well a pressure which will prevent the return of the injection fluid to the surface. The well bore must be filled with a high specific gravity fluid during workovers to maintain a positive (downward) gradient and/or a plug shall be installed which can resist the pressure differential. A blowout preventer must be installed and kept in proper operational condition whenever the wellhead is removed to work on the well. The permittee shall follow procedures such as those below to assure that a backflow or blowout does not occur:

   (a) Limit the temperature and/or corrosivity of the injectate; and

   (b) Develop procedures necessary to assure that pressure imbalances do not occur.

8. **Circumstances Under Which Injection Must Cease** –

   Injection shall cease when any of the following circumstances arises:

   (a) Failure of the well to pass a mechanical integrity test;

   (b) A loss of mechanical integrity during operation;

   (c) The automatic alarm or automatic shut-off system is triggered;

   (d) A significant unexpected change in the annulus or injection pressure;

   (e) The Director determines that the well lacks mechanical integrity; or

   (f) The permittee is unable to maintain compliance with any permit condition or regulatory requirement and the Director determines that injection should cease.

9. **Approaches for Ceasing Injection** –

   (a) The permittee must shut-in the well by gradual reduction in the injection pressure as outlined in Attachment A of this permit; or

   (b) The permittee must immediately cease injection and shut-in the well as outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

## L. MECHANICAL INTEGRITY

1. **Standards** – Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the injection well must have and maintain mechanical integrity consistent with 40 CFR 146.89. To meet these requirements, mechanical integrity

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tests/demonstrations must be witnessed by the Director or an authorized representative of the Director unless prior approval has been granted by the Director to run an un-witnessed test. In order to conduct testing without an EPA representative, the following procedures must be followed.

(a) The permittee must submit prior notification in an electronic format within the time period specified in Section L(3) of this permit, including the information that no EPA representative is available, and receive permission from the Director to proceed;

(b) The test must be performed in accordance with the Testing and Monitoring Plan (Attachment C of this permit) and documented using either a mechanical or digital device that records the value of the parameter of interest;

(c) A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

2. **Mechanical Integrity Testing** – The permittee shall conduct a casing inspection log and mechanical integrity testing as follows:

(a) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate internal mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A pressure test with liquid or gas; and

(ii) A casing inspection log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(b) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A tracer survey such as an oxygen activation log; or

(ii) A temperature or noise log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(c) Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the permittee must continuously monitor injection pressure, injection rate, injection volumes; pressure on the annulus between tubing and long string casing; and annulus fluid volume as specified in 40 CFR 146.88(e), and 146.89(b).

(d) At least once per year, the permittee must perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.89(c):

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(i) An Administrator-approved tracer survey such as an oxygen-activation log; or

(ii) A temperature or noise log. The Director may require such tests whenever the well is worked over; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(e) After any workover that may compromise the internal mechanical integrity of the well, the well shall be tested by means of a pressure test approved by the Director and the well must pass the test to demonstrate mechanical integrity.

(f) Prior to plugging the well, the permittee shall demonstrate external mechanical integrity as described in the Injection Well Plugging Plan and that meets the requirements of 40 CFR 146.92(a).

(g) The Director may require the use of any other tests to demonstrate mechanical integrity other than those listed above with the written approval of the Administrator pursuant to requirements at 40 CFR 146.89(e).

3. **Prior Notice and Reporting** –

(a) The permittee shall notify the Director in an electronic format of his or her intent to demonstrate mechanical integrity in an electronic format at least 30 days prior to such demonstration. At the discretion of the Director a shorter time period may be allowed.

(b) Reports of mechanical integrity demonstrations which include logs must include an interpretation of results by a knowledgeable log analyst. The permittee shall report in an electronic format the results of a mechanical integrity demonstration within the time period specified in Section N(4) of this permit.

4. **Gauge and Meter Calibration** – The permittee shall calibrate all gauges used in mechanical integrity demonstrations and other required monitoring to an accuracy of not less than 0.5 percent of full scale, within one year prior to each required test. The date of the most recent calibration shall be noted on or near the gauge or meter. A copy of the calibration certificate shall be submitted to the Director in an electronic format with the report of the test. Pressure gauge resolution shall be no greater than five psi. Certain mechanical integrity and other testing may require greater accuracy and shall be identified in the procedure submitted to the Director prior to the test.

5. **Loss of Mechanical Integrity** –

(a) If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or fails to maintain mechanical integrity during operation, or that a loss of mechanical integrity as defined by 40 CFR 146.89(a)(1) or (2) is suspected during operation (such as a significant unexpected change in the annulus or injection pressure), the permittee must:

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(i) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

(ii) Take all steps reasonably necessary to determine whether there may have been a release of the injected carbon dioxide stream or formation fluids into any unauthorized zone. If there is evidence of USDW endangerment, implement the Emergency and Remedial Response Plan (Attachment F of this permit);

(iii) Follow the reporting requirements as directed in Section N of this permit;

(iv) Restore and demonstrate mechanical integrity to the satisfaction of the Director and receive written approval from the Director prior to resuming injection; and

(v) Notify the Director in an electronic format when injection can be expected to resume.

(b) If a shutdown (*i.e.,* down-hole or at the surface) is triggered, the permittee must immediately investigate and identify as expeditiously as possible the cause of the shutdown. If, upon such investigation, the well appears to be lacking mechanical integrity, or if monitoring required indicates that the well may be lacking mechanical integrity, the permittee must take the actions listed above in Section L(5)(a)(i) through (v).

(c) If the well loses mechanical integrity prior to the next scheduled test date, then the well must either be plugged or repaired and retested within 30 days of losing mechanical integrity. The permittee shall not resume injection until mechanical integrity is demonstrated and the Director gives written approval to recommence injection in cases where the well has lost mechanical integrity.

6. **Mechanical Integrity Testing on Request From Director** – The permittee shall demonstrate mechanical integrity at any time upon written notice from the Director.

## M. TESTING AND MONITORING

1. **Testing and Monitoring Plan** –

(a) The permittee shall maintain and comply with the approved Testing and Monitoring Plan (Attachment C of this permit) and with the requirements at 40 CFR 144.51(j), 146.88(e), and 146.90. The Testing and Monitoring Plan is an enforceable condition of this permit. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Procedures for all testing and monitoring under this permit must be submitted to the Director in an electronic format for approval at least 30 days prior to the test. In performing all testing and monitoring under this permit, the permittee must follow the procedures approved by the Director. If the permittee is unable to follow the EPA approved procedures, then, the permittee must contact the Director at least 30 days prior to testing to discuss options, if any are feasible. When the test report is submitted, a full explanation must be provided as to why any approved procedures were

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not followed. If the approved procedures were not followed, EPA may take an appropriate action, including but not limited to, requiring the permittee to re-run the test.

(b) The permittee must update the Testing and Monitoring Plan as required at 40 CFR 146.90 (j) to incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Testing and Monitoring Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of monitoring wells or newly permitted injection wells within the AoR; or when required by the Director.

(c) Following each update of the Testing and Monitoring Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the results. Once approved by the Director, the revised Testing and Monitoring Plan will become an enforceable condition of this permit.

2. **Carbon Dioxide Stream Analysis** – The permittee shall analyze the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics, as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(a).

3. **Continuous Monitoring** – The permittee shall maintain continuous monitoring devices and use them to monitor injection pressure, flow rate, volume, the pressure on the annulus between the tubing and the long string of casing, annulus fluid level, and temperature. This monitoring shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(b). The permittee shall maintain for EPA's inspection at the facility an appropriately scaled, continuous record of these monitoring results as well as original files of any digitally recorded information pertaining to these operations.

4. **Corrosion Monitoring** – The permittee shall perform corrosion monitoring of the well materials for loss of mass, thickness, cracking, pitting, and other signs of corrosion on a quarterly basis using the procedures described in the Testing and Monitoring Plan and in accordance with 40 CFR 146.90(c) to ensure that the well components meet the minimum standards for material strength and performance set forth in 40 CFR 146.86(b).

5. **Ground Water Quality Monitoring**– The permittee shall monitor ground water quality and geochemical changes above the confining zone(s) that may be a result of carbon dioxide movement through the confining zone(s) or additional identified zones. This monitoring shall be performed for the parameters identified in the Testing and Monitoring Plan at the locations and depths, and at frequencies described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(d).

6. **External Mechanical Integrity Testing** – The permittee shall demonstrate external mechanical integrity as described in the Testing and Monitoring Plan and Section L of this permit to meet the requirements of 40 CFR 146.90(e).

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7. **Pressure Fall-Off Test** – The permittee shall conduct a pressure fall-off test at least once every five years unless more frequent testing is required by the Director based on site-specific information. The test shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(f).

8. **Plume and Pressure Front Tracking** –The permittee shall track the extent of the carbon dioxide plume and the presence or absence of elevated pressure (e.g., the pressure front) as described in the Testing and Monitoring Plan.

   (a) The permittee shall use direct methods to track the position of the carbon dioxide plume and the pressure front in the injection zone as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(1).

   (b) The permittee shall use indirect methods to track the position of the carbon dioxide plume and pressure front as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(2).

9. **Surface Air and/or Soil Gas Monitoring** – The permittee shall conduct any surface air monitoring and/or soil gas monitoring required by the Director to detect movement of carbon dioxide that could endanger a USDW at the frequency and locations described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(h).

10. **Additional Monitoring** – If required by the Director as provided in 40 CFR 146.90(i), the permittee shall perform any additional monitoring determined to be necessary to support, upgrade, and improve computational modeling of the AoR evaluation required under 40 CFR 146.84(c) and to determine compliance with standards under 40 CFR 144.12 or 40 CFR 146.86(a). This monitoring shall be performed as described in a modification to the Testing and Monitoring Plan.

## N. REPORTING AND RECORDKEEPING

1. **Electronic Reporting** – Electronic reports, submittals, notifications and records made and maintained by the permittee under this permit must be in an electronic format approved by EPA. The permittee shall electronically submit all required reports to the Director at:

   https://epa.velo.pnnl.gov/operators

2. **Semi-Annual Reports** – The permittee shall submit semi-annual reports containing:

   (a) Any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;

   (b) Monthly average, maximum, and minimum values for injection pressure, flow rate and daily volume, temperature, and annular pressure;

   (c) A description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;

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(d) A description of any event which triggers the shut-off systems required in Section(K)(6) of this permit pursuant to 40 CFR 146.88(e), and the response taken;

(e) The monthly volume and/or mass of the carbon dioxide stream injected over the reporting period and the volume and/or mass injected cumulatively over the life of the project;

(f) Monthly annulus fluid volume added or produced; and

(g) Results of the continuous monitoring required in Section M(3) including:

(i) A tabulation of: (1) daily maximum injection pressure, (2) daily minimum annulus pressure, (3) daily minimum value of the difference between simultaneous measurements of annulus and injection pressure, (4) daily volume, (5) daily maximum flow rate, and (6) average annulus tank fluid level; and

(ii) Graph(s) of the continuous monitoring as required in Section M(3) of this permit, or of daily average values of these parameters. The injection pressure, injection volume and flow rate, annulus fluid level, annulus pressure, and temperature shall be submitted on one or more graphs, using contrasting symbols or colors, or in another manner approved by the Director; and

(h) Results of any additional monitoring identified in the Testing and Monitoring Plan and described in Section M of this permit.

3. **24-Hour Reporting** –

(a) The permittee shall report to the Director any permit noncompliance which may endanger human health or the environment and/or any events that require implementation of actions in the Emergency and Remedial Response Plan (Attachment F of this permit). Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such verbal reports shall include, but not be limited to the following information:

(i) Any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW, or any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW;

(ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;

(iii) Any triggering of the shut-off system required in Section (K)(6) of this permit (i.e., down-hole or at the surface);

(iv) Any failure to maintain mechanical integrity;

(v) Pursuant to compliance with the requirement at 40 CFR 146.90(h) for surface

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air/soil gas monitoring or other monitoring technologies, if required by the Director, any release of carbon dioxide to the atmosphere or biosphere; and

(vi) Actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

(b) A written submission shall be provided to the Director in an electronic format within five days of the time the permittee becomes aware of the circumstances described in Section(N)(3)(a) of this permit. The submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue as well as actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit); and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

4. **Reports on Well Tests and Workovers** – Report, within 30 days, the results of:

(a) Periodic tests of mechanical integrity;

(b) Any well workover, including stimulation;

(c) Any other test of the injection well conducted by the permittee if required by the Director; and

(d) Any test of any monitoring well required by this permit.

5. **Advance Notice Reporting** –

(a) **Well Tests** – The permittee shall give at least 30 days advance written notice to the Director in an electronic format of any planned workover, stimulation, or other well test.

(b) **Planned Changes** – The permittee shall give written notice to the Director in an electronic format, as soon as possible, of any planned physical alterations or additions to the permitted injection facility other than minor repair/replacement or maintenance activities. An analysis of any new injection fluid shall be submitted to the Director for review and written approval at least 30 days prior to injection; this approval may result in a permit modification.

(c) **Anticipated Noncompliance** – The permittee shall give at least 14 days advance written notice to the Director in an electronic format of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

6. **Additional Reports** –

(a) **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 in an electronic format by the permittee no

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later than 30 days following each schedule date.

(b) **Transfer of Permits** – This permit is not transferable to any person except after notice is sent to the Director in an electronic format at least 30 days prior to transfer and the requirements of 40 CFR 144.38(a) have been met. Pursuant to requirements at 40 CFR 144.38(a), the Director will require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

(c) **Other Noncompliance** – The permittee shall report in an electronic format all other instances of noncompliance not otherwise reported with the next monitoring report. The reports shall contain the information listed in Section N(3)(b) of this permit.

(d) **Other Information** – When the permittee becomes aware of failure to submit any relevant facts in the permit application or that incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such facts or corrected information in an electronic format within 10 days in accordance with 40 CFR 144.51(l)(8).

(e) **Report on Permit Review** – Within 30 days of receipt of this permit, the permittee shall certify to the Director in an electronic format that he or she has read and is personally familiar with all terms and conditions of this permit.

**7. Records** –

(a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit (including records from pre-injection, active injection, and post-injection phases) for a period of at least 10 years from collection.

(b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information (e.g. modeling inputs for AoR delineations and reevaluations, plan modifications) submitted under 40 CFR 144.27, 144.31, 144.39, and 144.41 for a period of at least 10 years after site closure.

(c) The permittee shall retain records concerning the nature and composition of all injected fluids until 10 years after site closure.

(d) The retention periods specified in Section N(7)(a) through (c) of this permit may be extended by request of the Director at any time. The permittee shall continue to retain records after the retention period specified in Section N(7)(a) through (c) of this permit or any requested extension thereof expires unless the permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

(e) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

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(ii) The name(s) of the individual(s) who performed the sampling or measurements;

(iii) A precise description of both sampling methodology and the handling of samples;

(iv) The date(s) analyses were performed;

(v) The name(s) of the individual(s) who performed the analyses;

(vi) The analytical techniques or methods used; and

(vii) The results of such analyses.

## O. WELL PLUGGING, POST-INJECTION SITE CARE, AND SITE CLOSURE

1. **Well Plugging Plan** – The permittee shall maintain and comply with the approved Well Plugging Plan (Attachment D of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.92.

2. **Revision of Well Plugging Plan** – If the permittee finds it necessary to change the Well Plugging Plan (Attachment D of this permit), a revised plan shall be submitted in an electronic format to the Director for written approval. Any amendments to the Well Plugging Plan must be approved by the Director and must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41.

3. **Notice of Plugging and Abandonment** – The permittee must notify the Director in writing in an electronic format pursuant to 40 CFR 146.92(c), at least 60 days before plugging, conversion or abandonment of a well. At the discretion of the Director, a shorter notice period may be allowed.

4. **Plugging and Abandonment Approval and Report** –

(a) The permittee must receive written approval of the Director before plugging the well and shall plug and abandon the well in accordance with 40 CFR 146.92, as provided in the Well Plugging Plan (Attachment D of this permit).

(b) Within 60 days after plugging, the permittee must submit in an electronic format a plugging report to the Director. The report must be certified as accurate by the permittee and by the person who performed the plugging operation (if other than the permittee.) The permittee shall retain the well plugging report in an electronic format for 10 years following site closure. The report must include:

(i) A statement that the well was plugged in accordance with the Well Plugging Plan previously approved by the Director (Attachment D of this permit); or

(ii) If the actual plugging differed from the approved plan, a statement describing the actual plugging and an updated plan specifying the differences from the plan previously submitted and explaining why the Director should approve such

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deviation. If the Director determines that a deviation from the plan incorporated in this permit may endanger underground sources of drinking water, the permittee shall replug the well as required by the Director.

5. **Temporary Abandonment** – If the permittee ceases injection into the well for more than 24 consecutive months, the well is considered to be in a temporarily abandoned status, and the permittee shall plug and abandon the well in accordance with the approved Well Plugging Plan, 40 CFR 144.52 (a)(6), and 40 CFR 146.92, or make a demonstration of non-endangerment of this well while it is in temporary abandonment status. During any periods of temporary abandonment or disuse, the well will be tested to ensure that it maintains mechanical integrity, according to the requirements and frequency specified in Section L(2) of this permit. The permittee shall continue to comply with the conditions of this permit, including all monitoring and reporting requirements according to the frequencies outlined in the permit.

6. **Post-Injection Site Care and Site Closure Plan** –

   (a) The permittee shall maintain and comply with the Post-Injection Site Care and Site Closure Plan, found as Attachment E of this permit, which meets the requirements of 40 CFR 146.93 and is an enforceable condition of this permit. The permittee shall:

      (i) Upon cessation of injection, either submit in an electronic format for the Director's approval an amended Post-Injection Site Care and Site Closure Plan or demonstrate through monitoring data and modeling results that no amendment to the plan is needed.

      (ii) At any time during the life of the project, the permittee may modify and resubmit in an electronic format the Post-Injection Site Care and Site Closure Plan for the Director's approval. The permittee may, as part of such modifications to the Plan, request a modification to the post-injection site care timeframe that includes documentation of the information at 40 CFR 146.93(c)(1).

   (b) The permittee shall monitor the site following the cessation of injection to show the position of the carbon dioxide plume and pressure front and demonstrate that USDWs are not being endangered, as specified in the Post-Injection Site Care and Site Closure Plan and in 40 CFR 146.90, and 40 CFR 146.93, including:

      (i) Ground water quality monitoring;

      (ii) Tracking the position of the carbon dioxide plume and pressure front including direct pressure monitoring and geochemical plume monitoring and the use of indirect methods;

      (iii) Any other required monitoring, e.g., soil gas and/or surface air monitoring described in the Post-Injection Site Care and Site Closure Plan;

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(iv) The permittee shall submit in an electronic format the results of all monitoring performed according to the schedule identified in the Post-Injection Site Care and Site Closure Plan; and

(v) The permittee shall continue to conduct post-injection site monitoring for at least 50 years or for the duration of any alternative timeframe approved pursuant to 40 CFR 146.93(c) and the Post-Injection Site Care and Site Closure Plan.

(c ) The post-injection monitoring must continue until the project no longer poses an endangerment to USDWs and the demonstration pursuant to 40 CFR 146.93(b)(2) and as described in Section O(6)(d) of this permit is approved by the Director.

(d) Prior to authorization for site closure, the permittee shall submit to the Director for review and approval, in an electronic format, a demonstration, based on information collected pursuant to Section O(6)(b) of this permit, that the carbon dioxide plume and the associated pressure front do not pose an endangerment to USDWs and that no additional monitoring is needed to ensure that the project does not pose an endangerment to USDWs, as required under 40 CFR 146.93(b)(3). The Director reserves the right to amend the post-injection site monitoring requirements (including extend the monitoring period) if there is a concern that USDWs are being endangered.

(e) The permittee shall notify the Director in an electronic format at least 120 days before site closure. At this time, if any changes to the approved Post-Injection Site Care and Site Closure Plan in Attachment E of this permit are proposed, the permittee shall submit a revised plan.

(f) After the Director has authorized site closure, the permittee shall plug all monitoring wells as specified in Attachment E of this permit – the Post-Injection Site Care and Site Closure Plan – in a manner which will not allow movement of injection or formation fluids that endangers a USDW. The permittee shall also restore the site to its pre-injection condition.

(g) The permittee shall submit a site closure report in an electronic format to the Director within 90 days of site closure. The report must include the information specified at 40 CFR 146.93(f).

(h) The permittee shall record a notation on the deed to the facility property or any other document that is normally examined during a title search that will in perpetuity provide any potential purchaser of the property the information listed at 40 CFR 146.93(g).

(i) The permittee shall retain for 10 years following site closure an electronic copy of the site closure report , records collected during the post-injection site care period, and any other records required under 40 CFR 146.91(f)(4). The permittee shall deliver the records in an electronic format to the Director at the conclusion of the retention period.

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## P. EMERGENCY AND REMEDIAL RESPONSE

1. The Emergency and Remedial Response Plan describes actions the permittee must take to address movement of the injection or formation fluids that may cause an endangerment to a USDW during construction, operation, and post-injection site care periods. The permittee shall maintain and comply with the approved Emergency and Remedial Response Plan (Attachment F of this permit), which is an enforceable condition of this permit, and with 40 CFR 146.94.

2. If the permittee obtains evidence that the injected carbon dioxide and/or associated pressure front may cause endangerment to a USDW, the permittee must:

   (a) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

   (b) Take all steps reasonably necessary to identify and characterize any release;

   (c) Notify the Director within 24 hours; and

   (d) Implement the Emergency and Remedial Response Plan (Attachment F of this permit) approved by the Director.

3. At the frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee shall review and update the Emergency and Remedial Response Plan as required at 40 CFR 146.94(d) or demonstrate to the Director that no update is needed. The permittee shall also incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Emergency and Remedial Response Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of injection wells; or when required by the Director.

4. Following each update of the Emergency and Remedial Response Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and confirmation of the results. Once approved by the Director, the revised Emergency and Remedial Response Plan will become an enforceable condition of this permit.

## Q. COMMENCING INJECTION

The permittee may not commence injection until:

1. Results of the formation testing and logging program as specified in Section J of this permit and in 40 CFR 146.87 are submitted to the Director in an electronic format and subsequently reviewed and approved by the Director;

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2. Mechanical integrity of the well has been demonstrated in accordance with 40 CFR 146.89(a)(1) and (2), and in accordance with Section L(1) through (3) of this permit;

3. The completion of corrective action required by the Area of Review and Corrective Action Plan found in Attachment B of this permit in accordance with 40 CFR 146.84;

4. All requirements at 40 CFR 146.82(c) have been met, including but not limited to reviewing and updating of the Area of Review and Corrective Action, Testing and Monitoring, Well Plugging, Post-Injection Site Care and Site Closure, and Emergency and Remedial Response plans to incorporate final site characterization information, final delineation of the AoR, and the results of pre-injection testing, and information has been submitted in an electronic format, reviewed and approved by the Director;

5. Construction is complete and the permittee has submitted to the Director in an electronic format a notice that completed construction is in compliance with 40 CFR 146.86 and Section I of this permit;

6. The Director has inspected or otherwise reviewed the injection well and all submitted information and finds it is in compliance with the conditions of the permit;

7. The Director has approved demonstration of the alarm system and shut-off system under Section K.6 of this permit; and.

8. The Director has given written authorization to commence injection.

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## ATTACHMENTS

These attachments include, but are not limited to, permit conditions and plans concerning operating procedures, monitoring and reporting, as required by 40 CFR Parts 144 and 146. The permittee shall comply with these conditions and adhere to these plans as approved by the Director, as follows:

**A. SUMMARY OF OPERATING REQUIREMENTS**

**B. AREA OF REVIEW AND CORRECTIVE ACTION PLAN**

**C. TESTING AND MONITORING PLAN**

**D. WELL PLUGGING PLAN**

**E. POST-INJECTION SITE CARE AND SITE CLOSURE PLAN**

**F. EMERGENCY AND REMEDIAL RESPONSE PLAN**

**G. CONSTRUCTION DETAILS**

**H. FINANCIAL ASSURANCE DEMONSTRATION**

**I. STIMULATION PROGRAM**

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# Exhibit A-3

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U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDERGROUND INJECTION CONTROL PERMIT

CLASS VI

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F. EMERGENCY AND REMEDIAL RESPONSE PLAN
G. CONSTRUCTION DETAILS
H. FINANCIAL ASSURANCE DEMONSTRATION
I. STIMULATION PROGRAM

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BOULEVARD
CHICAGO, IL 60604-3590



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND INJECTION CONTROL PERMIT: CLASS VI

**Permit Number: IL-137-6A-0003**
**Facility Name: FutureGen Industrial Alliance, Inc.**

Pursuant to the Safe Drinking Water Act and Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 124, 144, 146, and 147,

**FutureGen Industrial Alliance, Inc. of Jacksonville, Illinois**

hereinafter, the permittee, is hereby authorized to construct and operate a Class VI injection well located in the State of Illinois, Morgan County, Township 16N, Range 9W, Section 26, latitude 39.80097°N and longitude 90.07544°W, for injection of the carbon dioxide ($CO_2$) stream generated by an oxy-combustion power plant in Meredosia, Illinois and as characterized in the permit application and the administrative record as a liquid, supercritical fluid, or gas into the Mount Simon and Eau Claire Formations at depths between 3785 feet and 4432 feet below ground surface upon the express condition that the permittee meet the restrictions set forth herein. The designated confining zone for this injection well is identified as the upper part of the Eau Claire Formation formed by the upper part of the Lombard Member and the Proviso Member. Injection shall not commence until the operator has received written authorization from the Director of the Water Division of EPA Region 5, in accordance with Section Q of this permit.

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit is effective. The following attachments are incorporated into this permit as enforceable conditions: A, B, C, D, E, F, G, H and I.

This permit shall become effective on OCT 14 2014, and shall remain in full force and effect during the operating life of the facility and the post-injection site care period until site closure is authorized and completed, unless this permit is revoked and reissued, terminated, or modified pursuant to 40 CFR 144.39, 144.40, or 144.41. This permit shall also remain in effect upon delegation of primary enforcement responsibility to the State of Illinois until such time as the State issues its own permit to the permittee or the State chooses to adopt this permit as a State permit. The permit will expire in one year if the permittee fails to commence construction, unless a written request in electronic format for an extension of this one-year period has been approved by the Director. The permittee may request an expiration date sooner than the one-year period, provided no construction on the well has commenced. This permit will be reviewed at least every five years from the effective date specified above.

Signed and Dated: August 29, 2014

Tinka G. Hyde
Director, Water Division

## PERMIT CONDITIONS

### A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. Notwithstanding any other provisions of this permit, the permittee authorized by this permit shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection, annulus or formation fluids into underground sources of drinking water (USDWs) or any unauthorized zones. The objective of this permit is to prevent the movement of fluids into or between USDWs or into any unauthorized zones consistent with the requirements at 40 CFR 146.86(a). Any underground injection activity not specifically authorized in this permit is prohibited. For purposes of enforcement, compliance with this permit during its term constitutes compliance with Part C of the Safe Drinking Water Act (SDWA). Such compliance does not constitute a defense to any action brought under Section 1431 of the SDWA or any other common or statutory law other than Part C of the SDWA. 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 State or local laws or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

### B. PERMIT ACTIONS

1. **Modification, Revocation and Reissuance, and Termination** – The Director of the Water Division of Region 5 of the U. S. Environmental Protection Agency (EPA), hereinafter, the Director, may, for cause or upon request from any interested person, including the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR 124.5, 144.12, 146.86(a), 144.39, and 144.40. The permit is also subject to minor modifications for cause as specified in 40 CFR 144.41. The filing of a request 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.

2. **Minor Modifications** – Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for minor changes in the permitted activity as listed in 40 CFR 144.41. Any permit modification not processed as a minor modification under 40 CFR 144.41 must be made for cause, and with part 124 draft permit and public notice as required in 40 CFR 144.39.

3. **Transfer of Permits** – This permit is not transferable to any person except in accordance with 40 CFR 144.38(a) and Section N(6)(b) of this permit.

### C. SEVERABILITY

The provisions of this 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 shall not be affected thereby.

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## D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 (Public Information) and 40 CFR 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential business information by the submitter. Any such claim must be asserted at the time of submission by clearly identifying each page with the words "confidential business information" on every page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2. Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee; and

2. Information which deals with the existence, absence or level of contaminants in drinking water.

## E. DEFINITION

All terms used in this permit shall have the meaning set forth in the SDWA and Underground Injection Control regulations specified at 40 CFR parts 124, 144, 146, and 147. Unless specifically stated otherwise, all references to “days” in this permit should be interpreted as calendar days.

## F. DUTIES AND REQUIREMENTS

1. **Duty to Comply** – The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.

2. **Duty to Reapply** – If the permittee wishes to continue an activity regulated by this permit after the expiration or termination of this permit, the permittee must apply for and obtain a new permit.

3. **Penalties for Violations of Permit Conditions** – Any person who violates a permit requirement is subject to civil penalties and other enforcement action under the SDWA. Any person who willfully violates permit conditions may be subject to criminal prosecution under the SDWA and other applicable statutes and regulations.

4. **Need to Halt or Reduce Activity Not a Defense** – It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. **Duty to Mitigate** – The permittee shall take all timely and reasonable steps necessary to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. **Proper Operation and Maintenance** – The permittee shall at all times properly operate and

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maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, among other things, 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 this permit.

7. **Duty to Provide Information** – The permittee shall furnish to the Director in an electronic format, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit or the UIC regulations. The permittee shall also furnish to the Director, upon request within a time specified, electronic copies of records required to be kept by this permit.

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

   (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where electronic or non-electronic records are kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any electronic or non-electronic records that are kept under the conditions of this permit;

   (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   (d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location, including facilities, equipment or operations regulated or required under this permit.

9. **Signatory Requirements** – All reports or other information, required to be submitted by this permit or requested by the Director shall be signed and certified in accordance with 40 CFR 144.32.

## G. AREA OF REVIEW AND CORRECTIVE ACTION

1. The Area of Review (AoR) is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and is based on available site characterization, monitoring, and operational data. The permittee shall maintain and comply with the approved Area of Review and Corrective Action Plan (Attachment B of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.84.

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2. At the fixed frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee must reevaluate the area of review and perform corrective action in the manner specified in 40 CFR 146.84 and update the Area of Review and Corrective Action Plan or demonstrate to the Director that no update is needed.

3. Following each AoR reevaluation or a demonstration that no evaluation is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the AoR results. Once approved by the Director, the revised Area of Review and Corrective Action Plan will become an enforceable condition of this permit.

## H. FINANCIAL RESPONSIBILITY

1. **Financial Responsibility** – The permittee shall maintain financial responsibility and resources to meet the requirements of 40 CFR 146.85 and the conditions of this permit. Financial responsibility shall be maintained through all phases of the project. The approved financial assurance mechanisms are found in Attachment H and in the administrative record of this permit.

   The financial instrument(s) must be sufficient to cover the cost of:

   (a) Corrective action (that meets the requirements of 40 CFR 146.84);

   (b) Injection well plugging (that meets the requirements of 40 CFR 146.92);

   (c) Post injection site care and site closure (that meets the requirements of 40 CFR 146.93);

   (d) Emergency and remedial response (that meets the requirements of 40 CFR 146.94).

2. **Cost Estimate Updates** – During the active life of the geologic sequestration project, the permittee must adjust the cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) and provide this adjustment to the Director in an electronic format. The permittee must also provide to the Director written updates in an electronic format of adjustments to the cost estimate within 60 days of any amendments to the Project Plans included as Attachments B – F of this permit, which address items (a) through (d) in Section H(1) of this permit.

3. **Notification** –

   (a) Whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the permittee, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial responsibility instruments to cover the increase. Whenever the current cost estimate decreases, the face amount of the financial assurance instrument may be reduced to the amount of the current cost estimate only after the permittee has received written approval from the Director.

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(b) The permittee must notify the Director by certified mail and in an electronic format of adverse financial conditions such as bankruptcy that may affect the ability to carry out injection well plugging, post-injection site care and site closure, and any applicable ongoing actions under Corrective Action and/or Emergency and Remedial Response.

(i) In the event that the permittee or the third party provider of a financial responsibility instrument is going through a bankruptcy, the permittee must notify the Director by certified mail and in an electronic format of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the permittee as debtor, within 10 days after commencement of the proceeding.

(ii) A guarantor of a corporate guarantee must make such a notification if he or she is named as debtor, as required under the terms of the guarantee.

(iii) A permittee who fulfills the requirements of paragraph (a) of this section by obtaining a trust fund, surety bond, letter of credit, escrow account, or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the trust fund, surety bond, letter of credit, escrow account, or insurance policy.

4. **Establishing Other Coverage** – The permittee must establish other financial assurance or liability coverage acceptable to the Director, within 60 days of the occurrence of the events in Section H(2) or H(3) of this permit.

## I. CONSTRUCTION

1. **Siting** – The permittee has demonstrated to the satisfaction of the Director that the well is in an area with suitable geology in accordance with the requirements at 40 CFR 146.83.

2. **Casing and Cementing** – Casing and cement or other materials used in the construction of the well must have sufficient structural strength for the life of the geologic sequestration project. All well materials must be compatible with all fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The casing and cementing program must prevent the movement of fluids into or between USDWs for the expected life of the well in accordance with 40 CFR 146.86. The casing and cement used in the construction of this well are shown in Attachment G of this permit and in the administrative record for this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

3. **Tubing and Packer Specifications** – Tubing and packer materials used in the construction of the well must be compatible with fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The permittee shall inject only through tubing with a packer set within the long string casing at a point within or below the confining zone immediately above the injection

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zone. The tubing and packer used in the well are represented in engineering drawings contained in Attachment G of this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

## J. PRE-INJECTION TESTING

1. Prior to the Director authorizing injection, the permittee shall perform all pre-injection logging, sampling, and testing specified at 40 CFR 146.87. This testing shall include:

   (a) Logs, surveys and tests to determine or verify the depth, thickness, porosity, permeability, lithology, and formation fluid salinity in all relevant geologic formations. These tests shall include:

      (i) Deviation checks that meet the requirements of 40 CFR 146.87(a)(1);

      (ii) Logs and tests before and upon installation of the surface casing that meet the requirements of 40 CFR 146.87(a)(2);

      (iii) Logs and tests before and upon installation of the long-string casing that meet the requirements of 40 CFR 146.87(a)(3);

      (iv) Tests to demonstrate internal and external mechanical integrity that meet the requirements of 40 CFR 146.87(a)(4); and

      (v) Any alternative methods that are required by and/or approved by the Director pursuant to 40 CFR 146.87(a)(5).

   (b) Whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone that meet the requirements of 40 CFR 146.87(b);

   (c) Records of the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone that meet the requirements of 40 CFR 146.87(c);

   (d) Tests as necessary to provide information about the injection and confining zones to allow determination or calculation of the fracture pressure and the physical and chemical characteristics of the injection and confining zones and the formation fluids in the injection zone that meet the requirements of 40 CFR 146.87(d); and

   (e) Tests to verify hydrogeologic characteristics of the injection zone that meet the requirements of 40 CFR 146.87(e), including:

      (i) A pressure fall-off test and

      (ii) A pumping test or injectivity tests.

2. The permittee shall submit to the Director for approval in an electronic format a schedule for logging and testing activities 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test. The permittee must provide

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the Director or their representative with the opportunity to witness all logging, sampling, and testing required under this Section.

## K. OPERATIONS

1. **Injection Pressure Limitation** – Except during stimulation, the permittee must ensure that injection pressure does not exceed 90 percent of the fracture pressure of the injection zone(s) so as to ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone(s). In no case shall injection pressure initiate fractures or propagate existing fractures in the confining zone or cause the movement of injection or formation fluids into a USDW. The maximum injection pressure limit is listed in Attachment A.

2. **Stimulation Program** – Pursuant to requirements at 40 CFR 146.82(a)(9), all stimulation programs proposed by the permittee must be approved by the Director as a permit modification and incorporated into Attachment I of this permit.

3. **Additional Injection Limitation** – No injectate other than that identified on page 1 of this permit shall be injected except fluids used for stimulation, rework, and well tests as approved by the Director.

4. **Annulus Fluid** – The permittee must fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the Director.

5. **Annulus/Tubing Pressure Differential** – Except during workovers or times of annulus maintenance, the permittee must maintain on the annulus a pressure that exceeds the operating injection pressure as specified in Attachment A of this permit, unless the Director determines that such requirement might harm the integrity of the well or endanger USDWs.

6. **Automatic Alarms and Automatic Shut-off System** –

   (a) The permittee must:

      (i) Install, continuously operate, and maintain an automatic alarm and an automatic shut-off system or, at the discretion of the Director, down-hole shut-off systems, or other mechanical devices that provide equivalent protection; and

      (ii) Successfully demonstrate the functionality of the alarm system and shut-off system prior to the Director authorizing injection, and at a minimum of once every twelfth month after the last approved demonstration.

   (b) Testing under this Section must involve subjecting the system to simulated failure conditions and must be witnessed by the Director or his or her representative unless the Director authorizes an unwitnessed test in advance. The permittee must provide notice in an electronic format 30 days prior to running the test and must provide the Director or their representative the opportunity to attend. The test must be documented using either a mechanical or digital device which records the value of

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the parameter of interest, or by a service company job record. A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

7. **Precautions to Prevent Well Blowouts** – At all times, the permittee shall maintain on the well a pressure which will prevent the return of the injection fluid to the surface. The well bore must be filled with a high specific gravity fluid during workovers to maintain a positive (downward) gradient and/or a plug shall be installed which can resist the pressure differential. A blowout preventer must be installed and kept in proper operational condition whenever the wellhead is removed to work on the well. The permittee shall follow procedures such as those below to assure that a backflow or blowout does not occur:

   (a) Limit the temperature and/or corrosivity of the injectate; and

   (b) Develop procedures necessary to assure that pressure imbalances do not occur.

8. **Circumstances Under Which Injection Must Cease** –

   Injection shall cease when any of the following circumstances arises:

   (a) Failure of the well to pass a mechanical integrity test;

   (b) A loss of mechanical integrity during operation;

   (c) The automatic alarm or automatic shut-off system is triggered;

   (d) A significant unexpected change in the annulus or injection pressure;

   (e) The Director determines that the well lacks mechanical integrity; or

   (f) The permittee is unable to maintain compliance with any permit condition or regulatory requirement and the Director determines that injection should cease.

9. **Approaches for Ceasing Injection** –

   (a) The permittee must shut-in the well by gradual reduction in the injection pressure as outlined in Attachment A of this permit; or

   (b) The permittee must immediately cease injection and shut-in the well as outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

## L. MECHANICAL INTEGRITY

1. **Standards** – Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the injection well must have and maintain mechanical integrity consistent with 40 CFR 146.89. To meet these requirements, mechanical integrity

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tests/demonstrations must be witnessed by the Director or an authorized representative of the Director unless prior approval has been granted by the Director to run an un-witnessed test. In order to conduct testing without an EPA representative, the following procedures must be followed.

(a) The permittee must submit prior notification in an electronic format within the time period specified in Section L(3) of this permit, including the information that no EPA representative is available, and receive permission from the Director to proceed;

(b) The test must be performed in accordance with the Testing and Monitoring Plan (Attachment C of this permit) and documented using either a mechanical or digital device that records the value of the parameter of interest;

(c) A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

2. **Mechanical Integrity Testing** – The permittee shall conduct a casing inspection log and mechanical integrity testing as follows:

(a) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate internal mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A pressure test with liquid or gas; and

(ii) A casing inspection log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(b) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A tracer survey such as an oxygen activation log; or

(ii) A temperature or noise log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(c) Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the permittee must continuously monitor injection pressure, injection rate, injection volumes; pressure on the annulus between tubing and long string casing; and annulus fluid volume as specified in 40 CFR 146.88(e), and 146.89(b).

(d) At least once per year, the permittee must perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.89(c):

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(i) An Administrator-approved tracer survey such as an oxygen-activation log; or

(ii) A temperature or noise log. The Director may require such tests whenever the well is worked over; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(e) After any workover that may compromise the internal mechanical integrity of the well, the well shall be tested by means of a pressure test approved by the Director and the well must pass the test to demonstrate mechanical integrity.

(f) Prior to plugging the well, the permittee shall demonstrate external mechanical integrity as described in the Injection Well Plugging Plan and that meets the requirements of 40 CFR 146.92(a).

(g) The Director may require the use of any other tests to demonstrate mechanical integrity other than those listed above with the written approval of the Administrator pursuant to requirements at 40 CFR 146.89(e).

3. **Prior Notice and Reporting** –

(a) The permittee shall notify the Director in an electronic format of his or her intent to demonstrate mechanical integrity in an electronic format at least 30 days prior to such demonstration. At the discretion of the Director a shorter time period may be allowed.

(b) Reports of mechanical integrity demonstrations which include logs must include an interpretation of results by a knowledgeable log analyst. The permittee shall report in an electronic format the results of a mechanical integrity demonstration within the time period specified in Section N(4) of this permit.

4. **Gauge and Meter Calibration** – The permittee shall calibrate all gauges used in mechanical integrity demonstrations and other required monitoring to an accuracy of not less than 0.5 percent of full scale, within one year prior to each required test. The date of the most recent calibration shall be noted on or near the gauge or meter. A copy of the calibration certificate shall be submitted to the Director in an electronic format with the report of the test. Pressure gauge resolution shall be no greater than five psi. Certain mechanical integrity and other testing may require greater accuracy and shall be identified in the procedure submitted to the Director prior to the test.

5. **Loss of Mechanical Integrity** –

(a) If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or fails to maintain mechanical integrity during operation, or that a loss of mechanical integrity as defined by 40 CFR 146.89(a)(1) or (2) is suspected during operation (such as a significant unexpected change in the annulus or injection pressure), the permittee must:

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(i) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

(ii) Take all steps reasonably necessary to determine whether there may have been a release of the injected carbon dioxide stream or formation fluids into any unauthorized zone. If there is evidence of USDW endangerment, implement the Emergency and Remedial Response Plan (Attachment F of this permit);

(iii) Follow the reporting requirements as directed in Section N of this permit;

(iv) Restore and demonstrate mechanical integrity to the satisfaction of the Director and receive written approval from the Director prior to resuming injection; and

(v) Notify the Director in an electronic format when injection can be expected to resume.

(b) If a shutdown (*i.e.,* down-hole or at the surface) is triggered, the permittee must immediately investigate and identify as expeditiously as possible the cause of the shutdown. If, upon such investigation, the well appears to be lacking mechanical integrity, or if monitoring required indicates that the well may be lacking mechanical integrity, the permittee must take the actions listed above in Section L(5)(a)(i) through (v).

(c) If the well loses mechanical integrity prior to the next scheduled test date, then the well must either be plugged or repaired and retested within 30 days of losing mechanical integrity. The permittee shall not resume injection until mechanical integrity is demonstrated and the Director gives written approval to recommence injection in cases where the well has lost mechanical integrity.

6. **Mechanical Integrity Testing on Request From Director** – The permittee shall demonstrate mechanical integrity at any time upon written notice from the Director.

## M. TESTING AND MONITORING

1. **Testing and Monitoring Plan** –

(a) The permittee shall maintain and comply with the approved Testing and Monitoring Plan (Attachment C of this permit) and with the requirements at 40 CFR 144.51(j), 146.88(e), and 146.90. The Testing and Monitoring Plan is an enforceable condition of this permit. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Procedures for all testing and monitoring under this permit must be submitted to the Director in an electronic format for approval at least 30 days prior to the test. In performing all testing and monitoring under this permit, the permittee must follow the procedures approved by the Director. If the permittee is unable to follow the EPA approved procedures, then, the permittee must contact the Director at least 30 days prior to testing to discuss options, if any are feasible. When the test report is submitted, a full explanation must be provided as to why any approved procedures were

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not followed. If the approved procedures were not followed, EPA may take an appropriate action, including but not limited to, requiring the permittee to re-run the test.

(b) The permittee must update the Testing and Monitoring Plan as required at 40 CFR 146.90 (j) to incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Testing and Monitoring Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of monitoring wells or newly permitted injection wells within the AoR; or when required by the Director.

(c) Following each update of the Testing and Monitoring Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the results. Once approved by the Director, the revised Testing and Monitoring Plan will become an enforceable condition of this permit.

2. **Carbon Dioxide Stream Analysis** – The permittee shall analyze the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics, as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(a).

3. **Continuous Monitoring** – The permittee shall maintain continuous monitoring devices and use them to monitor injection pressure, flow rate, volume, the pressure on the annulus between the tubing and the long string of casing, annulus fluid level, and temperature. This monitoring shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(b). The permittee shall maintain for EPA's inspection at the facility an appropriately scaled, continuous record of these monitoring results as well as original files of any digitally recorded information pertaining to these operations.

4. **Corrosion Monitoring** – The permittee shall perform corrosion monitoring of the well materials for loss of mass, thickness, cracking, pitting, and other signs of corrosion on a quarterly basis using the procedures described in the Testing and Monitoring Plan and in accordance with 40 CFR 146.90(c) to ensure that the well components meet the minimum standards for material strength and performance set forth in 40 CFR 146.86(b).

5. **Ground Water Quality Monitoring**– The permittee shall monitor ground water quality and geochemical changes above the confining zone(s) that may be a result of carbon dioxide movement through the confining zone(s) or additional identified zones. This monitoring shall be performed for the parameters identified in the Testing and Monitoring Plan at the locations and depths, and at frequencies described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(d).

6. **External Mechanical Integrity Testing** – The permittee shall demonstrate external mechanical integrity as described in the Testing and Monitoring Plan and Section L of this permit to meet the requirements of 40 CFR 146.90(e).

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7. **Pressure Fall-Off Test** – The permittee shall conduct a pressure fall-off test at least once every five years unless more frequent testing is required by the Director based on site-specific information. The test shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(f).

8. **Plume and Pressure Front Tracking** –The permittee shall track the extent of the carbon dioxide plume and the presence or absence of elevated pressure (e.g., the pressure front) as described in the Testing and Monitoring Plan.

   (a) The permittee shall use direct methods to track the position of the carbon dioxide plume and the pressure front in the injection zone as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(1).

   (b) The permittee shall use indirect methods to track the position of the carbon dioxide plume and pressure front as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(2).

9. **Surface Air and/or Soil Gas Monitoring** – The permittee shall conduct any surface air monitoring and/or soil gas monitoring required by the Director to detect movement of carbon dioxide that could endanger a USDW at the frequency and locations described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(h).

10. **Additional Monitoring** – If required by the Director as provided in 40 CFR 146.90(i), the permittee shall perform any additional monitoring determined to be necessary to support, upgrade, and improve computational modeling of the AoR evaluation required under 40 CFR 146.84(c) and to determine compliance with standards under 40 CFR 144.12 or 40 CFR 146.86(a). This monitoring shall be performed as described in a modification to the Testing and Monitoring Plan.

## N. REPORTING AND RECORDKEEPING

1. **Electronic Reporting** – Electronic reports, submittals, notifications and records made and maintained by the permittee under this permit must be in an electronic format approved by EPA. The permittee shall electronically submit all required reports to the Director at:

   https://epa.velo.pnnl.gov/operators

2. **Semi-Annual Reports** – The permittee shall submit semi-annual reports containing:

   (a) Any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;

   (b) Monthly average, maximum, and minimum values for injection pressure, flow rate and daily volume, temperature, and annular pressure;

   (c) A description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;

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(d) A description of any event which triggers the shut-off systems required in Section(K)(6) of this permit pursuant to 40 CFR 146.88(e), and the response taken;

(e) The monthly volume and/or mass of the carbon dioxide stream injected over the reporting period and the volume and/or mass injected cumulatively over the life of the project;

(f) Monthly annulus fluid volume added or produced; and

(g) Results of the continuous monitoring required in Section M(3) including:

(i) A tabulation of: (1) daily maximum injection pressure, (2) daily minimum annulus pressure, (3) daily minimum value of the difference between simultaneous measurements of annulus and injection pressure, (4) daily volume, (5) daily maximum flow rate, and (6) average annulus tank fluid level; and

(ii) Graph(s) of the continuous monitoring as required in Section M(3) of this permit, or of daily average values of these parameters. The injection pressure, injection volume and flow rate, annulus fluid level, annulus pressure, and temperature shall be submitted on one or more graphs, using contrasting symbols or colors, or in another manner approved by the Director; and

(h) Results of any additional monitoring identified in the Testing and Monitoring Plan and described in Section M of this permit.

3. **24-Hour Reporting** –

(a) The permittee shall report to the Director any permit noncompliance which may endanger human health or the environment and/or any events that require implementation of actions in the Emergency and Remedial Response Plan (Attachment F of this permit). Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such verbal reports shall include, but not be limited to the following information:

(i) Any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW, or any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW;

(ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;

(iii) Any triggering of the shut-off system required in Section (K)(6) of this permit (i.e., down-hole or at the surface);

(iv) Any failure to maintain mechanical integrity;

(v) Pursuant to compliance with the requirement at 40 CFR 146.90(h) for surface

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air/soil gas monitoring or other monitoring technologies, if required by the Director, any release of carbon dioxide to the atmosphere or biosphere; and

(vi) Actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

(b) A written submission shall be provided to the Director in an electronic format within five days of the time the permittee becomes aware of the circumstances described in Section(N)(3)(a) of this permit. The submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue as well as actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit); and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

4. **Reports on Well Tests and Workovers** – Report, within 30 days, the results of:

(a) Periodic tests of mechanical integrity;

(b) Any well workover, including stimulation;

(c) Any other test of the injection well conducted by the permittee if required by the Director; and

(d) Any test of any monitoring well required by this permit.

5. **Advance Notice Reporting** –

(a) **Well Tests** – The permittee shall give at least 30 days advance written notice to the Director in an electronic format of any planned workover, stimulation, or other well test.

(b) **Planned Changes** – The permittee shall give written notice to the Director in an electronic format, as soon as possible, of any planned physical alterations or additions to the permitted injection facility other than minor repair/replacement or maintenance activities. An analysis of any new injection fluid shall be submitted to the Director for review and written approval at least 30 days prior to injection; this approval may result in a permit modification.

(c) **Anticipated Noncompliance** – The permittee shall give at least 14 days advance written notice to the Director in an electronic format of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

6. **Additional Reports** –

(a) **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 in an electronic format by the permittee no

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later than 30 days following each schedule date.

(b) **Transfer of Permits** – This permit is not transferable to any person except after notice is sent to the Director in an electronic format at least 30 days prior to transfer and the requirements of 40 CFR 144.38(a) have been met. Pursuant to requirements at 40 CFR 144.38(a), the Director will require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

(c) **Other Noncompliance** – The permittee shall report in an electronic format all other instances of noncompliance not otherwise reported with the next monitoring report. The reports shall contain the information listed in Section N(3)(b) of this permit.

(d) **Other Information** – When the permittee becomes aware of failure to submit any relevant facts in the permit application or that incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such facts or corrected information in an electronic format within 10 days in accordance with 40 CFR 144.51(l)(8).

(e) **Report on Permit Review** – Within 30 days of receipt of this permit, the permittee shall certify to the Director in an electronic format that he or she has read and is personally familiar with all terms and conditions of this permit.

**7. Records** –

(a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit (including records from pre-injection, active injection, and post-injection phases) for a period of at least 10 years from collection.

(b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information (e.g. modeling inputs for AoR delineations and reevaluations, plan modifications) submitted under 40 CFR 144.27, 144.31, 144.39, and 144.41 for a period of at least 10 years after site closure.

(c) The permittee shall retain records concerning the nature and composition of all injected fluids until 10 years after site closure.

(d) The retention periods specified in Section N(7)(a) through (c) of this permit may be extended by request of the Director at any time. The permittee shall continue to retain records after the retention period specified in Section N(7)(a) through (c) of this permit or any requested extension thereof expires unless the permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

(e) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

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(ii) The name(s) of the individual(s) who performed the sampling or measurements;

(iii) A precise description of both sampling methodology and the handling of samples;

(iv) The date(s) analyses were performed;

(v) The name(s) of the individual(s) who performed the analyses;

(vi) The analytical techniques or methods used; and

(vii) The results of such analyses.

## O. WELL PLUGGING, POST-INJECTION SITE CARE, AND SITE CLOSURE

1. **Well Plugging Plan** – The permittee shall maintain and comply with the approved Well Plugging Plan (Attachment D of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.92.

2. **Revision of Well Plugging Plan** – If the permittee finds it necessary to change the Well Plugging Plan (Attachment D of this permit), a revised plan shall be submitted in an electronic format to the Director for written approval. Any amendments to the Well Plugging Plan must be approved by the Director and must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41.

3. **Notice of Plugging and Abandonment** – The permittee must notify the Director in writing in an electronic format pursuant to 40 CFR 146.92(c), at least 60 days before plugging, conversion or abandonment of a well. At the discretion of the Director, a shorter notice period may be allowed.

4. **Plugging and Abandonment Approval and Report** –

(a) The permittee must receive written approval of the Director before plugging the well and shall plug and abandon the well in accordance with 40 CFR 146.92, as provided in the Well Plugging Plan (Attachment D of this permit).

(b) Within 60 days after plugging, the permittee must submit in an electronic format a plugging report to the Director. The report must be certified as accurate by the permittee and by the person who performed the plugging operation (if other than the permittee.) The permittee shall retain the well plugging report in an electronic format for 10 years following site closure. The report must include:

(i) A statement that the well was plugged in accordance with the Well Plugging Plan previously approved by the Director (Attachment D of this permit); or

(ii) If the actual plugging differed from the approved plan, a statement describing the actual plugging and an updated plan specifying the differences from the plan previously submitted and explaining why the Director should approve such

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deviation. If the Director determines that a deviation from the plan incorporated in this permit may endanger underground sources of drinking water, the permittee shall replug the well as required by the Director.

5. **Temporary Abandonment** – If the permittee ceases injection into the well for more than 24 consecutive months, the well is considered to be in a temporarily abandoned status, and the permittee shall plug and abandon the well in accordance with the approved Well Plugging Plan, 40 CFR 144.52 (a)(6), and 40 CFR 146.92, or make a demonstration of non-endangerment of this well while it is in temporary abandonment status. During any periods of temporary abandonment or disuse, the well will be tested to ensure that it maintains mechanical integrity, according to the requirements and frequency specified in Section L(2) of this permit. The permittee shall continue to comply with the conditions of this permit, including all monitoring and reporting requirements according to the frequencies outlined in the permit.

6. **Post-Injection Site Care and Site Closure Plan** –

   (a) The permittee shall maintain and comply with the Post-Injection Site Care and Site Closure Plan, found as Attachment E of this permit, which meets the requirements of 40 CFR 146.93 and is an enforceable condition of this permit. The permittee shall:

      (i) Upon cessation of injection, either submit in an electronic format for the Director's approval an amended Post-Injection Site Care and Site Closure Plan or demonstrate through monitoring data and modeling results that no amendment to the plan is needed.

      (ii) At any time during the life of the project, the permittee may modify and resubmit in an electronic format the Post-Injection Site Care and Site Closure Plan for the Director's approval. The permittee may, as part of such modifications to the Plan, request a modification to the post-injection site care timeframe that includes documentation of the information at 40 CFR 146.93(c)(1).

   (b) The permittee shall monitor the site following the cessation of injection to show the position of the carbon dioxide plume and pressure front and demonstrate that USDWs are not being endangered, as specified in the Post-Injection Site Care and Site Closure Plan and in 40 CFR 146.90, and 40 CFR 146.93, including:

      (i) Ground water quality monitoring;

      (ii) Tracking the position of the carbon dioxide plume and pressure front including direct pressure monitoring and geochemical plume monitoring and the use of indirect methods;

      (iii) Any other required monitoring, e.g., soil gas and/or surface air monitoring described in the Post-Injection Site Care and Site Closure Plan;

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(iv) The permittee shall submit in an electronic format the results of all monitoring performed according to the schedule identified in the Post-Injection Site Care and Site Closure Plan; and

(v) The permittee shall continue to conduct post-injection site monitoring for at least 50 years or for the duration of any alternative timeframe approved pursuant to 40 CFR 146.93(c) and the Post-Injection Site Care and Site Closure Plan.

(c ) The post-injection monitoring must continue until the project no longer poses an endangerment to USDWs and the demonstration pursuant to 40 CFR 146.93(b)(2) and as described in Section O(6)(d) of this permit is approved by the Director.

(d) Prior to authorization for site closure, the permittee shall submit to the Director for review and approval, in an electronic format, a demonstration, based on information collected pursuant to Section O(6)(b) of this permit, that the carbon dioxide plume and the associated pressure front do not pose an endangerment to USDWs and that no additional monitoring is needed to ensure that the project does not pose an endangerment to USDWs, as required under 40 CFR 146.93(b)(3). The Director reserves the right to amend the post-injection site monitoring requirements (including extend the monitoring period) if there is a concern that USDWs are being endangered.

(e) The permittee shall notify the Director in an electronic format at least 120 days before site closure. At this time, if any changes to the approved Post-Injection Site Care and Site Closure Plan in Attachment E of this permit are proposed, the permittee shall submit a revised plan.

(f) After the Director has authorized site closure, the permittee shall plug all monitoring wells as specified in Attachment E of this permit – the Post-Injection Site Care and Site Closure Plan – in a manner which will not allow movement of injection or formation fluids that endangers a USDW. The permittee shall also restore the site to its pre-injection condition.

(g) The permittee shall submit a site closure report in an electronic format to the Director within 90 days of site closure. The report must include the information specified at 40 CFR 146.93(f).

(h) The permittee shall record a notation on the deed to the facility property or any other document that is normally examined during a title search that will in perpetuity provide any potential purchaser of the property the information listed at 40 CFR 146.93(g).

(i) The permittee shall retain for 10 years following site closure an electronic copy of the site closure report , records collected during the post-injection site care period, and any other records required under 40 CFR 146.91(f)(4). The permittee shall deliver the records in an electronic format to the Director at the conclusion of the retention period.

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## P. EMERGENCY AND REMEDIAL RESPONSE

1. The Emergency and Remedial Response Plan describes actions the permittee must take to address movement of the injection or formation fluids that may cause an endangerment to a USDW during construction, operation, and post-injection site care periods. The permittee shall maintain and comply with the approved Emergency and Remedial Response Plan (Attachment F of this permit), which is an enforceable condition of this permit, and with 40 CFR 146.94.

2. If the permittee obtains evidence that the injected carbon dioxide and/or associated pressure front may cause endangerment to a USDW, the permittee must:

   (a) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

   (b) Take all steps reasonably necessary to identify and characterize any release;

   (c) Notify the Director within 24 hours; and

   (d) Implement the Emergency and Remedial Response Plan (Attachment F of this permit) approved by the Director.

3. At the frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee shall review and update the Emergency and Remedial Response Plan as required at 40 CFR 146.94(d) or demonstrate to the Director that no update is needed. The permittee shall also incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Emergency and Remedial Response Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of injection wells; or when required by the Director.

4. Following each update of the Emergency and Remedial Response Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and confirmation of the results. Once approved by the Director, the revised Emergency and Remedial Response Plan will become an enforceable condition of this permit.

## Q. COMMENCING INJECTION

The permittee may not commence injection until:

1. Results of the formation testing and logging program as specified in Section J of this permit and in 40 CFR 146.87 are submitted to the Director in an electronic format and subsequently reviewed and approved by the Director;

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2. Mechanical integrity of the well has been demonstrated in accordance with 40 CFR 146.89(a)(1) and (2), and in accordance with Section L(1) through (3) of this permit;

3. The completion of corrective action required by the Area of Review and Corrective Action Plan found in Attachment B of this permit in accordance with 40 CFR 146.84;

4. All requirements at 40 CFR 146.82(c) have been met, including but not limited to reviewing and updating of the Area of Review and Corrective Action, Testing and Monitoring, Well Plugging, Post-Injection Site Care and Site Closure, and Emergency and Remedial Response plans to incorporate final site characterization information, final delineation of the AoR, and the results of pre-injection testing, and information has been submitted in an electronic format, reviewed and approved by the Director;

5. Construction is complete and the permittee has submitted to the Director in an electronic format a notice that completed construction is in compliance with 40 CFR 146.86 and Section I of this permit;

6. The Director has inspected or otherwise reviewed the injection well and all submitted information and finds it is in compliance with the conditions of the permit;

7. The Director has approved demonstration of the alarm system and shut-off system under Section K.6 of this permit; and.

8. The Director has given written authorization to commence injection.

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## ATTACHMENTS

These attachments include, but are not limited to, permit conditions and plans concerning operating procedures, monitoring and reporting, as required by 40 CFR Parts 144 and 146. The permittee shall comply with these conditions and adhere to these plans as approved by the Director, as follows:

**A. SUMMARY OF OPERATING REQUIREMENTS**

**B. AREA OF REVIEW AND CORRECTIVE ACTION PLAN**

**C. TESTING AND MONITORING PLAN**

**D. WELL PLUGGING PLAN**

**E. POST-INJECTION SITE CARE AND SITE CLOSURE PLAN**

**F. EMERGENCY AND REMEDIAL RESPONSE PLAN**

**G. CONSTRUCTION DETAILS**

**H. FINANCIAL ASSURANCE DEMONSTRATION**

**I. STIMULATION PROGRAM**

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# Exhibit A-4

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U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDERGROUND INJECTION CONTROL PERMIT

CLASS VI

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 W. JACKSON BOULEVARD
CHICAGO, IL 60604-3590



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNDERGROUND INJECTION CONTROL PERMIT: CLASS VI

**Permit Number: IL-137-6A-0004**
**Facility Name: FutureGen Industrial Alliance, Inc.**

Pursuant to the Safe Drinking Water Act and Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 124, 144, 146, and 147,

**FutureGen Industrial Alliance, Inc. of Jacksonville, Illinois**

hereinafter, the permittee, is hereby authorized to construct and operate a Class VI injection well located in the State of Illinois, Morgan County, Township 16N, Range 9W, Section 26, latitude 39.80111°N and longitude 90.07544°W, for injection of the carbon dioxide ($CO_2$) stream generated by an oxy-combustion power plant in Meredosia, Illinois and as characterized in the permit application and the administrative record as a liquid, supercritical fluid, or gas into the Mount Simon and Eau Claire Formations at depths between 3785 feet and 4432 feet below ground surface upon the express condition that the permittee meet the restrictions set forth herein. The designated confining zone for this injection well is identified as the upper part of the Eau Claire Formation formed by the upper part of the Lombard Member and the Proviso Member. Injection shall not commence until the operator has received written authorization from the Director of the Water Division of EPA Region 5, in accordance with Section Q of this permit.

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit is effective. The following attachments are incorporated into this permit as enforceable conditions: A, B, C, D, E, F, G, H and I.

This permit shall become effective on OCT 14 2014, and shall remain in full force and effect during the operating life of the facility and the post-injection site care period until site closure is authorized and completed, unless this permit is revoked and reissued, terminated, or modified pursuant to 40 CFR 144.39, 144.40, or 144.41. This permit shall also remain in effect upon delegation of primary enforcement responsibility to the State of Illinois until such time as the State issues its own permit to the permittee or the State chooses to adopt this permit as a State permit. The permit will expire in one year if the permittee fails to commence construction, unless a written request in electronic format for an extension of this one-year period has been approved by the Director. The permittee may request an expiration date sooner than the one-year period, provided no construction on the well has commenced. This permit will be reviewed at least every five years from the effective date specified above.

Signed and Dated: August 29, 2014

Tinka G. Hyde
Director, Water Division

## PERMIT CONDITIONS

### A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. Notwithstanding any other provisions of this permit, the permittee authorized by this permit shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection, annulus or formation fluids into underground sources of drinking water (USDWs) or any unauthorized zones. The objective of this permit is to prevent the movement of fluids into or between USDWs or into any unauthorized zones consistent with the requirements at 40 CFR 146.86(a). Any underground injection activity not specifically authorized in this permit is prohibited. For purposes of enforcement, compliance with this permit during its term constitutes compliance with Part C of the Safe Drinking Water Act (SDWA). Such compliance does not constitute a defense to any action brought under Section 1431 of the SDWA or any other common or statutory law other than Part C of the SDWA. 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 State or local laws or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

### B. PERMIT ACTIONS

1. **Modification, Revocation and Reissuance, and Termination** – The Director of the Water Division of Region 5 of the U. S. Environmental Protection Agency (EPA), hereinafter, the Director, may, for cause or upon request from any interested person, including the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR 124.5, 144.12, 146.86(a), 144.39, and 144.40. The permit is also subject to minor modifications for cause as specified in 40 CFR 144.41. The filing of a request 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.

2. **Minor Modifications** – Upon the consent of the permittee, the Director may modify a permit to make the corrections or allowances for minor changes in the permitted activity as listed in 40 CFR 144.41. Any permit modification not processed as a minor modification under 40 CFR 144.41 must be made for cause, and with part 124 draft permit and public notice as required in 40 CFR 144.39.

3. **Transfer of Permits** – This permit is not transferable to any person except in accordance with 40 CFR 144.38(a) and Section N(6)(b) of this permit.

### C. SEVERABILITY

The provisions of this 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 shall not be affected thereby.

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## D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 (Public Information) and 40 CFR 144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential business information by the submitter. Any such claim must be asserted at the time of submission by clearly identifying each page with the words "confidential business information" on every page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2. Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee; and

2. Information which deals with the existence, absence or level of contaminants in drinking water.

## E. DEFINITION

All terms used in this permit shall have the meaning set forth in the SDWA and Underground Injection Control regulations specified at 40 CFR parts 124, 144, 146, and 147. Unless specifically stated otherwise, all references to “days” in this permit should be interpreted as calendar days.

## F. DUTIES AND REQUIREMENTS

1. **Duty to Comply** – The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.

2. **Duty to Reapply** – If the permittee wishes to continue an activity regulated by this permit after the expiration or termination of this permit, the permittee must apply for and obtain a new permit.

3. **Penalties for Violations of Permit Conditions** – Any person who violates a permit requirement is subject to civil penalties and other enforcement action under the SDWA. Any person who willfully violates permit conditions may be subject to criminal prosecution under the SDWA and other applicable statutes and regulations.

4. **Need to Halt or Reduce Activity Not a Defense** – It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. **Duty to Mitigate** – The permittee shall take all timely and reasonable steps necessary to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. **Proper Operation and Maintenance** – The permittee shall at all times properly operate and

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maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, among other things, 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 this permit.

7. **Duty to Provide Information** – The permittee shall furnish to the Director in an electronic format, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit or the UIC regulations. The permittee shall also furnish to the Director, upon request within a time specified, electronic copies of records required to be kept by this permit.

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

   (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where electronic or non-electronic records are kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any electronic or non-electronic records that are kept under the conditions of this permit;

   (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   (d) Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location, including facilities, equipment or operations regulated or required under this permit.

9. **Signatory Requirements** – All reports or other information, required to be submitted by this permit or requested by the Director shall be signed and certified in accordance with 40 CFR 144.32.

## G. AREA OF REVIEW AND CORRECTIVE ACTION

1. The Area of Review (AoR) is the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity. The area of review is delineated using computational modeling that accounts for the physical and chemical properties of all phases of the injected carbon dioxide stream and is based on available site characterization, monitoring, and operational data. The permittee shall maintain and comply with the approved Area of Review and Corrective Action Plan (Attachment B of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.84.

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2. At the fixed frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee must reevaluate the area of review and perform corrective action in the manner specified in 40 CFR 146.84 and update the Area of Review and Corrective Action Plan or demonstrate to the Director that no update is needed.

3. Following each AoR reevaluation or a demonstration that no evaluation is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the AoR results. Once approved by the Director, the revised Area of Review and Corrective Action Plan will become an enforceable condition of this permit.

## H. FINANCIAL RESPONSIBILITY

1. **Financial Responsibility** – The permittee shall maintain financial responsibility and resources to meet the requirements of 40 CFR 146.85 and the conditions of this permit. Financial responsibility shall be maintained through all phases of the project. The approved financial assurance mechanisms are found in Attachment H and in the administrative record of this permit.

   The financial instrument(s) must be sufficient to cover the cost of:

   (a) Corrective action (that meets the requirements of 40 CFR 146.84);

   (b) Injection well plugging (that meets the requirements of 40 CFR 146.92);

   (c) Post injection site care and site closure (that meets the requirements of 40 CFR 146.93);

   (d) Emergency and remedial response (that meets the requirements of 40 CFR 146.94).

2. **Cost Estimate Updates** – During the active life of the geologic sequestration project, the permittee must adjust the cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) and provide this adjustment to the Director in an electronic format. The permittee must also provide to the Director written updates in an electronic format of adjustments to the cost estimate within 60 days of any amendments to the Project Plans included as Attachments B – F of this permit, which address items (a) through (d) in Section H(1) of this permit.

3. **Notification** –

   (a) Whenever the current cost estimate increases to an amount greater than the face amount of a financial instrument currently in use, the permittee, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current cost estimate and submit evidence of such increase to the Director, or obtain other financial responsibility instruments to cover the increase. Whenever the current cost estimate decreases, the face amount of the financial assurance instrument may be reduced to the amount of the current cost estimate only after the permittee has received written approval from the Director.

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(b) The permittee must notify the Director by certified mail and in an electronic format of adverse financial conditions such as bankruptcy that may affect the ability to carry out injection well plugging, post-injection site care and site closure, and any applicable ongoing actions under Corrective Action and/or Emergency and Remedial Response.

(i) In the event that the permittee or the third party provider of a financial responsibility instrument is going through a bankruptcy, the permittee must notify the Director by certified mail and in an electronic format of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the permittee as debtor, within 10 days after commencement of the proceeding.

(ii) A guarantor of a corporate guarantee must make such a notification if he or she is named as debtor, as required under the terms of the guarantee.

(iii) A permittee who fulfills the requirements of paragraph (a) of this section by obtaining a trust fund, surety bond, letter of credit, escrow account, or insurance policy will be deemed to be without the required financial assurance in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee of the institution issuing the trust fund, surety bond, letter of credit, escrow account, or insurance policy.

4. **Establishing Other Coverage** – The permittee must establish other financial assurance or liability coverage acceptable to the Director, within 60 days of the occurrence of the events in Section H(2) or H(3) of this permit.

## I. CONSTRUCTION

1. **Siting** – The permittee has demonstrated to the satisfaction of the Director that the well is in an area with suitable geology in accordance with the requirements at 40 CFR 146.83.

2. **Casing and Cementing** – Casing and cement or other materials used in the construction of the well must have sufficient structural strength for the life of the geologic sequestration project. All well materials must be compatible with all fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The casing and cementing program must prevent the movement of fluids into or between USDWs for the expected life of the well in accordance with 40 CFR 146.86. The casing and cement used in the construction of this well are shown in Attachment G of this permit and in the administrative record for this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

3. **Tubing and Packer Specifications** – Tubing and packer materials used in the construction of the well must be compatible with fluids with which the materials may be expected to come into contact and must meet or exceed standards developed for such materials by the American Petroleum Institute, ASTM International, or comparable standards acceptable to the Director. The permittee shall inject only through tubing with a packer set within the long string casing at a point within or below the confining zone immediately above the injection

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zone. The tubing and packer used in the well are represented in engineering drawings contained in Attachment G of this permit. Any change must be submitted in an electronic format for approval by the Director before installation.

## J. PRE-INJECTION TESTING

1. Prior to the Director authorizing injection, the permittee shall perform all pre-injection logging, sampling, and testing specified at 40 CFR 146.87. This testing shall include:

   (a) Logs, surveys and tests to determine or verify the depth, thickness, porosity, permeability, lithology, and formation fluid salinity in all relevant geologic formations. These tests shall include:

      (i) Deviation checks that meet the requirements of 40 CFR 146.87(a)(1);

      (ii) Logs and tests before and upon installation of the surface casing that meet the requirements of 40 CFR 146.87(a)(2);

      (iii) Logs and tests before and upon installation of the long-string casing that meet the requirements of 40 CFR 146.87(a)(3);

      (iv) Tests to demonstrate internal and external mechanical integrity that meet the requirements of 40 CFR 146.87(a)(4); and

      (v) Any alternative methods that are required by and/or approved by the Director pursuant to 40 CFR 146.87(a)(5).

   (b) Whole cores or sidewall cores of the injection zone and confining system and formation fluid samples from the injection zone that meet the requirements of 40 CFR 146.87(b);

   (c) Records of the fluid temperature, pH, conductivity, reservoir pressure, and static fluid level of the injection zone that meet the requirements of 40 CFR 146.87(c);

   (d) Tests as necessary to provide information about the injection and confining zones to allow determination or calculation of the fracture pressure and the physical and chemical characteristics of the injection and confining zones and the formation fluids in the injection zone that meet the requirements of 40 CFR 146.87(d); and

   (e) Tests to verify hydrogeologic characteristics of the injection zone that meet the requirements of 40 CFR 146.87(e), including:

      (i) A pressure fall-off test and

      (ii) A pumping test or injectivity tests.

2. The permittee shall submit to the Director for approval in an electronic format a schedule for logging and testing activities 30 days prior to conducting the first test and submit any changes to the schedule 30 days prior to the next scheduled test. The permittee must provide

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the Director or their representative with the opportunity to witness all logging, sampling, and testing required under this Section.

## K. OPERATIONS

1. **Injection Pressure Limitation** – Except during stimulation, the permittee must ensure that injection pressure does not exceed 90 percent of the fracture pressure of the injection zone(s) so as to ensure that the injection does not initiate new fractures or propagate existing fractures in the injection zone(s). In no case shall injection pressure initiate fractures or propagate existing fractures in the confining zone or cause the movement of injection or formation fluids into a USDW. The maximum injection pressure limit is listed in Attachment A.

2. **Stimulation Program** – Pursuant to requirements at 40 CFR 146.82(a)(9), all stimulation programs proposed by the permittee must be approved by the Director as a permit modification and incorporated into Attachment I of this permit.

3. **Additional Injection Limitation** – No injectate other than that identified on page 1 of this permit shall be injected except fluids used for stimulation, rework, and well tests as approved by the Director.

4. **Annulus Fluid** – The permittee must fill the annulus between the tubing and the long string casing with a non-corrosive fluid approved by the Director.

5. **Annulus/Tubing Pressure Differential** – Except during workovers or times of annulus maintenance, the permittee must maintain on the annulus a pressure that exceeds the operating injection pressure as specified in Attachment A of this permit, unless the Director determines that such requirement might harm the integrity of the well or endanger USDWs.

6. **Automatic Alarms and Automatic Shut-off System** –

   (a) The permittee must:

      (i) Install, continuously operate, and maintain an automatic alarm and an automatic shut-off system or, at the discretion of the Director, down-hole shut-off systems, or other mechanical devices that provide equivalent protection; and

      (ii) Successfully demonstrate the functionality of the alarm system and shut-off system prior to the Director authorizing injection, and at a minimum of once every twelfth month after the last approved demonstration.

   (b) Testing under this Section must involve subjecting the system to simulated failure conditions and must be witnessed by the Director or his or her representative unless the Director authorizes an unwitnessed test in advance. The permittee must provide notice in an electronic format 30 days prior to running the test and must provide the Director or their representative the opportunity to attend. The test must be documented using either a mechanical or digital device which records the value of

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the parameter of interest, or by a service company job record. A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

7. **Precautions to Prevent Well Blowouts** – At all times, the permittee shall maintain on the well a pressure which will prevent the return of the injection fluid to the surface. The well bore must be filled with a high specific gravity fluid during workovers to maintain a positive (downward) gradient and/or a plug shall be installed which can resist the pressure differential. A blowout preventer must be installed and kept in proper operational condition whenever the wellhead is removed to work on the well. The permittee shall follow procedures such as those below to assure that a backflow or blowout does not occur:

   (a) Limit the temperature and/or corrosivity of the injectate; and

   (b) Develop procedures necessary to assure that pressure imbalances do not occur.

8. **Circumstances Under Which Injection Must Cease** –

   Injection shall cease when any of the following circumstances arises:

   (a) Failure of the well to pass a mechanical integrity test;

   (b) A loss of mechanical integrity during operation;

   (c) The automatic alarm or automatic shut-off system is triggered;

   (d) A significant unexpected change in the annulus or injection pressure;

   (e) The Director determines that the well lacks mechanical integrity; or

   (f) The permittee is unable to maintain compliance with any permit condition or regulatory requirement and the Director determines that injection should cease.

9. **Approaches for Ceasing Injection** –

   (a) The permittee must shut-in the well by gradual reduction in the injection pressure as outlined in Attachment A of this permit; or

   (b) The permittee must immediately cease injection and shut-in the well as outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

## L. MECHANICAL INTEGRITY

1. **Standards** – Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the injection well must have and maintain mechanical integrity consistent with 40 CFR 146.89. To meet these requirements, mechanical integrity

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tests/demonstrations must be witnessed by the Director or an authorized representative of the Director unless prior approval has been granted by the Director to run an un-witnessed test. In order to conduct testing without an EPA representative, the following procedures must be followed.

(a) The permittee must submit prior notification in an electronic format within the time period specified in Section L(3) of this permit, including the information that no EPA representative is available, and receive permission from the Director to proceed;

(b) The test must be performed in accordance with the Testing and Monitoring Plan (Attachment C of this permit) and documented using either a mechanical or digital device that records the value of the parameter of interest;

(c) A final report including any additional interpretation necessary for evaluation of the testing must be submitted in an electronic format within the time period specified in Section N(4) of this permit.

2. **Mechanical Integrity Testing** – The permittee shall conduct a casing inspection log and mechanical integrity testing as follows:

(a) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate internal mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A pressure test with liquid or gas; and

(ii) A casing inspection log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(b) Prior to receiving authorization to inject, the permittee shall perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.87(a)(4):

(i) A tracer survey such as an oxygen activation log; or

(ii) A temperature or noise log; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(c) Other than during periods of well workover (maintenance) approved by the Director in which the sealed tubing-casing annulus is disassembled for maintenance or corrective procedures, the permittee must continuously monitor injection pressure, injection rate, injection volumes; pressure on the annulus between tubing and long string casing; and annulus fluid volume as specified in 40 CFR 146.88(e), and 146.89(b).

(d) At least once per year, the permittee must perform the following testing to demonstrate external mechanical integrity pursuant to 40 CFR 146.89(c):

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(i) An Administrator-approved tracer survey such as an oxygen-activation log; or

(ii) A temperature or noise log. The Director may require such tests whenever the well is worked over; or

(iii) An alternative approved by the Director that has been approved by the Administrator pursuant to requirements at 40 CFR 146.89(e).

(e) After any workover that may compromise the internal mechanical integrity of the well, the well shall be tested by means of a pressure test approved by the Director and the well must pass the test to demonstrate mechanical integrity.

(f) Prior to plugging the well, the permittee shall demonstrate external mechanical integrity as described in the Injection Well Plugging Plan and that meets the requirements of 40 CFR 146.92(a).

(g) The Director may require the use of any other tests to demonstrate mechanical integrity other than those listed above with the written approval of the Administrator pursuant to requirements at 40 CFR 146.89(e).

3. **Prior Notice and Reporting** –

(a) The permittee shall notify the Director in an electronic format of his or her intent to demonstrate mechanical integrity in an electronic format at least 30 days prior to such demonstration. At the discretion of the Director a shorter time period may be allowed.

(b) Reports of mechanical integrity demonstrations which include logs must include an interpretation of results by a knowledgeable log analyst. The permittee shall report in an electronic format the results of a mechanical integrity demonstration within the time period specified in Section N(4) of this permit.

4. **Gauge and Meter Calibration** – The permittee shall calibrate all gauges used in mechanical integrity demonstrations and other required monitoring to an accuracy of not less than 0.5 percent of full scale, within one year prior to each required test. The date of the most recent calibration shall be noted on or near the gauge or meter. A copy of the calibration certificate shall be submitted to the Director in an electronic format with the report of the test. Pressure gauge resolution shall be no greater than five psi. Certain mechanical integrity and other testing may require greater accuracy and shall be identified in the procedure submitted to the Director prior to the test.

5. **Loss of Mechanical Integrity** –

(a) If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or fails to maintain mechanical integrity during operation, or that a loss of mechanical integrity as defined by 40 CFR 146.89(a)(1) or (2) is suspected during operation (such as a significant unexpected change in the annulus or injection pressure), the permittee must:

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(i) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

(ii) Take all steps reasonably necessary to determine whether there may have been a release of the injected carbon dioxide stream or formation fluids into any unauthorized zone. If there is evidence of USDW endangerment, implement the Emergency and Remedial Response Plan (Attachment F of this permit);

(iii) Follow the reporting requirements as directed in Section N of this permit;

(iv) Restore and demonstrate mechanical integrity to the satisfaction of the Director and receive written approval from the Director prior to resuming injection; and

(v) Notify the Director in an electronic format when injection can be expected to resume.

(b) If a shutdown (*i.e.,* down-hole or at the surface) is triggered, the permittee must immediately investigate and identify as expeditiously as possible the cause of the shutdown. If, upon such investigation, the well appears to be lacking mechanical integrity, or if monitoring required indicates that the well may be lacking mechanical integrity, the permittee must take the actions listed above in Section L(5)(a)(i) through (v).

(c) If the well loses mechanical integrity prior to the next scheduled test date, then the well must either be plugged or repaired and retested within 30 days of losing mechanical integrity. The permittee shall not resume injection until mechanical integrity is demonstrated and the Director gives written approval to recommence injection in cases where the well has lost mechanical integrity.

6. **Mechanical Integrity Testing on Request From Director** – The permittee shall demonstrate mechanical integrity at any time upon written notice from the Director.

## M. TESTING AND MONITORING

1. **Testing and Monitoring Plan** –

(a) The permittee shall maintain and comply with the approved Testing and Monitoring Plan (Attachment C of this permit) and with the requirements at 40 CFR 144.51(j), 146.88(e), and 146.90. The Testing and Monitoring Plan is an enforceable condition of this permit. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Procedures for all testing and monitoring under this permit must be submitted to the Director in an electronic format for approval at least 30 days prior to the test. In performing all testing and monitoring under this permit, the permittee must follow the procedures approved by the Director. If the permittee is unable to follow the EPA approved procedures, then, the permittee must contact the Director at least 30 days prior to testing to discuss options, if any are feasible. When the test report is submitted, a full explanation must be provided as to why any approved procedures were

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not followed. If the approved procedures were not followed, EPA may take an appropriate action, including but not limited to, requiring the permittee to re-run the test.

(b) The permittee must update the Testing and Monitoring Plan as required at 40 CFR 146.90 (j) to incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Testing and Monitoring Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of monitoring wells or newly permitted injection wells within the AoR; or when required by the Director.

(c) Following each update of the Testing and Monitoring Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and approval of the results. Once approved by the Director, the revised Testing and Monitoring Plan will become an enforceable condition of this permit.

2. **Carbon Dioxide Stream Analysis** – The permittee shall analyze the carbon dioxide stream with sufficient frequency to yield data representative of its chemical and physical characteristics, as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(a).

3. **Continuous Monitoring** – The permittee shall maintain continuous monitoring devices and use them to monitor injection pressure, flow rate, volume, the pressure on the annulus between the tubing and the long string of casing, annulus fluid level, and temperature. This monitoring shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(b). The permittee shall maintain for EPA's inspection at the facility an appropriately scaled, continuous record of these monitoring results as well as original files of any digitally recorded information pertaining to these operations.

4. **Corrosion Monitoring** – The permittee shall perform corrosion monitoring of the well materials for loss of mass, thickness, cracking, pitting, and other signs of corrosion on a quarterly basis using the procedures described in the Testing and Monitoring Plan and in accordance with 40 CFR 146.90(c) to ensure that the well components meet the minimum standards for material strength and performance set forth in 40 CFR 146.86(b).

5. **Ground Water Quality Monitoring**– The permittee shall monitor ground water quality and geochemical changes above the confining zone(s) that may be a result of carbon dioxide movement through the confining zone(s) or additional identified zones. This monitoring shall be performed for the parameters identified in the Testing and Monitoring Plan at the locations and depths, and at frequencies described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(d).

6. **External Mechanical Integrity Testing** – The permittee shall demonstrate external mechanical integrity as described in the Testing and Monitoring Plan and Section L of this permit to meet the requirements of 40 CFR 146.90(e).

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7. **Pressure Fall-Off Test** – The permittee shall conduct a pressure fall-off test at least once every five years unless more frequent testing is required by the Director based on site-specific information. The test shall be performed as described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(f).

8. **Plume and Pressure Front Tracking** –The permittee shall track the extent of the carbon dioxide plume and the presence or absence of elevated pressure (e.g., the pressure front) as described in the Testing and Monitoring Plan.

   (a) The permittee shall use direct methods to track the position of the carbon dioxide plume and the pressure front in the injection zone as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(1).

   (b) The permittee shall use indirect methods to track the position of the carbon dioxide plume and pressure front as described in the Testing and Monitoring Plan and to meet the requirements of 40 CFR 146.90(g)(2).

9. **Surface Air and/or Soil Gas Monitoring** – The permittee shall conduct any surface air monitoring and/or soil gas monitoring required by the Director to detect movement of carbon dioxide that could endanger a USDW at the frequency and locations described in the Testing and Monitoring Plan to meet the requirements of 40 CFR 146.90(h).

10. **Additional Monitoring** – If required by the Director as provided in 40 CFR 146.90(i), the permittee shall perform any additional monitoring determined to be necessary to support, upgrade, and improve computational modeling of the AoR evaluation required under 40 CFR 146.84(c) and to determine compliance with standards under 40 CFR 144.12 or 40 CFR 146.86(a). This monitoring shall be performed as described in a modification to the Testing and Monitoring Plan.

## N. REPORTING AND RECORDKEEPING

1. **Electronic Reporting** – Electronic reports, submittals, notifications and records made and maintained by the permittee under this permit must be in an electronic format approved by EPA. The permittee shall electronically submit all required reports to the Director at:

   https://epa.velo.pnnl.gov/operators

2. **Semi-Annual Reports** – The permittee shall submit semi-annual reports containing:

   (a) Any changes to the physical, chemical, and other relevant characteristics of the carbon dioxide stream from the proposed operating data;

   (b) Monthly average, maximum, and minimum values for injection pressure, flow rate and daily volume, temperature, and annular pressure;

   (c) A description of any event that exceeds operating parameters for annulus pressure or injection pressure specified in the permit;

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(d) A description of any event which triggers the shut-off systems required in Section(K)(6) of this permit pursuant to 40 CFR 146.88(e), and the response taken;

(e) The monthly volume and/or mass of the carbon dioxide stream injected over the reporting period and the volume and/or mass injected cumulatively over the life of the project;

(f) Monthly annulus fluid volume added or produced; and

(g) Results of the continuous monitoring required in Section M(3) including:

(i) A tabulation of: (1) daily maximum injection pressure, (2) daily minimum annulus pressure, (3) daily minimum value of the difference between simultaneous measurements of annulus and injection pressure, (4) daily volume, (5) daily maximum flow rate, and (6) average annulus tank fluid level; and

(ii) Graph(s) of the continuous monitoring as required in Section M(3) of this permit, or of daily average values of these parameters. The injection pressure, injection volume and flow rate, annulus fluid level, annulus pressure, and temperature shall be submitted on one or more graphs, using contrasting symbols or colors, or in another manner approved by the Director; and

(h) Results of any additional monitoring identified in the Testing and Monitoring Plan and described in Section M of this permit.

3. **24-Hour Reporting** –

(a) The permittee shall report to the Director any permit noncompliance which may endanger human health or the environment and/or any events that require implementation of actions in the Emergency and Remedial Response Plan (Attachment F of this permit). Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such verbal reports shall include, but not be limited to the following information:

(i) Any evidence that the injected carbon dioxide stream or associated pressure front may cause an endangerment to a USDW, or any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW;

(ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs;

(iii) Any triggering of the shut-off system required in Section (K)(6) of this permit (i.e., down-hole or at the surface);

(iv) Any failure to maintain mechanical integrity;

(v) Pursuant to compliance with the requirement at 40 CFR 146.90(h) for surface

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air/soil gas monitoring or other monitoring technologies, if required by the Director, any release of carbon dioxide to the atmosphere or biosphere; and

(vi) Actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit).

(b) A written submission shall be provided to the Director in an electronic format within five days of the time the permittee becomes aware of the circumstances described in Section(N)(3)(a) of this permit. The submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue as well as actions taken to implement appropriate protocols outlined in the Emergency and Remedial Response Plan (Attachment F of this permit); and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.

4. **Reports on Well Tests and Workovers** – Report, within 30 days, the results of:

(a) Periodic tests of mechanical integrity;

(b) Any well workover, including stimulation;

(c) Any other test of the injection well conducted by the permittee if required by the Director; and

(d) Any test of any monitoring well required by this permit.

5. **Advance Notice Reporting** –

(a) **Well Tests** – The permittee shall give at least 30 days advance written notice to the Director in an electronic format of any planned workover, stimulation, or other well test.

(b) **Planned Changes** – The permittee shall give written notice to the Director in an electronic format, as soon as possible, of any planned physical alterations or additions to the permitted injection facility other than minor repair/replacement or maintenance activities. An analysis of any new injection fluid shall be submitted to the Director for review and written approval at least 30 days prior to injection; this approval may result in a permit modification.

(c) **Anticipated Noncompliance** – The permittee shall give at least 14 days advance written notice to the Director in an electronic format of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

6. **Additional Reports** –

(a) **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 in an electronic format by the permittee no

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later than 30 days following each schedule date.

(b) **Transfer of Permits** – This permit is not transferable to any person except after notice is sent to the Director in an electronic format at least 30 days prior to transfer and the requirements of 40 CFR 144.38(a) have been met. Pursuant to requirements at 40 CFR 144.38(a), the Director will require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the SDWA.

(c) **Other Noncompliance** – The permittee shall report in an electronic format all other instances of noncompliance not otherwise reported with the next monitoring report. The reports shall contain the information listed in Section N(3)(b) of this permit.

(d) **Other Information** – When the permittee becomes aware of failure to submit any relevant facts in the permit application or that incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such facts or corrected information in an electronic format within 10 days in accordance with 40 CFR 144.51(l)(8).

(e) **Report on Permit Review** – Within 30 days of receipt of this permit, the permittee shall certify to the Director in an electronic format that he or she has read and is personally familiar with all terms and conditions of this permit.

**7. Records** –

(a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit (including records from pre-injection, active injection, and post-injection phases) for a period of at least 10 years from collection.

(b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information (e.g. modeling inputs for AoR delineations and reevaluations, plan modifications) submitted under 40 CFR 144.27, 144.31, 144.39, and 144.41 for a period of at least 10 years after site closure.

(c) The permittee shall retain records concerning the nature and composition of all injected fluids until 10 years after site closure.

(d) The retention periods specified in Section N(7)(a) through (c) of this permit may be extended by request of the Director at any time. The permittee shall continue to retain records after the retention period specified in Section N(7)(a) through (c) of this permit or any requested extension thereof expires unless the permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

(e) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

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(ii) The name(s) of the individual(s) who performed the sampling or measurements;

(iii) A precise description of both sampling methodology and the handling of samples;

(iv) The date(s) analyses were performed;

(v) The name(s) of the individual(s) who performed the analyses;

(vi) The analytical techniques or methods used; and

(vii) The results of such analyses.

## O. WELL PLUGGING, POST-INJECTION SITE CARE, AND SITE CLOSURE

1. **Well Plugging Plan** – The permittee shall maintain and comply with the approved Well Plugging Plan (Attachment D of this permit) which is an enforceable condition of this permit and shall meet the requirements of 40 CFR 146.92.

2. **Revision of Well Plugging Plan** – If the permittee finds it necessary to change the Well Plugging Plan (Attachment D of this permit), a revised plan shall be submitted in an electronic format to the Director for written approval. Any amendments to the Well Plugging Plan must be approved by the Director and must be incorporated into the permit, and are subject to the permit modification requirements at 40 CFR 144.39 or 144.41.

3. **Notice of Plugging and Abandonment** – The permittee must notify the Director in writing in an electronic format pursuant to 40 CFR 146.92(c), at least 60 days before plugging, conversion or abandonment of a well. At the discretion of the Director, a shorter notice period may be allowed.

4. **Plugging and Abandonment Approval and Report** –

(a) The permittee must receive written approval of the Director before plugging the well and shall plug and abandon the well in accordance with 40 CFR 146.92, as provided in the Well Plugging Plan (Attachment D of this permit).

(b) Within 60 days after plugging, the permittee must submit in an electronic format a plugging report to the Director. The report must be certified as accurate by the permittee and by the person who performed the plugging operation (if other than the permittee.) The permittee shall retain the well plugging report in an electronic format for 10 years following site closure. The report must include:

(i) A statement that the well was plugged in accordance with the Well Plugging Plan previously approved by the Director (Attachment D of this permit); or

(ii) If the actual plugging differed from the approved plan, a statement describing the actual plugging and an updated plan specifying the differences from the plan previously submitted and explaining why the Director should approve such

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deviation. If the Director determines that a deviation from the plan incorporated in this permit may endanger underground sources of drinking water, the permittee shall replug the well as required by the Director.

5. **Temporary Abandonment** – If the permittee ceases injection into the well for more than 24 consecutive months, the well is considered to be in a temporarily abandoned status, and the permittee shall plug and abandon the well in accordance with the approved Well Plugging Plan, 40 CFR 144.52 (a)(6), and 40 CFR 146.92, or make a demonstration of non-endangerment of this well while it is in temporary abandonment status. During any periods of temporary abandonment or disuse, the well will be tested to ensure that it maintains mechanical integrity, according to the requirements and frequency specified in Section L(2) of this permit. The permittee shall continue to comply with the conditions of this permit, including all monitoring and reporting requirements according to the frequencies outlined in the permit.

6. **Post-Injection Site Care and Site Closure Plan** –

   (a) The permittee shall maintain and comply with the Post-Injection Site Care and Site Closure Plan, found as Attachment E of this permit, which meets the requirements of 40 CFR 146.93 and is an enforceable condition of this permit. The permittee shall:

      (i) Upon cessation of injection, either submit in an electronic format for the Director's approval an amended Post-Injection Site Care and Site Closure Plan or demonstrate through monitoring data and modeling results that no amendment to the plan is needed.

      (ii) At any time during the life of the project, the permittee may modify and resubmit in an electronic format the Post-Injection Site Care and Site Closure Plan for the Director's approval. The permittee may, as part of such modifications to the Plan, request a modification to the post-injection site care timeframe that includes documentation of the information at 40 CFR 146.93(c)(1).

   (b) The permittee shall monitor the site following the cessation of injection to show the position of the carbon dioxide plume and pressure front and demonstrate that USDWs are not being endangered, as specified in the Post-Injection Site Care and Site Closure Plan and in 40 CFR 146.90, and 40 CFR 146.93, including:

      (i) Ground water quality monitoring;

      (ii) Tracking the position of the carbon dioxide plume and pressure front including direct pressure monitoring and geochemical plume monitoring and the use of indirect methods;

      (iii) Any other required monitoring, e.g., soil gas and/or surface air monitoring described in the Post-Injection Site Care and Site Closure Plan;

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(iv) The permittee shall submit in an electronic format the results of all monitoring performed according to the schedule identified in the Post-Injection Site Care and Site Closure Plan; and

(v) The permittee shall continue to conduct post-injection site monitoring for at least 50 years or for the duration of any alternative timeframe approved pursuant to 40 CFR 146.93(c) and the Post-Injection Site Care and Site Closure Plan.

(c ) The post-injection monitoring must continue until the project no longer poses an endangerment to USDWs and the demonstration pursuant to 40 CFR 146.93(b)(2) and as described in Section O(6)(d) of this permit is approved by the Director.

(d) Prior to authorization for site closure, the permittee shall submit to the Director for review and approval, in an electronic format, a demonstration, based on information collected pursuant to Section O(6)(b) of this permit, that the carbon dioxide plume and the associated pressure front do not pose an endangerment to USDWs and that no additional monitoring is needed to ensure that the project does not pose an endangerment to USDWs, as required under 40 CFR 146.93(b)(3). The Director reserves the right to amend the post-injection site monitoring requirements (including extend the monitoring period) if there is a concern that USDWs are being endangered.

(e) The permittee shall notify the Director in an electronic format at least 120 days before site closure. At this time, if any changes to the approved Post-Injection Site Care and Site Closure Plan in Attachment E of this permit are proposed, the permittee shall submit a revised plan.

(f) After the Director has authorized site closure, the permittee shall plug all monitoring wells as specified in Attachment E of this permit – the Post-Injection Site Care and Site Closure Plan – in a manner which will not allow movement of injection or formation fluids that endangers a USDW. The permittee shall also restore the site to its pre-injection condition.

(g) The permittee shall submit a site closure report in an electronic format to the Director within 90 days of site closure. The report must include the information specified at 40 CFR 146.93(f).

(h) The permittee shall record a notation on the deed to the facility property or any other document that is normally examined during a title search that will in perpetuity provide any potential purchaser of the property the information listed at 40 CFR 146.93(g).

(i) The permittee shall retain for 10 years following site closure an electronic copy of the site closure report , records collected during the post-injection site care period, and any other records required under 40 CFR 146.91(f)(4). The permittee shall deliver the records in an electronic format to the Director at the conclusion of the retention period.

US EPA ARCHIVE DOCUMENT

## P. EMERGENCY AND REMEDIAL RESPONSE

1. The Emergency and Remedial Response Plan describes actions the permittee must take to address movement of the injection or formation fluids that may cause an endangerment to a USDW during construction, operation, and post-injection site care periods. The permittee shall maintain and comply with the approved Emergency and Remedial Response Plan (Attachment F of this permit), which is an enforceable condition of this permit, and with 40 CFR 146.94.

2. If the permittee obtains evidence that the injected carbon dioxide and/or associated pressure front may cause endangerment to a USDW, the permittee must:

   (a) Cease injection in accordance with Sections K(8) and K(9)(a) or (b), and Attachments C or F of this permit;

   (b) Take all steps reasonably necessary to identify and characterize any release;

   (c) Notify the Director within 24 hours; and

   (d) Implement the Emergency and Remedial Response Plan (Attachment F of this permit) approved by the Director.

3. At the frequency specified in the Area of Review and Corrective Action Plan, or more frequently when monitoring and operational conditions warrant, the permittee shall review and update the Emergency and Remedial Response Plan as required at 40 CFR 146.94(d) or demonstrate to the Director that no update is needed. The permittee shall also incorporate monitoring and operational data and in response to AoR reevaluations required under Section G.2. of this permit or demonstrate to the Director that no update is needed. The amended Emergency and Remedial Response Plan or demonstration shall be submitted to the Director in an electronic format within one year of an AoR reevaluation; following any significant changes to the facility such as addition of injection wells; or when required by the Director.

4. Following each update of the Emergency and Remedial Response Plan or a demonstration that no update is needed, the permittee shall submit the resultant information in an electronic format to the Director for review and confirmation of the results. Once approved by the Director, the revised Emergency and Remedial Response Plan will become an enforceable condition of this permit.

## Q. COMMENCING INJECTION

The permittee may not commence injection until:

1. Results of the formation testing and logging program as specified in Section J of this permit and in 40 CFR 146.87 are submitted to the Director in an electronic format and subsequently reviewed and approved by the Director;

US EPA ARCHIVE DOCUMENT

2. Mechanical integrity of the well has been demonstrated in accordance with 40 CFR 146.89(a)(1) and (2), and in accordance with Section L(1) through (3) of this permit;

3. The completion of corrective action required by the Area of Review and Corrective Action Plan found in Attachment B of this permit in accordance with 40 CFR 146.84;

4. All requirements at 40 CFR 146.82(c) have been met, including but not limited to reviewing and updating of the Area of Review and Corrective Action, Testing and Monitoring, Well Plugging, Post-Injection Site Care and Site Closure, and Emergency and Remedial Response plans to incorporate final site characterization information, final delineation of the AoR, and the results of pre-injection testing, and information has been submitted in an electronic format, reviewed and approved by the Director;

5. Construction is complete and the permittee has submitted to the Director in an electronic format a notice that completed construction is in compliance with 40 CFR 146.86 and Section I of this permit;

6. The Director has inspected or otherwise reviewed the injection well and all submitted information and finds it is in compliance with the conditions of the permit;

7. The Director has approved demonstration of the alarm system and shut-off system under Section K.6 of this permit; and.

8. The Director has given written authorization to commence injection.

US EPA ARCHIVE DOCUMENT

## ATTACHMENTS

These attachments include, but are not limited to, permit conditions and plans concerning operating procedures, monitoring and reporting, as required by 40 CFR Parts 144 and 146. The permittee shall comply with these conditions and adhere to these plans as approved by the Director, as follows:

**A. SUMMARY OF OPERATING REQUIREMENTS**

**B. AREA OF REVIEW AND CORRECTIVE ACTION PLAN**

**C. TESTING AND MONITORING PLAN**

**D. WELL PLUGGING PLAN**

**E. POST-INJECTION SITE CARE AND SITE CLOSURE PLAN**

**F. EMERGENCY AND REMEDIAL RESPONSE PLAN**

**G. CONSTRUCTION DETAILS**

**H. FINANCIAL ASSURANCE DEMONSTRATION**

**I. STIMULATION PROGRAM**

US EPA ARCHIVE DOCUMENT

# Exhibit B-1

**Index to the Administrative Record, Final Decision**
**FutureGen 2.0 Well #1; Permit #IL-137-6A-0001**

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|

**I. Draft Permit Administrative Record (40 C.F.R. § 124.18(b))**

a. Permit application (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 3/1/2013 | 3/15/2013 | N/A | Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |
| 2 | 5/1/2013 | 5/15/2013 | N/A | Revised Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |

b. Supporting documentation supplied by permit applicant (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 11/19/2013 | 12/12/2013 | N/A | Request for Additional Information #1 | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 4 | 12/10/2013 | 12/16/2013 | N/A | Request for Additional Information #2 | Kenneth Humphreys, FutureGen | Stephen Jann, EPA |
| 5 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 6 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 7 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) #3 (IR3-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 8 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 9 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 10 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 11 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delination and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 12 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 13 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 14 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

c. Draft permit or notice of intent to deny the application or terminate the permit (40 C.F.R. § 124.9(b)(2))

| | | | | | | |
|---|---|---|---|---|---|---|
| 15 | 3/31/2014 | 3/31/2014 | N/A | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0001, FutureGen 2.0 Well #1 | N/A | N/A |

d. Statement of basis or fact sheet (40 C.F.R. § 124.9(b)(3))

| | | | | | | |
|---|---|---|---|---|---|---|
| 16 | 3/31/2014 | 3/31/2014 | N/A | Public Comment on First Carbon Storage Draft Permits | N/A | N/A |
| 17 | 3/31/2014 | 3/31/2014 | N/A | Statement of Basis for Issuance of Class VI Underground Injection Control Permits | N/A | N/A |

e. All documents cited in the statement of basis or fact sheet (40 C.F.R. § 124.9(b)(4))

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 18 | 3/31/2014 | 3/31/2014 | N/A | Safe Drinking Water Act and Regulations at 40 C.F.R. 124 | N/A | N/A |

f. Other documents contained in the supporting file for the draft permit (40 C.F.R. § 124.9(b)(5))

| | | | | | | |
|---|---|---|---|---|---|---|
| 19 | 2/6/2013 | 2/6/2013 | 14:42 | Fw: 2.0 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 20 | 2/6/2013 | 2/6/2013 | 20:50 | Re: 2.0 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 21 | 3/12/2013 | 3/12/2013 | 12:24 | Copies | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 22 | 3/12/2013 | 3/12/2013 | 12:52 | Re: Copies | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 23 | 4/9/2013 | 4/22/2013 | N/A | Completeness Review of Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 24 | 4/26/2013 | 4/26/2013 | 15:28 | UIC Questions | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 25 | 4/30/2013 | 4/30/2013 | 16:41 | Followup | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 26 | 5/10/2013 | 5/10/2013 | 13:35 | UIC Re-Issue based on Completeness Review | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 27 | 5/13/2013 | 5/15/2013 | N/A | Revised Supporting Documentation | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 28 | 5/14/2013 | 5/14/2013 | 16:14 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 29 | 5/14/2013 | 5/14/2013 | 17:06 | Re: UIC Re-Issue based on Completeness Review | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 30 | 5/14/2013 | 5/14/2013 | 16:22 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 31 | 5/14/2013 | 5/14/2013 | 17:45 | FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 32 | 5/14/2013 | 5/14/2013 | 16:59 | Re: FutureGen Industrial Alliance; non profit status | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 33 | 5/14/2013 | 5/14/2013 | 17:01 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 34 | 5/23/2013 | 5/23/2013 | 10:06 | FutureGen Permit Application - FOI Request | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 35 | 5/23/2013 | 5/23/2013 | 10:14 | Re: FutureGen Permit Application - FOI Request | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 36 | 5/23/2013 | 5/23/2013 | 11:08 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 37 | 5/23/2013 | 5/23/2013 | 11:28 | Alliance General Counsel Information | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 38 | 5/23/2013 | 5/23/2013 | 12:47 | Re: Alliance General Counsel Information | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 39 | 5/23/2013 | 5/23/2013 | 15:42 | FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 40 | 5/29/2013 | 5/29/2013 | 15:25 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 41 | 5/29/2013 | 5/29/2013 | 15:34 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 42 | 6/3/2013 | 6/3/2013 | 12:06 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 43 | 6/5/2013 | 6/5/2013 | 14:43 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 44 | 6/5/2013 | 6/5/2013 | 16:36 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 45 | 6/5/2013 | 6/5/2013 | 16:39 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 46 | 6/5/2013 | 6/5/2013 | 16:54 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Lucinda Swartz, FutureGen; Mary McAuliffe, EPA |
| 47 | 6/11/2013 | 6/11/2013 | 9:42 | Fw: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 48 | 6/26/2013 | 6/26/2013 | 10:06 | FutureGen UIC Permit Question | Betty Niemann | Janette Hansen, EPA |
| 49 | 6/26/2013 | 6/26/2013 | 11:00 | Re: FutureGen UIC Permit Question | Janette Hansen, EPA | Betty Niemann |
| 50 | 7/30/2013 | 7/30/2013 | N/A | Phone Log Janette Hansen | N/A | N/A |
| 51 | 8/8/2013 | 8/8/2013 | 7:56 | FutureGen 2.0 - Listing of Materials to be Provided | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 52 | 8/8/2013 | 8/8/2013 | 10:14 | Re: FutureGen 2.0 - Listing of Materials to be Provided | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 53 | 8/12/2013 | 8/12/2013 | 15:46 | Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 54 | 8/26/2013 | 8/26/2013 | 11:04 | Fw: Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 55 | 8/26/2013 | 8/26/2013 | 12:21 | Re: Input Advisor For FutureGen Data | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 56 | 8/28/2013 | 8/28/2013 | 9:36 | Upcoming Hearings for Water Discharge (NPDES) 4Permit and for the Air Prevention of Significant Deterioration (PSD) and Construction Permit for FutureGen | Dean Studer, Illinois EPA | Brian Urbaszewski et al. |
| 57 | 8/28/2013 | 8/28/2013 | 11:45 | Upcoming Hearing for Water Discharge (NPDES) Permit and for the Air Construction Permits for FutureGen | Dean Studer, Illinois EPA | A. Buhl et al. |
| 58 | 8/30/2013 | 8/30/2013 | 21:06 | FutureGen Data Set | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 59 | 9/4/2013 | 9/4/2013 | 14:06 | FutureGen Schedule | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 60 | 9/4/2013 | 9/4/2013 | 14:21 | Re: FutureGen Schedule | Tyler Gilmore, FutureGen | Janette Hansen, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 61 | 9/29/2013 | 9/29/2013 | 11:23 | FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 62 | 9/30/2013 | 9/30/2013 | 7:31 | Re: FutureGen 2.0 in Illinois | Janette Hansen, EPA | Lillian Korous |
| 63 | 9/30/2013 | 9/30/2013 | 18:53 | Re: FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 64 | 10/7/2013 | 10/7/2013 | 16:05 | Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 65 | 10/17/2013 | 10/17/2013 | 13:38 | Re: Meredosia Hearing | Janette Hansen, EPA | Danny Little |
| 66 | 10/17/2013 | 10/17/2013 | 9:27 | Re: Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 67 | 10/31/2013 | N/A | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 68 | 11/14/2013 | 11/19/2013 | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 69 | 11/14/2013 | 11/14/2013 | 17:11 | FutureGen 2.0 Request for Additional Information | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 70 | 11/14/2013 | 11/14/2013 | 17:34 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Andrew Greenhagen, EPA |
| 71 | 11/15/2013 | 11/21/2013 | N/A | National Historic Preservation Act Inquiry; Location is at 39.800266N, 90.07469W (SE 1/4, SE 1/4, SW 1/4, SE 1/4, Section 26, T16N, R9W) | Rebecca Harvey, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 72 | 11/15/2013 | 11/15/2013 | 6:36 | Re: FutureGen 2.0 Request for Additional Information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 73 | 11/15/2013 | 11/15/2013 | 8:55 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 74 | 11/22/2013 | 11/22/2013 | 12:05 | FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA; Rebecca Harvey, EPA |
| 75 | 11/22/2013 | 11/22/2013 | 14:07 | RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 76 | 11/22/2013 | 11/22/2013 | 14:26 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 77 | 12/3/2013 | 12/3/2013 | 10:35 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 78 | 12/3/2013 | 12/3/2013 | 9:27 | Re: FutureGen 2.0 Class VI Well Permit Application | Jeffrey McDonald, EPA | Betty Niemann |
| 79 | 12/3/2013 | 12/3/2013 | 14:05 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 80 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 81 | 12/6/2013 | 12/6/2013 | 15:48 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 82 | 12/9/2013 | 12/9/2013 | N/A | National Historic Preservation Act Inquiry | Anne Haaker, Illinois Historic Preservation Agency | Rebecca Harvey, EPA |
| 83 | 12/9/2013 | 12/9/2013 | 11:08 | FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 84 | 12/9/2013 | 12/9/2013 | 11:13 | Re: FutureGen 2.0 | Janette Hansen, EPA | Dean Studer, Illinois EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 85 | 12/9/2013 | 12/9/2013 | 14:40 | Re: FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 86 | 12/10/2013 | 12/10/2013 | 8:37 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 87 | 12/10/2013 | 12/10/2013 | 15:30 | FutureGen 2.0 EIS Referenced Document | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 88 | 12/10/2013 | 12/10/2013 | N/A | Memo: Consideration of other laws under 40 CFR 144.4 | N/A | N/A |
| 89 | 12/11/2013 | 12/11/2013 | 14:56 | Re: Salinity in Ironton Sandstone | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 90 | 12/13/2013 | 12/13/2013 | 15:45 | Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 91 | 12/16/2013 | 12/16/2013 | 9:09 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 92 | 12/19/2013 | 12/19/2013 | 11:46 | Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 93 | 12/20/2013 | 12/20/2013 | 15:58 | FGA FR and other requests: 12-20-2013 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 94 | 12/31/2013 | 12/31/2013 | 11:49 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 95 | 12/31/2013 | 12/31/2013 | 12:35 | Re: Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 96 | 12/31/2013 | 12/31/2013 | 13:06 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 97 | 1/2/2014 | 1/2/2014 | 13:09 | Erratum to August 2013 Input Advisor File | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 98 | 1/2/2014 | 1/2/2014 | 13:20 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 99 | 1/2/2014 | 1/2/2014 | 16:13 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 100 | 1/3/2014 | 1/3/2014 | 12:03 | You have files ready for pickup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 101 | 1/3/2014 | 1/3/2014 | 13:13 | Re: You have files ready for pickup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 102 | 1/3/2014 | 1/3/2014 | 16:38 | 01-03-2014 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 103 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 104 | 1/3/2014 | 1/3/2014 | 19:08 | You have files ready for pickup | David Lanigan, FutureGen | Jeffrey McDonald, EPA |
| 105 | 1/10/2014 | 1/10/2014 | 14:38 | Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 106 | 1/14/2014 | 1/14/2014 | 15:52 | IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 107 | 1/14/2014 | 1/14/2014 | 14:49 | Re: IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 108 | 1/16/2014 | 1/16/2014 | 12:24 | IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 109 | 1/16/2014 | 1/16/2014 | 16:21 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 110 | 1/16/2014 | 1/16/2014 | 14:52 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 111 | 1/16/2014 | 1/16/2014 | 17:07 | Draft Minutes and Meeting followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 112 | 1/16/2014 | 1/16/2014 | 17:14 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 113 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 114 | 1/17/2014 | 1/17/2014 | 16:09 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 115 | 1/17/2014 | 1/17/2014 | 16:10 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 116 | 1/21/2014 | 1/21/2014 | 12:40 | Fw: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 117 | 1/21/2014 | 1/21/2014 | 17:01 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 118 | 1/22/2014 | 1/22/2014 | 10:08 | Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 119 | 1/22/2014 | 1/22/2014 | 14:39 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 120 | 1/22/2014 | 1/22/2014 | 15:54 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 121 | 1/22/2014 | 1/22/2014 | 16:12 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 122 | 1/23/2014 | 1/28/2014 | N/A | Notification of Class VI permit applications in the State of Illinois | Stephen Jann, EPA | Stephen Nightingale, Illinois EPA |
| 123 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 124 | 1/23/2014 | 1/23/2014 | 17:24 | Analysis of Pressure Impacts and Protection of USDW | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 125 | 1/24/2014 | 1/24/2014 | 16:22 | Re: Analysis of Pressure Impacts and Protection of USDW | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 126 | 1/27/2014 | 1/27/2014 | 11:13 | Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 127 | 1/27/2014 | 1/27/2014 | 11:22 | Re: Insurance and Trust Fund Followup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 128 | 1/27/2014 | 1/27/2014 | 12:03 | Re: Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 129 | 1/28/2014 | 1/28/2014 | 11:39 | FR Trust Fund feedback | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 130 | 1/28/2014 | 1/28/2014 | 17:41 | Timing of Trust Funding | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 131 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 132 | 1/29/2014 | 1/29/2014 | 8:39 | Re: Informal Request #5 EPA_IR5 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 133 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 134 | 1/29/2014 | 1/29/2014 | 13:50 | Re: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 135 | 1/30/2014 | 1/30/2014 | 17:59 | Followup Call on Trust Fund and Insurance | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 136 | 1/31/2014 | 1/31/2014 | 9:48 | Re: Followup Call on Trust Fund and Insurance | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 137 | 1/31/2014 | 1/31/2014 | 11:52 | Fw: Message from "R5-16-21" | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 138 | 1/31/2014 | 1/31/2014 | 15:28 | Quick Answer | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 139 | 1/31/2014 | 1/31/2014 | 16:26 | Re: Quick Answer | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 140 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delineation and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 141 | 2/4/2014 | 2/4/2014 | 8:28 | Re: Area of Review Delineation and Maximum Well Pressure Calculations | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 142 | 2/4/2014 | 2/4/2014 | 14:46 | Re: Timing of Trust Funding | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 143 | 2/5/2014 | 2/5/2014 | 16:37 | 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 144 | 2/5/2014 | 2/5/2014 | 16:55 | Re: 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 145 | 2/5/2014 | 2/5/2014 | 18:38 | Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 146 | 2/6/2014 | 2/6/2014 | 13:20 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 147 | 2/6/2014 | 2/6/2014 | 15:07 | Re: Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 148 | 2/6/2014 | 2/6/2014 | 15:10 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 149 | 2/6/2014 | 2/6/2014 | 15:11 | Re: Information on Insurance Requirements | Joseph Tiago, EPA | Jeffrey McDonald, EPA et al. |
| 150 | 2/7/2014 | 2/7/2014 | 16:27 | Re: UIC Insurance Discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 151 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 152 | 2/7/2014 | 2/7/2014 | 16:28 | Re: Annular Pressurization System for Injection Wells | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 153 | 2/7/2014 | 2/7/2014 | 16:30 | Re: UIC Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 154 | 2/12/2014 | 2/12/2014 | 11:16 | Fw: ADM QASP Plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 155 | 2/12/2014 | 2/12/2014 | 12:13 | Re: ADM QASP Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 156 | 2/12/2014 | 2/12/2014 | 13:41 | draft AOR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 157 | 2/13/2014 | 2/13/2014 | 18:25 | Plugging and Abandonment Plan Revision | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 158 | 2/14/2014 | 2/14/2014 | 9:27 | Re: Plugging and Abandonment Plan Revision | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 159 | 2/14/2014 | 2/14/2014 | 15:11 | draft testing and monitoring plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 160 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 161 | 2/17/2014 | 2/17/2014 | 15:29 | Conference Call Times | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 162 | 2/18/2014 | 2/18/2014 | 8:58 | Re: EPA's IR#9 01-31-2014 ready to be send | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 163 | 2/18/2014 | 2/18/2014 | 9:10 | Re: Conference Call Times | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 164 | 2/18/2014 | 2/18/2014 | 11:40 | discussion points for 2/19 phone call on critical pressure calculations at FG | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 165 | 2/18/2014 | 2/18/2014 | 17:54 | Fw: discussion points for 2/19 phone call on critical pressure calculations at FG | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Andrew Greenhagen, EPA |
| 166 | 2/19/2014 | 2/19/2014 | 14:29 | 2/19/14 brief phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 167 | 2/20/2014 | 2/20/2014 | 9:40 | Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 168 | 2/20/2014 | 2/20/2014 | 9:41 | Re: Draft Trust Agreement | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 169 | 2/20/2014 | 2/20/2014 | 10:02 | Fw: Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 170 | 2/20/2014 | 2/20/2014 | 13:34 | IR#10 02-20-14; question about pressure front tracking | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 171 | 2/21/2014 | 2/21/2014 | 13:16 | draft ERR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 172 | 2/21/2014 | 2/21/2014 | 14:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 173 | 2/21/2014 | 2/21/2014 | 16:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 174 | 2/21/2014 | 2/21/2014 | 16:02 | Re: draft PISC plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 175 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 176 | 2/21/2014 | 2/21/2014 | 16:49 | draft Trust Fund language | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 177 | 2/24/2014 | 2/24/2014 | 13:40 | updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 178 | 2/24/2014 | 2/24/2014 | 13:49 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 179 | 2/25/2014 | 2/25/2014 | 9:50 | Re: updated draft PISC for your review and reply | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 180 | 2/25/2014 | 2/25/2014 | 10:17 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 181 | 2/25/2014 | 2/25/2014 | 11:35 | Fw: Demonstration of Non Endangerment | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 182 | 2/25/2014 | 2/25/2014 | 16:15 | Injection Intervals and Injection Zone for each well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 183 | 2/26/2013 | 2/26/2013 | 9:34 | trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 184 | 2/26/2013 | 2/26/2013 | 10:02 | Re: trust fund language corrections | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 185 | 2/26/2013 | 2/26/2013 | 10:53 | Re: trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 186 | 2/26/2013 | 2/26/2013 | 13:53 | Plugging and Construction plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 187 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Champaign - The News-Gazette | N/A | N/A |
| 188 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Decatur - The Decatur Tribune | N/A | N/A |
| 189 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Springfield - The State Journal-Register | N/A | N/A |
| 190 | 2/27/2014 | 2/27/2014 | 13:26 | Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 191 | 2/27/2014 | 2/27/2014 | 15:09 | 2/25/14 phone memo | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 192 | 2/27/2014 | 2/27/2014 | 15:33 | AoR delineation | Jeffrey McDonald, EPA | Mark Williams, FutureGen |
| 193 | 2/27/2014 | 2/27/2014 | N/A | Class VI Mailing List Solicitation - Jacksonville - The Source | N/A | N/A |
| 194 | 2/28/2014 | 2/28/2014 | 5:27 | Re: Trust Agreement language for FGA FR | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 195 | 2/28/2014 | 2/28/2014 | 7:24 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 196 | 2/28/2014 | 2/28/2014 | 10:10 | Re: AoR delineation | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Mark Williams, FutureGen |
| 197 | 2/28/2014 | 2/28/2014 | 11:16 | Re: Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 198 | 2/28/2014 | 2/28/2014 | 14:51 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 199 | 2/28/2014 | 2/28/2014 | 15:10 | Re: AoR delineation | Stephen Roy, EPA | Jeffrey McDonald, EPA et al. |
| 200 | 2/28/2014 | 2/28/2014 | 15:13 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA et al. |
| 201 | 2/28/2014 | 2/28/2014 | 16:07 | Re: AoR delineation | Stephen Roy, EPA | Tyler Gilmore, FutureGen |

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| 202 | 2/28/2014 | 2/28/2014 | 16:13 | Fw: Another equation for calculating the critical pressure | Stephen Roy, EPA | Tyler Gilmore, FutureGen |
| 203 | 2/28/2014 | 2/28/2014 | 17:35 | Re: AoR delineation | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 204 | 2/28/2014 | 2/28/2014 | 17:57 | Re: AoR delineation | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 205 | 3/3/2014 | 3/3/2014 | 13:02 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 206 | 3/3/2014 | 3/3/2014 | 13:09 | Quick Request | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 207 | 3/3/2014 | 3/3/2014 | 13:28 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 208 | 3/3/2014 | 3/3/2014 | 14:09 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 209 | 3/3/2014 | 3/3/2014 | 15:24 | Re: Quick Request | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 210 | 3/3/2014 | 3/3/2014 | 22:23 | FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 211 | 3/4/2014 | 3/4/2014 | 12:15 | FG-EPA Call Notes: March | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 212 | 3/4/2014 | 3/4/2014 | 17:31 | Emergency and Remedial Response Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 213 | 3/4/2014 | 3/4/2014 | 18:00 | Addition of AoR "Triggers" and Pressure Monitoring Well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 214 | 3/4/2014 | 3/4/2014 | 18:15 | Post Injection Site Care Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 215 | 3/4/2014 | 3/4/2014 | 18:54 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 216 | 3/4/2014 | 3/4/2014 | 19:11 | Testing and Monitoring Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 217 | 3/5/2014 | 3/5/2014 | 1:32 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 218 | 3/5/2014 | 3/5/2014 | 8:40 | Re: FutureGen QASP | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 219 | 3/5/2014 | 3/5/2014 | 9:15 | AoR File - Follow-Up | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen; Delphine Appriou, FutureGen |
| 220 | 3/5/2014 | 3/5/2014 | 10:19 | Re: FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 221 | 3/5/2014 | 3/5/2014 | 12:21 | You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 222 | 3/5/2014 | 3/5/2014 | 12:27 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 223 | 3/5/2014 | 3/5/2014 | 12:29 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 224 | 3/5/2014 | 3/5/2014 | 12:43 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 225 | 3/5/2014 | 3/5/2014 | 12:53 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 226 | 3/5/2014 | 3/5/2014 | 12:59 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |

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| 227 | 3/5/2014 | 3/5/2014 | 13:18 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 228 | 3/5/2014 | 3/5/2014 | 16:08 | Re: FutureGen QASP | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 229 | 3/5/2014 | 3/5/2014 | 17:44 | Injection well plugging plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 230 | 3/6/2014 | 3/6/2014 | 8:35 | Re: Injection well plugging plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 231 | 3/6/2014 | 3/6/2014 | 9:41 | Fw: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 232 | 3/6/2014 | 3/6/2014 | 15:08 | Calculations of Critical Pressure | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 233 | 3/6/2014 | 3/6/2014 | 15:25 | Updated Microseismic Sensitivity Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 234 | 3/6/2014 | 3/6/2014 | 22:07 | AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 235 | 3/6/2014 | 3/6/2014 | 22:55 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 236 | 3/7/2014 | 3/7/2014 | 8:36 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 237 | 3/7/2014 | 3/7/2014 | 10:06 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 238 | 3/7/2014 | 3/7/2014 | 13:13 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 239 | 3/7/2014 | 3/7/2014 | 17:37 | Insurance and CO2 Storage Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 240 | 3/7/2014 | 3/7/2014 | 20:23 | Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 241 | 3/8/2014 | 3/8/2014 | 12:50 | Transmittal of AoR information and Request | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 242 | 3/10/2014 | 3/10/2014 | 10:47 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen; MaryRose Bayer, EPA |
| 243 | 3/10/2014 | 3/10/2014 | 14:48 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 244 | 3/10/2014 | 3/10/2014 | 17:39 | Last Transmittal of AoR information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 245 | 3/11/2014 | 3/11/2014 | 13:05 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 246 | 3/11/2014 | 3/11/2014 | 15:50 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 247 | 3/11/2014 | 3/11/2014 | 16:49 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 248 | 3/11/2014 | 3/11/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 249 | 3/11/2014 | 3/11/2014 | N/A | Insurance Checklist | N/A | N/A |
| 250 | 3/12/2014 | 3/12/2014 | 5:51 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 251 | 3/12/2014 | 3/12/2014 | 11:20 | Re: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 252 | 3/12/2014 | 3/12/2014 | 10:28 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 253 | 3/12/2014 | 3/12/2014 | 11:54 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 254 | 3/12/2014 | 3/12/2014 | 14:13 | pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 255 | 3/12/2014 | 3/12/2014 | 14:05 | Fw: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 256 | 3/12/2014 | 3/12/2014 | 14:08 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 257 | 3/12/2014 | 3/12/2014 | 14:13 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 258 | 3/12/2014 | 3/12/2014 | 16:46 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 259 | 3/13/2014 | 3/13/2014 | 4:32 | Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 260 | 3/13/2014 | 3/13/2014 | 9:58 | Re: Conference Call(s) | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 261 | 3/13/2014 | 3/13/2014 | 9:58 | Re: pressure differential and plume boundary graphic | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 262 | 3/13/2014 | 3/13/2014 | 10:02 | Re: pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 263 | 3/13/2014 | 3/13/2014 | 10:03 | Re: Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 264 | 3/13/2014 | 3/13/2014 | 13:21 | Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 265 | 3/13/2014 | 3/13/2014 | 14:26 | Re: Saw that you called | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 266 | 3/13/2014 | 3/13/2014 | 13:30 | Re: Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Thomas Krueger, EPA |
| 267 | 3/13/2014 | 3/13/2014 | 15:28 | Insurance Files | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 268 | 3/13/2014 | 3/13/2014 | 15:39 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 269 | 3/13/2014 | 3/13/2014 | 16:13 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 270 | 3/13/2014 | 3/13/2014 | 16:23 | Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 271 | 3/14/2014 | 3/14/2014 | 10:16 | insurance issues raised from our contractor to help guide the discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 272 | 3/14/2014 | 3/14/2014 | 10:27 | Re: Conference Call(s) | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 273 | 3/14/2014 | 3/14/2014 | 10:28 | Re: Conference Call(s) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 274 | 3/14/2014 | 3/14/2014 | 14:23 | well test procedures | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 275 | 3/14/2014 | 3/14/2014 | 15:26 | All Plugging Plans | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 276 | 3/14/2014 | 3/14/2014 | 15:28 | Re: All Plugging Plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 277 | 3/14/2014 | 3/14/2014 | 17:15 | Re: Final Draft CO2 Trust Agreement | Tom Maple, US Bank | Lucinda Swartz, FutureGen |
| 278 | 3/15/2014 | 3/15/2014 | 9:40 | Pressure front elevation and New Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 279 | 3/17/2014 | 3/17/2014 | 12:00 | Fw: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 280 | 3/17/2014 | 3/17/2014 | 12:32 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 281 | 3/17/2014 | 3/17/2014 | 14:12 | Re: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 282 | 3/17/2014 | 3/17/2014 | 14:24 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 283 | 3/19/2014 | 3/19/2014 | 16:49 | Re: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 284 | 3/20/2014 | 3/20/2014 | 16:16 | Re: Insurance info | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 285 | 3/21/2014 | 3/21/2014 | 11:49 | Location of future pressure monitoring well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 286 | 3/21/2014 | 3/21/2014 | 13:08 | Re: Location of future pressure monitoring well | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 287 | 3/21/2014 | 3/21/2014 | 16:24 | Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 288 | 3/21/2014 | 3/21/2014 | 16:40 | Re: Executed Trust Fund Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 289 | 3/21/2014 | 3/21/2014 | 16:45 | Re: Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 290 | 3/24/2014 | 3/24/2014 | 17:00 | Re: FG App Missing Refs | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 291 | 3/24/2014 | 3/24/2014 | 18:15 | insurance options | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 292 | 3/25/2014 | 3/25/2014 | 11:28 | Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 293 | 3/25/2014 | 3/25/2014 | 11:23 | Re: Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 294 | 3/25/2014 | 3/25/2014 | 14:14 | Re: Insurance for FGA | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 295 | 3/25/2014 | 3/25/2014 | 18:10 | Re: Insurance Coverage for Emergency and Remedial Response Actions | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 296 | 3/25/2014 | 3/25/2014 | N/A | FutureGen Alliance Class VI Injection Project: Evaluation of Area of Review Delineation and Corrective Action (Due to the large volume of underlying data summarized in the AoR report, including the sensitivity analyses performed by FG and EPA, this information is not physically included in the administrative record, but is available upon request.) | N/A | N/A |
| 297 | 3/26/2014 | 3/26/2014 | 7:05 | Re: Insurance for FGA | Joseph Tiago, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 298 | 3/26/2014 | 3/26/2014 | 8:28 | Re: Insurance for FGA | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 299 | 3/26/2014 | 3/26/2014 | 14:53 | Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 300 | 3/26/2014 | 3/26/2014 | 15:39 | Re: Your address? | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 301 | 3/26/2014 | 3/26/2014 | 19:36 | Re: Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 302 | 3/27/2014 | 3/27/2014 | 7:16 | Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 303 | 3/27/2014 | 3/27/2014 | 9:13 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 304 | 3/27/2014 | 3/27/2014 | 11:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 305 | 3/27/2014 | 3/27/2014 | 12:03 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 306 | 3/27/2014 | 3/27/2014 | 12:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 307 | 3/27/2014 | 3/27/2014 | 12:58 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 308 | 3/27/2014 | 3/27/2014 | 15:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 310 | 3/27/2014 | 3/27/2014 | N/A | Memo: EJ Analysis for FutureGen 2.0 in Morgan County | N/A | N/A |
| 311 | 3/28/2014 | 3/28/2014 | 8:20 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 312 | 3/28/2014 | 3/28/2014 | 8:27 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 313 | 3/28/2014 | 3/28/2014 | 8:39 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 314 | 3/28/2014 | 3/28/2014 | 8:52 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 315 | 3/28/2014 | 3/28/2014 | 10:54 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 316 | 3/28/2014 | 3/28/2014 | 13:31 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 317 | 3/28/2014 | 3/28/2014 | 13:54 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 318 | 3/28/2014 | 3/28/2014 | 17:24 | Fw: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 319 | 3/28/2014 | 3/28/2014 | N/A | Illinois State Treasurer Approved Financial Institutions - US Bank | N/A | N/A |
| 320 | 3/28/2014 | 3/28/2014 | N/A | Financial Responsibility Estimates for FutureGen Based on Cost Tool Options | N/A | N/A |
| 321 | 3/29/2014 | 3/29/2014 | 15:25 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 322 | 3/31/2014 | 3/31/2014 | N/A | Induced Seismicity Evaluation Using the EPA-Developed Decision Model | N/A | N/A |
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| 328 | N/A | N/A | N/A | 40 CFR 144.31; Underground Injection Control Program; Code of Federal Regulations; | N/A | N/A |
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| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 447 | N/A | N/A | N/A | USEPA; Draft UIC Program Class VI Well Recordkeeping, Reporting, and Data Management Guidance for Owners and Operators; EPA 816-P-13-001; | N/A | N/A |
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| 471 | N/A | N/A | N/A | American Recovery and Reinvestment Act of 2009; Public Law 111-5; 2009 | N/A | N/A |
| 472 | N/A | N/A | N/A | Clean Air Act Section 7401; 42 USC 7401; | N/A | N/A |
| 473 | N/A | N/A | N/A | Clean Water Act/Federal Water Pollution Control Act; 33 USC 1344; | N/A | N/A |
| 474 | N/A | N/A | N/A | Marine Protection, Research, and Sanctuaries Act of 1972; 16 USC 1431 and 33 USC 1401; | N/A | N/A |
| 475 | N/A | N/A | N/A | National Environmental Policy Act of 1969; 42 USC | N/A | N/A |
| 476 | N/A | N/A | N/A | Resource Conservation and Recovery Act; 42 USC 6901; | N/A | N/A |
| 477 | N/A | N/A | N/A | Safe Drinking Water Act of 1974; 42 USC 300f; | N/A | N/A |

**II. All Comments Received During the Public Comment Period (40 C.F.R. § 124.18(b)(1))**

| | | | | | | |
|---|---|---|---|---|---|---|
| 478 | 5/15/2014 | 5/15/2014 | | USEPA Region 5 - FutureGen Additional Public Comments | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/3/2014 | 4/3/2014 | | Question and Concern | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/1/2014 | 4/1/2014 | | Public Hearing Question on FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA |
| 479 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Bradley Zeller | Jeffrey McDonald, EPA |
| 480 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | Carl Hankel | Jeffrey McDonald, EPA |
| 481 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Central Illinois Building & Construction Trades Council | Jeffrey McDonald, EPA |
| 482 | 4/29/2014 | 4/29/2014 | | FutureGen Alliance Public Comments | Clearstack Combustion Corp. | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 483 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Danny Little | Jeffrey McDonald, EPA |
| 484 | 4/4/2014 | 4/4/2014 | | FutureGen Alliance Public Comments | Ed Shaw | Jeffrey McDonald, EPA |
| 485 | 5/7/2014 | 5/7/2014 | | USEPA Region 5 - FutureGen Public Comments | Elizabeth Rigor | Jeffrey McDonald, EPA |
| 486 | 5/14/2014 | 5/14/2014 | | Comments on the Class VI permits 137-6A-0001, -0002, 0003 and 0004 | FutureGen Industrial Alliance | Jeffrey McDonald, EPA |
| 487 | 5/12/2015 | 5/12/2015 | | FutureGen Alliance Public Comments | Global Carbon Capture and Storage Institute | Jeffrey McDonald, EPA |
| 488 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Coal Assoc. | Jeffrey McDonald, EPA |
| 489 | 5/13/2014 | 5/13/2014 | | Submission from the Illinois Chamber of Commerce | Illinois Chamber of Commerce | Jeffrey McDonald, EPA |
| 490 | 5/15/2014 | 5/15/2014 | | FutureGen 2.0 Project Comments | American Coalition for Clean Coal Electricity, Coal Utilization Research Council, Edison Electric Institute, Illinois Coal Association, National Mining Association (NMA), and National Rural Electric Cooperative Association | Jeffrey McDonald, EPA |
| 491 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Department of Commerce and Economic Opportunity (DCEO) | Jeffrey McDonald, EPA |
| 492 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Boilermakers Local 363 | Jeffrey McDonald, EPA |
| 493 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Electrical Workers (IBEW) Local 193 | Jeffrey McDonald, EPA |
| 494 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Jacksonville Regional Economic Development Corporation (EDC) | Jeffrey McDonald, EPA |
| 495 | 4/5/2014 | 4/5/2014 | | FutureGen Alliance Public Comments | Karen Shaw | Jeffrey McDonald, EPA |
| 496 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Laborers' International Union of North America (LIUNA) | Jeffrey McDonald, EPA |
| 497 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen's UIC Draft Permits | Leinberger & Critchelow Families / Nijman Franzetti, LLP | Jeffrey McDonald, EPA |
| 498 | 4/10/2014 | 4/10/2014 | | FutureGen 2 to EPA | Lillian Korous | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 499 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Marc Landers | Jeffrey McDonald, EPA |
| 500 | 4/2/2014 | 4/2/2014 | | carbon capture plan | Mick Mcintyre | Jeffrey McDonald, EPA |
| 501 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen Alliance 2.0 Class VI Permit Application | Natural Resources Defense Council (NRDC), Clean Air Task Force, and Sierra | Jeffrey McDonald, EPA |
| 502 | 5/8/2014 | 5/8/2014 | | FutureGen Alliance Public Comments | Pipefitters Local 137 | Jeffrey McDonald, EPA |
| 503 | 5/5/2014 | 5/5/2014 | | FutureGen Permit Comments | Robert J. Finley | Jeffrey McDonald, EPA |
| 504 | 5/15/2014 | 5/15/2014 | | Comments on Draft FutureGen Class VI Well Permits for Wells #1, #2, #3, and #4 | U.S. Carbon Sequestration Council (CSC) | Jeffrey McDonald, EPA |
| 505 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | US Fish and Wildlife Service | Jeffrey McDonald, EPA |
| 506 | 5/5/2014 | 5/5/2014 | | FutureGen Alliance Public Comments | Wilmot McCutchen | Jeffrey McDonald, EPA |
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**III. Tape or Transcript of Public Hearings (40 C.F.R. § 124.18(b)(2))**

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|---|---|---|---|---|---|---|
| 506 | * | 6/4/2014 | 13:50 | Underground Injection Control Draft Permits for the FutureGen Industrial Alliance - Revised Final transcripts - Public Hearing of May 7, 2014, at MacMurray College, Jacksonville, Illinois | Robin L. Stranimeier, of Jane Rose Reporting | Jeffrey McDonald, Jeffrey Wawczak, Lillateese Simmons, EPA |
| 507 | | | | | | |

**IV. Written Materials Submitted at Public Hearings (40 C.F.R. § 124.18(b)(3))**

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|---|---|---|---|---|---|---|
| 508 | * | | | Comments of the Illinois Department of Commerce and Economic Opportunity's Office of Coal Development | * | |
| 509 | | | | Comment of Phil Gonet, Illinois Coal Assoc. | | |
| 510 | | | | Jacksonville Regional Economic Development Corporation (EDC), Terry Denison | | |

**V. Response to Comments (40 C.F.R. § 124.18(b)(4))**

a. Response to comments

| | | | | | | |
|---|---|---|---|---|---|---|
| 511 | * | 8/29/2014 | | Response to Comments for Draft Class VI Permits Issued to the FutureGen Industrial Alliance | Tinka Hyde, EPA | Commenters |

b. New records considered by the Agency in Developing response to comments

| | | | | | | |
|---|---|---|---|---|---|---|
| 512 | * | 8/14/2014 | 11:29 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 513 | | 8/14/2014 | 11:19 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 514 | | 8/14/2014 | 10:41 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 515 | | 8/13/2014 | 13:21 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 516 | | 7/14/2014 | 09:46 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 517 | | 7/11/2014 | 10:25 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 518 | | 7/17/2014 | 11:53 | ISGS well data in West Central Illinois | Jeffrey McDonald, EPA | Alison Lecouris, ISGS |
| 519 | | 7/17/2014 | 14:18 | ISGS well data in West Central Illinois | Alison Lecouris, ISGS | Jeffrey McDonald, EPA |
| 520 | | 7/22/2014 | 05:17 | shape files | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 521 | | 7/25/2014 | 11:02 | shape files | Jeffrey McDonald, EPA | David Lanigan, Tyler Gilmore, PNNL |
| 522 | | 7/25/2014 | 13:43 | shape files | David Lanigan, PNNL | Jeffrey McDonald, EPA |
| 523 | | 6/13/2014 | 15:32 | Agenda for Tuesday's Meeting | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 524 | | 8/14/2014 | 11:12 | Criswell Plugging Affidavit [and attached OG-6 Well Plugging Report form, cementing service report from Franklin Well Services, 1965 Illinois Well Completion Report, and 1965 permit] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 525 | | 8/14/2014 | 11:19 | re: Criswell Plugging Affidavit | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 526 | | 8/14/2014 | 11:24 | re: Criswell Plugging Affidavit | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 527 | | 8/21/2014 | 14:15 | link [NRDC editorial] | Robert Finley, ISGS | Jeffrey McDonald, EPA |
| 528 | | 8/28/2014 | | Meeting between FutureGen, EPA and EPA's contractor, The Cadmus Group | Tyler Gilmore, Lucinda Swartz | Mary Rose Bayer, Joseph Tiago, Andrew Greenhagen, Mary McAuliffe, Tom Krueger, Jason Deardorff, Jeffrey McDonald, and Jaime Rooke (Cadmus) |
| 529 | | 8/27/2014 | 12:10 | Cost Tool for ERR activities | MaryRose Bayer, EPA | Jeffrey McDonald, EPA |
| 530 | | 7/28/2014 | 13:34 | downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 531 | | 8/14/2014 | 14:20 | re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 532 | | 8/14/2014 | 12:26 | re: downhole pressure gauge question [and use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 533 | | 8/14/2014 | 16:27 | re: downhole pressure gauge question [and use of tracers] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 534 | | 7/15/2014 | 12:36 | Letter of Intent to Drill Stratigraphic Well [e-mail and letter] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 535 | | 7/9/2014 | 15:22 | e-mail re: CO2 Flow | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 536 | | na | | Illinois Compiled Statues [20 ILCS 1108/1] | na | na |
| 537 | 7/25/2008 | | | Federal Register Vol. 73; No. 144; Federal Requirements Under the Underground Injection (UIC) Program for Carbon Dioxide (CO2) Geologic Sequestration (GS) | na | na |
| 538 | 7/1/2014 | | | FutureGen Corrective Action Evaluation; Illinois State Geological Survey (ISGS) Well Data | na | na |
| 539 | 4/15/2010 | | | API Comments on: Sequestering Carbon Dioxide in a Closed Underground Volume | American Petroleum Institute | na |
| 540 | 4/1/2010 | | | A Brief Technical Critique of Ehlig-Economides and Economides 2010: "Sequestering Carbon Dioxide in a Closed Underground Volume" | Pacific Northwest National Laboratory | na |
| 541 | 4/9/2014 | 4/15/2014 | | Class VI Injection well permit - FutureGen Industrial Alliance, Inc. | Anne E. Haaker, Illionois Historic Preservation Agency | Lisa Perenchio, EPA |
| 542 | | 3/31/2014 | | Certificate of Service | Denice Dumas, NAAPCA | na |
| 543 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Matt Mangan, U.S. Fish and Wildlife Service |
| 544 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Bill Hoback, Ill. Dept. of Commerce and Economic Opportunity |
| 545 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Robert Flider, Ill. Dept. of Agriculture |
| 546 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Adam Pollet, Ill. Dept. of Commerce and Economic Opportunity |
| 547 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Todd Rettig, IDNR |
| 548 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marc Miller, IDNR |
| 549 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Karen Miller, IDNR |
| 550 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Arland Juhl, IDNR |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 551 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Andree DuVarney, U.S. Dept. of Agriculture |
| 552 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Kenneth Westlake, EPA |
| 553 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Charles L. Walthall, U.S. Dept. of Agriculture |
| 554 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Dr. LaMar Hasbrouck, Illinois Dept. of Public Health |
| 555 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Jonathan Feipel, Ill. Commerce Commission |
| 556 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Chuck Ingersoll, Ill. Dept. of Transportation |
| 557 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marthea Roundtree, EPA |
| 558 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Steve Nightengale, IEPA |
| 559 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Lisa Bonnett, IEPA |
| 560 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | David Bloomberg, IEPA |
| 561 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 562 | 3/31/2014 | 3/31/2014 | | U.S. Environmental Protection Agency Draft Permit Numbers: IL-137-6A-0001, -0002, -0003, and -0004 for the Wells #1, #2,#3, and #4 (respectively) in Morgan County, Illinois | Tinka G. Hyde, EPA | Kenneth K. Humphreys, FutureGen Industrial Alliance, Inc. |
| 563 | 3/31/2014 | 3/31/2014 | | Draft Class VI permits respository | Stephen M. Jann, EPA | Jacksonville Public Library |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 564 | 8/26/2014 | 8/1/2014 | | Phone conversation with ISGS regarding Mt. Simon formation flow rates and their consideration with FutureGen permit applications | Jeffrey McDonald, EPA | Robert Finley and Edward Mehnert, Illinois State Geol. Survey |
| 565 | 8/26/2014 | 7/30/2014 | | Phone conversation with Battelle/PNNL and Cadmus regarding the FutureGen permit applications numerical modeling | Jeffrey McDonald, EPA | Signe White, PNNL and Inci Demirkanli, Cadmus |
| 566 | 8/28/2014 | 7/11/2014 | | Phone conversation memo with Pan Handle, operators of the gas storage field in Waverly, Illinois | Jeffrey McDonald, EPA | Dave Hegemann and Larry Jenkins, Pan Handle |
| 567 | na | na | | data sheet on Halliburton's Hydromite | na | na |
| 568 | 2/11/2011 | | | "Investigation of gridding effects for numerical simulations of CO2 geologic sequestration" by Yamamoto and Doughty | | |
| 569 | 2/1/2008 | na | | Determination of Mechanical Integrity of Injection Wells; Region 5 guidance document # 5 | | |
| 570 | 3/1/2012 | | | Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio, Area | Ohio DNR | |
| 571 | 8/28/2014 | 6/27/2014 | | Phone conversation record with Bryan Huff of ISGS regarding Criswell and Whitlock well records | Jeffrey McDonald, EPA | Bryan Huff, ISGS |
| 572 | 6/30/2014 | 6/30/2014 | | e-mail from Bryan Huff with ISGS records on Criswell and Whitlock wells | Bryan Huff, ISGS | Jeffrey McDonald, EPA |
| 573 | | 6/17/2014 | | CO2Flow Software Documentation: Hydraulic Model for CO2 Pipelines and Injection wells (January and June, 2014 versions) | PNNL | |
| 574 | | 6/17/2014 | | Testing of CO2Flow Pipeline and Injection Well Simulation Program (April 2014 version) | PNNL | |
| 575 | 3/27/2014 | 6/17/2014 | | AIG Insurance specimen policy | FutureGen | |
| 576 | 7/9/2014 | 7/9/2014 | 16:08 | Well files [database and other info on Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 577 | 7/10/2014 | 7/10/2014 | 11:01 | re: Well files [Criswell and Whitlock] | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 578 | 7/11/2014 | 7/11/2014 | 09:25 | re: Well files [Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 579 | 8/28/2014 | 7/9/2014 | | Phone conversation with Doug Shutt of the IDNR | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 580 | 7/30/2014 | 7/30/2014 | 14:27 | e-mail re: More Concerns over FutureGen | Betty Niemann | Jeffrey McDonald, EPA |
| 581 | 8/28/2014 | 7/25/2014 | | Phone conversations with Mike Elliott of PNNL | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 582 | 7/28/2014 | 7/28/2014 | 13:34 | e-mail: downhole pressure gauge question | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 583 | 8/14/2014 | 8/14/2014 | 14:20 | e-mail: re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 584 | 8/14/2014 | 8/14/2014 | 14:26 | e-mail: re: downhole pressure gauge question [requesting clarification on use or non-use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| **VI. Other Records in the Supporting File for the Permit (40 C.F.R. § 124.18(b)(6))** | | | | | | |
| 585 | 3/31/2014 | 3/31/2014 | N/A | Public Notice Mailed to EPA List | EPA | Numerous Parties |
| 586 | 3/31/2014 | 3/31/2014 | N/A | Public Notice sent via Certified Mail to EPA List | EPA | Numerous Parties |
| 587 | 4/1/2014 | 4/1/2014 | 17:33 | Public Notice E-mailed to EPA List | EPA | Numerous Parties |
| 588 | 4/2/2014 | 4/2/2014 | 10:32 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 589 | 4/2/2014 | 4/2/2014 | 13:33 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 590 | 4/4/2014 | 4/4/2014 | 17:17 | Public Notice E-mailed to EPA List - Second attempt to send the notice to those returned as undeliverable | EPA | Numerous Parties |
| 591 | | 8/28/2014 | | Phone conversation record with Tyler Gilmore (PNNL) and Doug Shutt (IDNR) regarding alleged water well issues while drilling the stratigraphic test well at FutureGen | Jeffrey McDonald, EPA | Tyler Gilmore,PNNL and Doug Shutt, IDNR |
| 592 | | 8/28/2014 | | memo to file regarding description of the Potosi formation's lost circulation as "leakage" | Jeffrey McDonald, EPA | na |
| 593 | | 1/13/2014 | 19:13 | ISWS well record search - Morgan County IL | William Saylor, ISWS | William Tong, EPA |
| **VII. Final Permit (40 C.F.R. § 124.18(b)(7))** | | | | | | |
| 594 | * | 8/28/2014 | | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0001, FutureGen 2.0 Well #1 | | |

I, Jeffrey R. McDonald, am the permit writer for U.S. EPA permit # IL-137-6A-0001, FutureGen 2.0 Well #1. The administrative record for this final permit decision includes, to the best of my knowledge, the documents that form the basis for the final permit decision, as required by 40 C.F.R. § 124.18. The above Administrative Record Index references the documents in the administrative record for this final permit decision.

Jeffrey R. McDonald, Permit Writer,
Underground Injection Control Branch, U.S. EPA Region 5

8/28/14
Date

# Exhibit B-2

**Index to the Administrative Record, Final Decision**
**FutureGen 2.0 Well #2; Permit #IL-137-6A-0002**

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|

**I. Draft Permit Administrative Record (40 C.F.R. § 124.18(b))**

a. Permit application (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 3/1/2013 | 3/15/2013 | N/A | Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |
| 2 | 5/1/2013 | 5/15/2013 | N/A | Revised Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |

b. Supporting documentation supplied by permit applicant (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 11/19/2013 | 12/12/2013 | N/A | Request for Additional Information #1 | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 4 | 12/10/2013 | 12/16/2013 | N/A | Request for Additional Information #2 | Kenneth Humphreys, FutureGen | Stephen Jann, EPA |
| 5 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 6 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 7 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) #3 (IR3-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 8 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 9 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 10 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 11 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delination and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 12 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 13 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 14 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

c. Draft permit or notice of intent to deny the application or terminate the permit (40 C.F.R. § 124.9(b)(2))

| | | | | | | |
|---|---|---|---|---|---|---|
| 15 | 3/31/2014 | 3/31/2014 | N/A | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0002, FutureGen 2.0 Well #2 | N/A | N/A |

d. Statement of basis or fact sheet (40 C.F.R. § 124.9(b)(3))

| | | | | | | |
|---|---|---|---|---|---|---|
| 16 | 3/31/2014 | 3/31/2014 | N/A | Public Comment on First Carbon Storage Draft Permits | N/A | N/A |
| 17 | 3/31/2014 | 3/31/2014 | N/A | Statement of Basis for Issuance of Class VI Underground Injection Control Permits | N/A | N/A |

e. All documents cited in the statement of basis or fact sheet (40 C.F.R. § 124.9(b)(4))

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 18 | 3/31/2014 | 3/31/2014 | N/A | Safe Drinking Water Act and Regulations at 40 C.F.R. 124 | N/A | N/A |

f. Other documents contained in the supporting file for the draft permit (40 C.F.R. § 124.9(b)(5))

| | | | | | | |
|---|---|---|---|---|---|---|
| 19 | 2/6/2013 | 2/6/2013 | 14:42 | Fw: 2.0 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 20 | 2/6/2013 | 2/6/2013 | 20:50 | Re: 2.0 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 21 | 3/12/2013 | 3/12/2013 | 12:24 | Copies | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 22 | 3/12/2013 | 3/12/2013 | 12:52 | Re: Copies | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 23 | 4/9/2013 | 4/22/2013 | N/A | Completeness Review of Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 24 | 4/26/2013 | 4/26/2013 | 15:28 | UIC Questions | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 25 | 4/30/2013 | 4/30/2013 | 16:41 | Followup | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 26 | 5/10/2013 | 5/10/2013 | 13:35 | UIC Re-Issue based on Completeness Review | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 27 | 5/13/2013 | 5/15/2013 | N/A | Revised Supporting Documentation | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 28 | 5/14/2013 | 5/14/2013 | 16:14 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 29 | 5/14/2013 | 5/14/2013 | 17:06 | Re: UIC Re-Issue based on Completeness Review | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 30 | 5/14/2013 | 5/14/2013 | 16:22 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 31 | 5/14/2013 | 5/14/2013 | 17:45 | FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 32 | 5/14/2013 | 5/14/2013 | 16:59 | Re: FutureGen Industrial Alliance; non profit status | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 33 | 5/14/2013 | 5/14/2013 | 17:01 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 34 | 5/23/2013 | 5/23/2013 | 10:06 | FutureGen Permit Application - FOI Request | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 35 | 5/23/2013 | 5/23/2013 | 10:14 | Re: FutureGen Permit Application - FOI Request | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 36 | 5/23/2013 | 5/23/2013 | 11:08 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 37 | 5/23/2013 | 5/23/2013 | 11:28 | Alliance General Counsel Information | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 38 | 5/23/2013 | 5/23/2013 | 12:47 | Re: Alliance General Counsel Information | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 39 | 5/23/2013 | 5/23/2013 | 15:42 | FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 40 | 5/29/2013 | 5/29/2013 | 15:25 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 41 | 5/29/2013 | 5/29/2013 | 15:34 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 42 | 6/3/2013 | 6/3/2013 | 12:06 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 43 | 6/5/2013 | 6/5/2013 | 14:43 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 44 | 6/5/2013 | 6/5/2013 | 16:36 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 45 | 6/5/2013 | 6/5/2013 | 16:39 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 46 | 6/5/2013 | 6/5/2013 | 16:54 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Lucinda Swartz, FutureGen; Mary McAuliffe, EPA |
| 47 | 6/11/2013 | 6/11/2013 | 9:42 | Fw: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 48 | 6/26/2013 | 6/26/2013 | 10:06 | FutureGen UIC Permit Question | Betty Niemann | Janette Hansen, EPA |
| 49 | 6/26/2013 | 6/26/2013 | 11:00 | Re: FutureGen UIC Permit Question | Janette Hansen, EPA | Betty Niemann |
| 50 | 7/30/2013 | 7/30/2013 | N/A | Phone Log Janette Hansen | N/A | N/A |
| 51 | 8/8/2013 | 8/8/2013 | 7:56 | FutureGen 2.0 - Listing of Materials to be Provided | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 52 | 8/8/2013 | 8/8/2013 | 10:14 | Re: FutureGen 2.0 - Listing of Materials to be Provided | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 53 | 8/12/2013 | 8/12/2013 | 15:46 | Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 54 | 8/26/2013 | 8/26/2013 | 11:04 | Fw: Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 55 | 8/26/2013 | 8/26/2013 | 12:21 | Re: Input Advisor For FutureGen Data | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 56 | 8/28/2013 | 8/28/2013 | 9:36 | Upcoming Hearings for Water Discharge (NPDES) 4Permit and for the Air Prevention of Significant Deterioration (PSD) and Construction Permit for FutureGen | Dean Studer, Illinois EPA | Brian Urbaszewski et al. |
| 57 | 8/28/2013 | 8/28/2013 | 11:45 | Upcoming Hearing for Water Discharge (NPDES) Permit and for the Air Construction Permits for FutureGen | Dean Studer, Illinois EPA | A. Buhl et al. |
| 58 | 8/30/2013 | 8/30/2013 | 21:06 | FutureGen Data Set | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 59 | 9/4/2013 | 9/4/2013 | 14:06 | FutureGen Schedule | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 60 | 9/4/2013 | 9/4/2013 | 14:21 | Re: FutureGen Schedule | Tyler Gilmore, FutureGen | Janette Hansen, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 61 | 9/29/2013 | 9/29/2013 | 11:23 | FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 62 | 9/30/2013 | 9/30/2013 | 7:31 | Re: FutureGen 2.0 in Illinois | Janette Hansen, EPA | Lillian Korous |
| 63 | 9/30/2013 | 9/30/2013 | 18:53 | Re: FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 64 | 10/7/2013 | 10/7/2013 | 16:05 | Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 65 | 10/17/2013 | 10/17/2013 | 13:38 | Re: Meredosia Hearing | Janette Hansen, EPA | Danny Little |
| 66 | 10/17/2013 | 10/17/2013 | 9:27 | Re: Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 67 | 10/31/2013 | N/A | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 68 | 11/14/2013 | 11/19/2013 | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 69 | 11/14/2013 | 11/14/2013 | 17:11 | FutureGen 2.0 Request for Additional Information | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 70 | 11/14/2013 | 11/14/2013 | 17:34 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Andrew Greenhagen, EPA |
| 71 | 11/15/2013 | 11/21/2013 | N/A | National Historic Preservation Act Inquiry; Location is at 39.800266N, 90.07469W (SE 1/4, SE 1/4, SW 1/4, SE 1/4, Section 26, T16N, R9W) | Rebecca Harvey, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 72 | 11/15/2013 | 11/15/2013 | 6:36 | Re: FutureGen 2.0 Request for Additional Information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 73 | 11/15/2013 | 11/15/2013 | 8:55 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 74 | 11/22/2013 | 11/22/2013 | 12:05 | FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA; Rebecca Harvey, EPA |
| 75 | 11/22/2013 | 11/22/2013 | 14:07 | RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 76 | 11/22/2013 | 11/22/2013 | 14:26 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 77 | 12/3/2013 | 12/3/2013 | 10:35 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 78 | 12/3/2013 | 12/3/2013 | 9:27 | Re: FutureGen 2.0 Class VI Well Permit Application | Jeffrey McDonald, EPA | Betty Niemann |
| 79 | 12/3/2013 | 12/3/2013 | 14:05 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 80 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 81 | 12/6/2013 | 12/6/2013 | 15:48 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 82 | 12/9/2013 | 12/9/2013 | N/A | National Historic Preservation Act Inquiry | Anne Haaker, Illinois Historic Preservation Agency | Rebecca Harvey, EPA |
| 83 | 12/9/2013 | 12/9/2013 | 11:08 | FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 84 | 12/9/2013 | 12/9/2013 | 11:13 | Re: FutureGen 2.0 | Janette Hansen, EPA | Dean Studer, Illinois EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 85 | 12/9/2013 | 12/9/2013 | 14:40 | Re: FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 86 | 12/10/2013 | 12/10/2013 | 8:37 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 87 | 12/10/2013 | 12/10/2013 | 15:30 | FutureGen 2.0 EIS Referenced Document | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 88 | 12/10/2013 | 12/10/2013 | N/A | Memo: Consideration of other laws under 40 CFR 144.4 | N/A | N/A |
| 89 | 12/11/2013 | 12/11/2013 | 14:56 | Re: Salinity in Ironton Sandstone | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 90 | 12/13/2013 | 12/13/2013 | 15:45 | Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 91 | 12/16/2013 | 12/16/2013 | 9:09 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 92 | 12/19/2013 | 12/19/2013 | 11:46 | Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 93 | 12/20/2013 | 12/20/2013 | 15:58 | FGA FR and other requests: 12-20-2013 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 94 | 12/31/2013 | 12/31/2013 | 11:49 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 95 | 12/31/2013 | 12/31/2013 | 12:35 | Re: Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 96 | 12/31/2013 | 12/31/2013 | 13:06 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 97 | 1/2/2014 | 1/2/2014 | 13:09 | Erratum to August 2013 Input Advisor File | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 98 | 1/2/2014 | 1/2/2014 | 13:20 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 99 | 1/2/2014 | 1/2/2014 | 16:13 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 100 | 1/3/2014 | 1/3/2014 | 12:03 | You have files ready for pickup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 101 | 1/3/2014 | 1/3/2014 | 13:13 | Re: You have files ready for pickup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 102 | 1/3/2014 | 1/3/2014 | 16:38 | 01-03-2014 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 103 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 104 | 1/3/2014 | 1/3/2014 | 19:08 | You have files ready for pickup | David Lanigan, FutureGen | Jeffrey McDonald, EPA |
| 105 | 1/10/2014 | 1/10/2014 | 14:38 | Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 106 | 1/14/2014 | 1/14/2014 | 15:52 | IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 107 | 1/14/2014 | 1/14/2014 | 14:49 | Re: IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 108 | 1/16/2014 | 1/16/2014 | 12:24 | IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 109 | 1/16/2014 | 1/16/2014 | 16:21 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 110 | 1/16/2014 | 1/16/2014 | 14:52 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 111 | 1/16/2014 | 1/16/2014 | 17:07 | Draft Minutes and Meeting followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 112 | 1/16/2014 | 1/16/2014 | 17:14 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 113 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 114 | 1/17/2014 | 1/17/2014 | 16:09 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 115 | 1/17/2014 | 1/17/2014 | 16:10 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 116 | 1/21/2014 | 1/21/2014 | 12:40 | Fw: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 117 | 1/21/2014 | 1/21/2014 | 17:01 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 118 | 1/22/2014 | 1/22/2014 | 10:08 | Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 119 | 1/22/2014 | 1/22/2014 | 14:39 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 120 | 1/22/2014 | 1/22/2014 | 15:54 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 121 | 1/22/2014 | 1/22/2014 | 16:12 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 122 | 1/23/2014 | 1/28/2014 | N/A | Notification of Class VI permit applications in the State of Illinois | Stephen Jann, EPA | Stephen Nightingale, Illinois EPA |
| 123 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 124 | 1/23/2014 | 1/23/2014 | 17:24 | Analysis of Pressure Impacts and Protection of USDW | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 125 | 1/24/2014 | 1/24/2014 | 16:22 | Re: Analysis of Pressure Impacts and Protection of USDW | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 126 | 1/27/2014 | 1/27/2014 | 11:13 | Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 127 | 1/27/2014 | 1/27/2014 | 11:22 | Re: Insurance and Trust Fund Followup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 128 | 1/27/2014 | 1/27/2014 | 12:03 | Re: Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 129 | 1/28/2014 | 1/28/2014 | 11:39 | FR Trust Fund feedback | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 130 | 1/28/2014 | 1/28/2014 | 17:41 | Timing of Trust Funding | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 131 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 132 | 1/29/2014 | 1/29/2014 | 8:39 | Re: Informal Request #5 EPA_IR5 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 133 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 134 | 1/29/2014 | 1/29/2014 | 13:50 | Re: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 135 | 1/30/2014 | 1/30/2014 | 17:59 | Followup Call on Trust Fund and Insurance | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 136 | 1/31/2014 | 1/31/2014 | 9:48 | Re: Followup Call on Trust Fund and Insurance | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 137 | 1/31/2014 | 1/31/2014 | 11:52 | Fw: Message from "R5-16-21" | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 138 | 1/31/2014 | 1/31/2014 | 15:28 | Quick Answer | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 139 | 1/31/2014 | 1/31/2014 | 16:26 | Re: Quick Answer | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 140 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delineation and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 141 | 2/4/2014 | 2/4/2014 | 8:28 | Re: Area of Review Delineation and Maximum Well Pressure Calculations | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 142 | 2/4/2014 | 2/4/2014 | 14:46 | Re: Timing of Trust Funding | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 143 | 2/5/2014 | 2/5/2014 | 16:37 | 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 144 | 2/5/2014 | 2/5/2014 | 16:55 | Re: 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 145 | 2/5/2014 | 2/5/2014 | 18:38 | Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 146 | 2/6/2014 | 2/6/2014 | 13:20 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 147 | 2/6/2014 | 2/6/2014 | 15:07 | Re: Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 148 | 2/6/2014 | 2/6/2014 | 15:10 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 149 | 2/6/2014 | 2/6/2014 | 15:11 | Re: Information on Insurance Requirements | Joseph Tiago, EPA | Jeffrey McDonald, EPA et al. |
| 150 | 2/7/2014 | 2/7/2014 | 16:27 | Re: UIC Insurance Discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 151 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 152 | 2/7/2014 | 2/7/2014 | 16:28 | Re: Annular Pressurization System for Injection Wells | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 153 | 2/7/2014 | 2/7/2014 | 16:30 | Re: UIC Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 154 | 2/12/2014 | 2/12/2014 | 11:16 | Fw: ADM QASP Plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 155 | 2/12/2014 | 2/12/2014 | 12:13 | Re: ADM QASP Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 156 | 2/12/2014 | 2/12/2014 | 13:41 | draft AOR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 157 | 2/13/2014 | 2/13/2014 | 18:25 | Plugging and Abandonment Plan Revision | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 158 | 2/14/2014 | 2/14/2014 | 9:27 | Re: Plugging and Abandonment Plan Revision | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 159 | 2/14/2014 | 2/14/2014 | 15:11 | draft testing and monitoring plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 160 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 161 | 2/17/2014 | 2/17/2014 | 15:29 | Conference Call Times | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 162 | 2/18/2014 | 2/18/2014 | 8:58 | Re: EPA's IR#9 01-31-2014 ready to be send | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 163 | 2/18/2014 | 2/18/2014 | 9:10 | Re: Conference Call Times | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 164 | 2/18/2014 | 2/18/2014 | 11:40 | discussion points for 2/19 phone call on critical pressure calculations at FG | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 165 | 2/18/2014 | 2/18/2014 | 17:54 | Fw: discussion points for 2/19 phone call on critical pressure calculations at FG | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Andrew Greenhagen, EPA |
| 166 | 2/19/2014 | 2/19/2014 | 14:29 | 2/19/14 brief phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 167 | 2/20/2014 | 2/20/2014 | 9:40 | Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 168 | 2/20/2014 | 2/20/2014 | 9:41 | Re: Draft Trust Agreement | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 169 | 2/20/2014 | 2/20/2014 | 10:02 | Fw: Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 170 | 2/20/2014 | 2/20/2014 | 13:34 | IR#10 02-20-14; question about pressure front tracking | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 171 | 2/21/2014 | 2/21/2014 | 13:16 | draft ERR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 172 | 2/21/2014 | 2/21/2014 | 14:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 173 | 2/21/2014 | 2/21/2014 | 16:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 174 | 2/21/2014 | 2/21/2014 | 16:02 | Re: draft PISC plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 175 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 176 | 2/21/2014 | 2/21/2014 | 16:49 | draft Trust Fund language | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 177 | 2/24/2014 | 2/24/2014 | 13:40 | updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 178 | 2/24/2014 | 2/24/2014 | 13:49 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 179 | 2/25/2014 | 2/25/2014 | 9:50 | Re: updated draft PISC for your review and reply | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 180 | 2/25/2014 | 2/25/2014 | 10:17 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 181 | 2/25/2014 | 2/25/2014 | 11:35 | Fw: Demonstration of Non Endangerment | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 182 | 2/25/2014 | 2/25/2014 | 16:15 | Injection Intervals and Injection Zone for each well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 183 | 2/26/2013 | 2/26/2013 | 9:34 | trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 184 | 2/26/2013 | 2/26/2013 | 10:02 | Re: trust fund language corrections | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 185 | 2/26/2013 | 2/26/2013 | 10:53 | Re: trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 186 | 2/26/2013 | 2/26/2013 | 13:53 | Plugging and Construction plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 187 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Champaign - The News-Gazette | N/A | N/A |
| 188 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Decatur - The Decatur Tribune | N/A | N/A |
| 189 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Springfield - The State Journal-Register | N/A | N/A |
| 190 | 2/27/2014 | 2/27/2014 | 13:26 | Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 191 | 2/27/2014 | 2/27/2014 | 15:09 | 2/25/14 phone memo | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 192 | 2/27/2014 | 2/27/2014 | 15:33 | AoR delineation | Jeffrey McDonald, EPA | Mark Williams, FutureGen |
| 193 | 2/27/2014 | 2/27/2014 | N/A | Class VI Mailing List Solicitation - Jacksonville - The Source | N/A | N/A |
| 194 | 2/28/2014 | 2/28/2014 | 5:27 | Re: Trust Agreement language for FGA FR | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 195 | 2/28/2014 | 2/28/2014 | 7:24 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 196 | 2/28/2014 | 2/28/2014 | 10:10 | Re: AoR delineation | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Mark Williams, FutureGen |
| 197 | 2/28/2014 | 2/28/2014 | 11:16 | Re: Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 198 | 2/28/2014 | 2/28/2014 | 14:51 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 199 | 2/28/2014 | 2/28/2014 | 15:10 | Re: AoR delineation | Stephen Roy, EPA | Jeffrey McDonald, EPA et al. |
| 200 | 2/28/2014 | 2/28/2014 | 15:13 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA et al. |
| 201 | 2/28/2014 | 2/28/2014 | 16:07 | Re: AoR delineation | Stephen Roy, EPA | Tyler Gilmore, FutureGen |

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| 202 | 2/28/2014 | 2/28/2014 | 16:13 | Fw: Another equation for calculating the critical pressure | Stephen Roy, EPA | Tyler Gilmore, FutureGen |
| 203 | 2/28/2014 | 2/28/2014 | 17:35 | Re: AoR delineation | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 204 | 2/28/2014 | 2/28/2014 | 17:57 | Re: AoR delineation | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 205 | 3/3/2014 | 3/3/2014 | 13:02 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 206 | 3/3/2014 | 3/3/2014 | 13:09 | Quick Request | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 207 | 3/3/2014 | 3/3/2014 | 13:28 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 208 | 3/3/2014 | 3/3/2014 | 14:09 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 209 | 3/3/2014 | 3/3/2014 | 15:24 | Re: Quick Request | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 210 | 3/3/2014 | 3/3/2014 | 22:23 | FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 211 | 3/4/2014 | 3/4/2014 | 12:15 | FG-EPA Call Notes: March | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 212 | 3/4/2014 | 3/4/2014 | 17:31 | Emergency and Remedial Response Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 213 | 3/4/2014 | 3/4/2014 | 18:00 | Addition of AoR "Triggers" and Pressure Monitoring Well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 214 | 3/4/2014 | 3/4/2014 | 18:15 | Post Injection Site Care Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 215 | 3/4/2014 | 3/4/2014 | 18:54 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 216 | 3/4/2014 | 3/4/2014 | 19:11 | Testing and Monitoring Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 217 | 3/5/2014 | 3/5/2014 | 1:32 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 218 | 3/5/2014 | 3/5/2014 | 8:40 | Re: FutureGen QASP | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 219 | 3/5/2014 | 3/5/2014 | 9:15 | AoR File - Follow-Up | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen; Delphine Appriou, FutureGen |
| 220 | 3/5/2014 | 3/5/2014 | 10:19 | Re: FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 221 | 3/5/2014 | 3/5/2014 | 12:21 | You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 222 | 3/5/2014 | 3/5/2014 | 12:27 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 223 | 3/5/2014 | 3/5/2014 | 12:29 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 224 | 3/5/2014 | 3/5/2014 | 12:43 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 225 | 3/5/2014 | 3/5/2014 | 12:53 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 226 | 3/5/2014 | 3/5/2014 | 12:59 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |

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| 227 | 3/5/2014 | 3/5/2014 | 13:18 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 228 | 3/5/2014 | 3/5/2014 | 16:08 | Re: FutureGen QASP | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 229 | 3/5/2014 | 3/5/2014 | 17:44 | Injection well plugging plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 230 | 3/6/2014 | 3/6/2014 | 8:35 | Re: Injection well plugging plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 231 | 3/6/2014 | 3/6/2014 | 9:41 | Fw: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 232 | 3/6/2014 | 3/6/2014 | 15:08 | Calculations of Critical Pressure | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 233 | 3/6/2014 | 3/6/2014 | 15:25 | Updated Microseismic Sensitivity Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 234 | 3/6/2014 | 3/6/2014 | 22:07 | AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 235 | 3/6/2014 | 3/6/2014 | 22:55 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 236 | 3/7/2014 | 3/7/2014 | 8:36 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 237 | 3/7/2014 | 3/7/2014 | 10:06 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 238 | 3/7/2014 | 3/7/2014 | 13:13 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 239 | 3/7/2014 | 3/7/2014 | 17:37 | Insurance and CO2 Storage Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 240 | 3/7/2014 | 3/7/2014 | 20:23 | Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 241 | 3/8/2014 | 3/8/2014 | 12:50 | Transmittal of AoR information and Request | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 242 | 3/10/2014 | 3/10/2014 | 10:47 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen; MaryRose Bayer, EPA |
| 243 | 3/10/2014 | 3/10/2014 | 14:48 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 244 | 3/10/2014 | 3/10/2014 | 17:39 | Last Transmittal of AoR information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 245 | 3/11/2014 | 3/11/2014 | 13:05 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 246 | 3/11/2014 | 3/11/2014 | 15:50 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 247 | 3/11/2014 | 3/11/2014 | 16:49 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 248 | 3/11/2014 | 3/11/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 249 | 3/11/2014 | 3/11/2014 | N/A | Insurance Checklist | N/A | N/A |
| 250 | 3/12/2014 | 3/12/2014 | 5:51 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 251 | 3/12/2014 | 3/12/2014 | 11:20 | Re: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 252 | 3/12/2014 | 3/12/2014 | 10:28 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 253 | 3/12/2014 | 3/12/2014 | 11:54 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 254 | 3/12/2014 | 3/12/2014 | 14:13 | pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 255 | 3/12/2014 | 3/12/2014 | 14:05 | Fw: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 256 | 3/12/2014 | 3/12/2014 | 14:08 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 257 | 3/12/2014 | 3/12/2014 | 14:13 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 258 | 3/12/2014 | 3/12/2014 | 16:46 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 259 | 3/13/2014 | 3/13/2014 | 4:32 | Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 260 | 3/13/2014 | 3/13/2014 | 9:58 | Re: Conference Call(s) | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 261 | 3/13/2014 | 3/13/2014 | 9:58 | Re: pressure differential and plume boundary graphic | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 262 | 3/13/2014 | 3/13/2014 | 10:02 | Re: pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 263 | 3/13/2014 | 3/13/2014 | 10:03 | Re: Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 264 | 3/13/2014 | 3/13/2014 | 13:21 | Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 265 | 3/13/2014 | 3/13/2014 | 14:26 | Re: Saw that you called | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 266 | 3/13/2014 | 3/13/2014 | 13:30 | Re: Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Thomas Krueger, EPA |
| 267 | 3/13/2014 | 3/13/2014 | 15:28 | Insurance Files | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 268 | 3/13/2014 | 3/13/2014 | 15:39 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 269 | 3/13/2014 | 3/13/2014 | 16:13 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 270 | 3/13/2014 | 3/13/2014 | 16:23 | Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 271 | 3/14/2014 | 3/14/2014 | 10:16 | insurance issues raised from our contractor to help guide the discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 272 | 3/14/2014 | 3/14/2014 | 10:27 | Re: Conference Call(s) | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 273 | 3/14/2014 | 3/14/2014 | 10:28 | Re: Conference Call(s) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 274 | 3/14/2014 | 3/14/2014 | 14:23 | well test procedures | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 275 | 3/14/2014 | 3/14/2014 | 15:26 | All Plugging Plans | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 276 | 3/14/2014 | 3/14/2014 | 15:28 | Re: All Plugging Plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 277 | 3/14/2014 | 3/14/2014 | 17:15 | Re: Final Draft CO2 Trust Agreement | Tom Maple, US Bank | Lucinda Swartz, FutureGen |
| 278 | 3/15/2014 | 3/15/2014 | 9:40 | Pressure front elevation and New Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 279 | 3/17/2014 | 3/17/2014 | 12:00 | Fw: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 280 | 3/17/2014 | 3/17/2014 | 12:32 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 281 | 3/17/2014 | 3/17/2014 | 14:12 | Re: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 282 | 3/17/2014 | 3/17/2014 | 14:24 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 283 | 3/19/2014 | 3/19/2014 | 16:49 | Re: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 284 | 3/20/2014 | 3/20/2014 | 16:16 | Re: Insurance info | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 285 | 3/21/2014 | 3/21/2014 | 11:49 | Location of future pressure monitoring well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 286 | 3/21/2014 | 3/21/2014 | 13:08 | Re: Location of future pressure monitoring well | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 287 | 3/21/2014 | 3/21/2014 | 16:24 | Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 288 | 3/21/2014 | 3/21/2014 | 16:40 | Re: Executed Trust Fund Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 289 | 3/21/2014 | 3/21/2014 | 16:45 | Re: Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 290 | 3/24/2014 | 3/24/2014 | 17:00 | Re: FG App Missing Refs | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 291 | 3/24/2014 | 3/24/2014 | 18:15 | insurance options | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 292 | 3/25/2014 | 3/25/2014 | 11:28 | Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 293 | 3/25/2014 | 3/25/2014 | 11:23 | Re: Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 294 | 3/25/2014 | 3/25/2014 | 14:14 | Re: Insurance for FGA | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 295 | 3/25/2014 | 3/25/2014 | 18:10 | Re: Insurance Coverage for Emergency and Remedial Response Actions | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 296 | 3/25/2014 | 3/25/2014 | N/A | FutureGen Alliance Class VI Injection Project: Evaluation of Area of Review Delineation and Corrective Action (Due to the large volume of underlying data summarized in the AoR report, including the sensitivity analyses performed by FG and EPA, this information is not physically included in the administrative record, but is available upon request.) | N/A | N/A |
| 297 | 3/26/2014 | 3/26/2014 | 7:05 | Re: Insurance for FGA | Joseph Tiago, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 298 | 3/26/2014 | 3/26/2014 | 8:28 | Re: Insurance for FGA | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 299 | 3/26/2014 | 3/26/2014 | 14:53 | Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 300 | 3/26/2014 | 3/26/2014 | 15:39 | Re: Your address? | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 301 | 3/26/2014 | 3/26/2014 | 19:36 | Re: Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 302 | 3/27/2014 | 3/27/2014 | 7:16 | Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 303 | 3/27/2014 | 3/27/2014 | 9:13 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 304 | 3/27/2014 | 3/27/2014 | 11:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 305 | 3/27/2014 | 3/27/2014 | 12:03 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 306 | 3/27/2014 | 3/27/2014 | 12:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 307 | 3/27/2014 | 3/27/2014 | 12:58 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 308 | 3/27/2014 | 3/27/2014 | 15:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 309 | 3/27/2014 | 3/27/2014 | 14:51 | Memo: Growth Fault and Surface Air Monitoring | N/A | N/A |
| 310 | 3/27/2014 | 3/27/2014 | N/A | Memo: EJ Analysis for FutureGen 2.0 in Morgan County | N/A | N/A |
| 311 | 3/28/2014 | 3/28/2014 | 8:20 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 312 | 3/28/2014 | 3/28/2014 | 8:27 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 313 | 3/28/2014 | 3/28/2014 | 8:39 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 314 | 3/28/2014 | 3/28/2014 | 8:52 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 315 | 3/28/2014 | 3/28/2014 | 10:54 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 316 | 3/28/2014 | 3/28/2014 | 13:31 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 317 | 3/28/2014 | 3/28/2014 | 13:54 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 318 | 3/28/2014 | 3/28/2014 | 17:24 | Fw: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 319 | 3/28/2014 | 3/28/2014 | N/A | Illinois State Treasurer Approved Financial Institutions - US Bank | N/A | N/A |
| 320 | 3/28/2014 | 3/28/2014 | N/A | Financial Responsibility Estimates for FutureGen Based on Cost Tool Options | N/A | N/A |
| 321 | 3/29/2014 | 3/29/2014 | 15:25 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 322 | 3/31/2014 | 3/31/2014 | N/A | Induced Seismicity Evaluation Using the EPA-Developed Decision Model | N/A | N/A |
| 323 | 3/31/2014 | 3/31/2014 | N/A | USGS; 2009 Earthquake Probability Mapping; 2014 | N/A | N/A |
| 324 | 3/31/2014 | 3/31/2014 | N/A | USGS; Earthquake Archive Search; 2014 | N/A | N/A |
| 325 | 3/31/2014 | 3/31/2014 | N/A | USGS; Quaternary Fault and Fold Database of the United States; 2014 | N/A | N/A |
| 326 | 3/31/2014 | 3/31/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 327 | N/A | N/A | N/A | 40 CFR 144.3; Underground Injection Control Program Definitions; Code of Federal Regulations; | N/A | N/A |
| 328 | N/A | N/A | N/A | 40 CFR 144.31; Underground Injection Control Program; Code of Federal Regulations; | N/A | N/A |
| 329 | N/A | N/A | N/A | 40 CFR 146; Underground Injection Control Program: Criteria and Standards; Code of Federal Regulations; | N/A | N/A |
| 330 | N/A | N/A | N/A | 75 FR 77230; Federal Requirements Under the Underground Injection Control Program for Carbon Dioxide Geologic Sequestration Wells; Federal Register; 2010 | N/A | N/A |
| 331 | N/A | N/A | N/A | 76 FR 29728; Notice of Intent to Prepare an Environmental Impact Statement and Notice of Potential Floodplain and Wetlands Involvement for the FutureGen 2.0 Program; Federal Register; 2011 | N/A | N/A |
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| 354 | N/A | N/A | N/A | Cihan A., Q. Zhou, and J-T. Birkholzer; Analytical solutions for pressure perturbation and fluid leakage through aquitards and wells in multilayered-aquifer systems; Water Resources Research; 2011 | N/A | N/A |
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| 407 | N/A | N/A | N/A | Meyer, R.O. and F.F. Krause; Permeability Anisotropy and Heterogeneity of a Sandstone Reservoir Analogue: An Estuarine to Shoreface Depositional System in the Virgelle Member, Milk River Formation, Writing-On-Stone Provincial Park, Southern Alberta; Bulletin of Canadian Petroleum Geology; 2006 | N/A | N/A |
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| 472 | N/A | N/A | N/A | Clean Air Act Section 7401; 42 USC 7401; | N/A | N/A |
| 473 | N/A | N/A | N/A | Clean Water Act/Federal Water Pollution Control Act; 33 USC 1344; | N/A | N/A |
| 474 | N/A | N/A | N/A | Marine Protection, Research, and Sanctuaries Act of 1972; 16 USC 1431 and 33 USC 1401; | N/A | N/A |
| 475 | N/A | N/A | N/A | National Environmental Policy Act of 1969; 42 USC | N/A | N/A |
| 476 | N/A | N/A | N/A | Resource Conservation and Recovery Act; 42 USC 6901; | N/A | N/A |
| 477 | N/A | N/A | N/A | Safe Drinking Water Act of 1974; 42 USC 300f; | N/A | N/A |

**II. All Comments Received During the Public Comment Period (40 C.F.R. § 124.18(b)(1))**

| | | | | | | |
|---|---|---|---|---|---|---|
| 478 | 5/15/2014 | 5/15/2014 | | USEPA Region 5 - FutureGen Additional Public Comments | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/3/2014 | 4/3/2014 | | Question and Concern | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/1/2014 | 4/1/2014 | | Public Hearing Question on FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA |
| 479 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Bradley Zeller | Jeffrey McDonald, EPA |
| 480 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | Carl Hankel | Jeffrey McDonald, EPA |
| 481 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Central Illinois Building & Construction Trades Council | Jeffrey McDonald, EPA |
| 482 | 4/29/2014 | 4/29/2014 | | FutureGen Alliance Public Comments | Clearstack Combustion Corp. | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 483 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Danny Little | Jeffrey McDonald, EPA |
| 484 | 4/4/2014 | 4/4/2014 | | FutureGen Alliance Public Comments | Ed Shaw | Jeffrey McDonald, EPA |
| 485 | 5/7/2014 | 5/7/2014 | | USEPA Region 5 - FutureGen Public Comments | Elizabeth Rigor | Jeffrey McDonald, EPA |
| 486 | 5/14/2014 | 5/14/2014 | | Comments on the Class VI permits 137-6A-0001, -0002, 0003 and 0004 | FutureGen Industrial Alliance | Jeffrey McDonald, EPA |
| 487 | 5/12/2015 | 5/12/2015 | | FutureGen Alliance Public Comments | Global Carbon Capture and Storage Institute | Jeffrey McDonald, EPA |
| 488 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Coal Assoc. | Jeffrey McDonald, EPA |
| 489 | 5/13/2014 | 5/13/2014 | | Submission from the Illinois Chamber of Commerce | Illinois Chamber of Commerce | Jeffrey McDonald, EPA |
| 490 | 5/15/2014 | 5/15/2014 | | FutureGen 2.0 Project Comments | American Coalition for Clean Coal Electricity, Coal Utilization Research Council, Edison Electric Institute, Illinois Coal Association, National Mining Association (NMA), and National Rural Electric Cooperative Association | Jeffrey McDonald, EPA |
| 491 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Department of Commerce and Economic Opportunity (DCEO) | Jeffrey McDonald, EPA |
| 492 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Boilermakers Local 363 | Jeffrey McDonald, EPA |
| 493 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Electrical Workers (IBEW) Local 193 | Jeffrey McDonald, EPA |
| 494 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Jacksonville Regional Economic Development Corporation (EDC) | Jeffrey McDonald, EPA |
| 495 | 4/5/2014 | 4/5/2014 | | FutureGen Alliance Public Comments | Karen Shaw | Jeffrey McDonald, EPA |
| 496 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Laborers' International Union of North America (LIUNA) | Jeffrey McDonald, EPA |
| 497 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen's UIC Draft Permits | Leinberger & Critchelow Families / Nijman Franzetti, LLP | Jeffrey McDonald, EPA |
| 498 | 4/10/2014 | 4/10/2014 | | FutureGen 2 to EPA | Lillian Korous | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 499 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Marc Landers | Jeffrey McDonald, EPA |
| 500 | 4/2/2014 | 4/2/2014 | | carbon capture plan | Mick Mcintyre | Jeffrey McDonald, EPA |
| 501 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen Alliance 2.0 Class VI Permit Application | Natural Resources Defense Council (NRDC), Clean Air Task Force, and Sierra | Jeffrey McDonald, EPA |
| 502 | 5/8/2014 | 5/8/2014 | | FutureGen Alliance Public Comments | Pipefitters Local 137 | Jeffrey McDonald, EPA |
| 503 | 5/5/2014 | 5/5/2014 | | FutureGen Permit Comments | Robert J. Finley | Jeffrey McDonald, EPA |
| 504 | 5/15/2014 | 5/15/2014 | | Comments on Draft FutureGen Class VI Well Permits for Wells #1, #2, #3, and #4 | U.S. Carbon Sequestration Council (CSC) | Jeffrey McDonald, EPA |
| 505 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | US Fish and Wildlife Service | Jeffrey McDonald, EPA |
| 506 | 5/5/2014 | 5/5/2014 | | FutureGen Alliance Public Comments | Wilmot McCutchen | Jeffrey McDonald, EPA |
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**III. Tape or Transcript of Public Hearings (40 C.F.R. § 124.18(b)(2))**

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|---|---|---|---|---|---|---|
| 506 | * | 6/4/2014 | 13:50 | Underground Injection Control Draft Permits for the FutureGen Industrial Alliance - Revised Final transcripts - Public Hearing of May 7, 2014, at MacMurray College, Jacksonville, Illinois | Robin L. Stranimeier, of Jane Rose Reporting | Jeffrey McDonald, Jeffrey Wawczak, Lillateese Simmons, EPA |
| 507 | | | | | | |

**IV. Written Materials Submitted at Public Hearings (40 C.F.R. § 124.18(b)(3))**

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| 508 | * | | | Comments of the Illinois Department of Commerce and Economic Opportunity's Office of Coal Development | * | |
| 509 | | | | Comment of Phil Gonet, Illinois Coal Assoc. | | |
| 510 | | | | Jacksonville Regional Economic Development Corporation (EDC), Terry Denison | | |

**V. Response to Comments (40 C.F.R. § 124.18(b)(4))**

a. Response to comments

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|---|---|---|---|---|---|---|
| 511 | * | 8/29/2014 | | Response to Comments for Draft Class VI Permits Issued to the FutureGen Industrial Alliance | Tinka Hyde, EPA | Commenters |

b. New records considered by the Agency in Developing response to comments

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|---|---|---|---|---|---|---|
| 512 | * | 8/14/2014 | 11:29 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 513 | | 8/14/2014 | 11:19 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 514 | | 8/14/2014 | 10:41 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 515 | | 8/13/2014 | 13:21 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 516 | | 7/14/2014 | 09:46 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 517 | | 7/11/2014 | 10:25 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 518 | | 7/17/2014 | 11:53 | ISGS well data in West Central Illinois | Jeffrey McDonald, EPA | Alison Lecouris, ISGS |
| 519 | | 7/17/2014 | 14:18 | ISGS well data in West Central Illinois | Alison Lecouris, ISGS | Jeffrey McDonald, EPA |
| 520 | | 7/22/2014 | 05:17 | shape files | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 521 | | 7/25/2014 | 11:02 | shape files | Jeffrey McDonald, EPA | David Lanigan, Tyler Gilmore, PNNL |
| 522 | | 7/25/2014 | 13:43 | shape files | David Lanigan, PNNL | Jeffrey McDonald, EPA |
| 523 | | 6/13/2014 | 15:32 | Agenda for Tuesday's Meeting | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 524 | | 8/14/2014 | 11:12 | Criswell Plugging Affidavit [and attached OG-6 Well Plugging Report form, cementing service report from Franklin Well Services, 1965 Illinois Well Completion Report, and 1965 permit] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 525 | | 8/14/2014 | 11:19 | re: Criswell Plugging Affidavit | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 526 | | 8/14/2014 | 11:24 | re: Criswell Plugging Affidavit | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 527 | | 8/21/2014 | 14:15 | link [NRDC editorial] | Robert Finley, ISGS | Jeffrey McDonald, EPA |
| 528 | | 8/28/2014 | | Meeting between FutureGen, EPA and EPA's contractor, The Cadmus Group | Tyler Gilmore, Lucinda Swartz | Mary Rose Bayer, Joseph Tiago, Andrew Greenhagen, Mary McAuliffe, Tom Krueger, Jason Deardorff, Jeffrey McDonald, and Jaime Rooke (Cadmus) |
| 529 | | 8/27/2014 | 12:10 | Cost Tool for ERR activities | MaryRose Bayer, EPA | Jeffrey McDonald, EPA |
| 530 | | 7/28/2014 | 13:34 | downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 531 | | 8/14/2014 | 14:20 | re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 532 | | 8/14/2014 | 12:26 | re: downhole pressure gauge question [and use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 533 | | 8/14/2014 | 16:27 | re: downhole pressure gauge question [and use of tracers] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 534 | | 7/15/2014 | 12:36 | Letter of Intent to Drill Stratigraphic Well [e-mail and letter] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 535 | | 7/9/2014 | 15:22 | e-mail re: CO2 Flow | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 536 | | na | | Illinois Compiled Statues [20 ILCS 1108/1] | na | na |
| 537 | 7/25/2008 | | | Federal Register Vol. 73; No. 144; Federal Requirements Under the Underground Injection (UIC) Program for Carbon Dioxide (CO2) Geologic Sequestration (GS) | na | na |
| 538 | 7/1/2014 | | | FutureGen Corrective Action Evaluation; Illinois State Geological Survey (ISGS) Well Data | na | na |
| 539 | 4/15/2010 | | | API Comments on: Sequestering Carbon Dioxide in a Closed Underground Volume | American Petroleum Institute | na |
| 540 | 4/1/2010 | | | A Brief Technical Critique of Ehlig-Economides and Economides 2010: "Sequestering Carbon Dioxide in a Closed Underground Volume" | Pacific Northwest National Laboratory | na |
| 541 | 4/9/2014 | 4/15/2014 | | Class VI Injection well permit - FutureGen Industrial Alliance, Inc. | Anne E. Haaker, Illionois Historic Preservation Agency | Lisa Perenchio, EPA |
| 542 | | 3/31/2014 | | Certificate of Service | Denice Dumas, NAAPCA | na |
| 543 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Matt Mangan, U.S. Fish and Wildlife Service |
| 544 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Bill Hoback, Ill. Dept. of Commerce and Economic Opportunity |
| 545 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Robert Flider, Ill. Dept. of Agriculture |
| 546 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Adam Pollet, Ill. Dept. of Commerce and Economic Opportunity |
| 547 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Todd Rettig, IDNR |
| 548 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marc Miller, IDNR |
| 549 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Karen Miller, IDNR |
| 550 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Arland Juhl, IDNR |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 551 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Andree DuVarney, U.S. Dept. of Agriculture |
| 552 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Kenneth Westlake, EPA |
| 553 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Charles L. Walthall, U.S. Dept. of Agriculture |
| 554 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Dr. LaMar Hasbrouck, Illinois Dept. of Public Health |
| 555 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Jonathan Feipel, Ill. Commerce Commission |
| 556 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Chuck Ingersoll, Ill. Dept. of Transportation |
| 557 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marthea Roundtree, EPA |
| 558 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Steve Nightengale, IEPA |
| 559 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Lisa Bonnett, IEPA |
| 560 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | David Bloomberg, IEPA |
| 561 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 562 | 3/31/2014 | 3/31/2014 | | U.S. Environmental Protection Agency Draft Permit Numbers: IL-137-6A-0001, -0002, -0003, and -0004 for the Wells #1, #2,#3, and #4 (respectively) in Morgan County, Illinois | Tinka G. Hyde, EPA | Kenneth K. Humphreys, FutureGen Industrial Alliance, Inc. |
| 563 | 3/31/2014 | 3/31/2014 | | Draft Class VI permits respository | Stephen M. Jann, EPA | Jacksonville Public Library |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 564 | 8/26/2014 | 8/1/2014 | | Phone conversation with ISGS regarding Mt. Simon formation flow rates and their consideration with FutureGen permit applications | Jeffrey McDonald, EPA | Robert Finley and Edward Mehnert, Illinois State Geol. Survey |
| 565 | 8/26/2014 | 7/30/2014 | | Phone conversation with Battelle/PNNL and Cadmus regarding the FutureGen permit applications numerical modeling | Jeffrey McDonald, EPA | Signe White, PNNL and Inci Demirkanli, Cadmus |
| 566 | 8/28/2014 | 7/11/2014 | | Phone conversation memo with Pan Handle, operators of the gas storage field in Waverly, Illinois | Jeffrey McDonald, EPA | Dave Hegemann and Larry Jenkins, Pan Handle |
| 567 | na | na | | data sheet on Halliburton's Hydromite | na | na |
| 568 | 2/11/2011 | | | "Investigation of gridding effects for numerical simulations of CO2 geologic sequestration" by Yamamoto and Doughty | | |
| 569 | 2/1/2008 | na | | Determination of Mechanical Integrity of Injection Wells; Region 5 guidance document # 5 | | |
| 570 | 3/1/2012 | | | Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio, Area | Ohio DNR | |
| 571 | 8/28/2014 | 6/27/2014 | | Phone conversation record with Bryan Huff of ISGS regarding Criswell and Whitlock well records | Jeffrey McDonald, EPA | Bryan Huff, ISGS |
| 572 | 6/30/2014 | 6/30/2014 | | e-mail from Bryan Huff with ISGS records on Criswell and Whitlock wells | Bryan Huff, ISGS | Jeffrey McDonald, EPA |
| 573 | | 6/17/2014 | | CO2Flow Software Documentation: Hydraulic Model for CO2 Pipelines and Injection wells (January and June, 2014 versions) | PNNL | |
| 574 | | 6/17/2014 | | Testing of CO2Flow Pipeline and Injection Well Simulation Program (April 2014 version) | PNNL | |
| 575 | 3/27/2014 | 6/17/2014 | | AIG Insurance specimen policy | FutureGen | |
| 576 | 7/9/2014 | 7/9/2014 | 16:08 | Well files [database and other info on Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 577 | 7/10/2014 | 7/10/2014 | 11:01 | re: Well files [Criswell and Whitlock] | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 578 | 7/11/2014 | 7/11/2014 | 09:25 | re: Well files [Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 579 | 8/28/2014 | 7/9/2014 | | Phone conversation with Doug Shutt of the IDNR | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 580 | 7/30/2014 | 7/30/2014 | 14:27 | e-mail re: More Concerns over FutureGen | Betty Niemann | Jeffrey McDonald, EPA |
| 581 | 8/28/2014 | 7/25/2014 | | Phone conversations with Mike Elliott of PNNL | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 582 | 7/28/2014 | 7/28/2014 | 13:34 | e-mail: downhole pressure gauge question | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 583 | 8/14/2014 | 8/14/2014 | 14:20 | e-mail: re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 584 | 8/14/2014 | 8/14/2014 | 14:26 | e-mail: re: downhole pressure gauge question [requesting clarification on use or non-use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| **VI. Other Records in the Supporting File for the Permit (40 C.F.R. § 124.18(b)(6))** | | | | | | |
| 585 | 3/31/2014 | 3/31/2014 | N/A | Public Notice Mailed to EPA List | EPA | Numerous Parties |
| 586 | 3/31/2014 | 3/31/2014 | N/A | Public Notice sent via Certified Mail to EPA List | EPA | Numerous Parties |
| 587 | 4/1/2014 | 4/1/2014 | 17:33 | Public Notice E-mailed to EPA List | EPA | Numerous Parties |
| 588 | 4/2/2014 | 4/2/2014 | 10:32 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 589 | 4/2/2014 | 4/2/2014 | 13:33 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 590 | 4/4/2014 | 4/4/2014 | 17:17 | Public Notice E-mailed to EPA List - Second attempt to send the notice to those returned as undeliverable | EPA | Numerous Parties |
| 591 | | 8/28/2014 | | Phone conversation record with Tyler Gilmore (PNNL) and Doug Shutt (IDNR) regarding alleged water well issues while drilling the stratigraphic test well at FutureGen | Jeffrey McDonald, EPA | Tyler Gilmore,PNNL and Doug Shutt, IDNR |
| 592 | | 8/28/2014 | | memo to file regarding description of the Potosi formation's lost circulation as "leakage" | Jeffrey McDonald, EPA | na |
| 593 | | 1/13/2014 | 19:13 | ISWS well record search - Morgan County IL | William Saylor, ISWS | William Tong, EPA |
| **VII. Final Permit (40 C.F.R. § 124.18(b)(7))** | | | | | | |
| 594 | * | 8/28/2014 | | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0002, FutureGen 2.0 Well #2 | | |

I, Jeffrey R. McDonald, am the permit writer for U.S. EPA permit # IL-137-6A-0002, FutureGen 2.0 Well #2. The administrative record for this final permit decision includes, to the best of my knowledge, the documents that form the basis for the final permit decision, as required by 40 C.F.R. § 124.18. The above Administrative Record Index references the documents in the administrative record for this final permit decision.

Jeffrey R. McDonald, Permit Writer,
Underground Injection Control Branch, U.S. EPA Region 5

8/28/14
Date

# Exhibit B-3

**Index to the Administrative Record, Final Decision**
**FutureGen 2.0 Well #3; Permit #IL-137-6A-0003**

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|

**I. Draft Permit Administrative Record (40 C.F.R. § 124.18(b))**

a. Permit application (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 3/1/2013 | 3/15/2013 | N/A | Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |
| 2 | 5/1/2013 | 5/15/2013 | N/A | Revised Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |

b. Supporting documentation supplied by permit applicant (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 11/19/2013 | 12/12/2013 | N/A | Request for Additional Information #1 | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 4 | 12/10/2013 | 12/16/2013 | N/A | Request for Additional Information #2 | Kenneth Humphreys, FutureGen | Stephen Jann, EPA |
| 5 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 6 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 7 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) #3 (IR3-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 8 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 9 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 10 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 11 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delination and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 12 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 13 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 14 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

c. Draft permit or notice of intent to deny the application or terminate the permit (40 C.F.R. § 124.9(b)(2))

| | | | | | | |
|---|---|---|---|---|---|---|
| 15 | 3/31/2014 | 3/31/2014 | N/A | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0003, FutureGen 2.0 Well #3 | N/A | N/A |

d. Statement of basis or fact sheet (40 C.F.R. § 124.9(b)(3))

| | | | | | | |
|---|---|---|---|---|---|---|
| 16 | 3/31/2014 | 3/31/2014 | N/A | Public Comment on First Carbon Storage Draft Permits | N/A | N/A |
| 17 | 3/31/2014 | 3/31/2014 | N/A | Statement of Basis for Issuance of Class VI Underground Injection Control Permits | N/A | N/A |

e. All documents cited in the statement of basis or fact sheet (40 C.F.R. § 124.9(b)(4))

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 18 | 3/31/2014 | 3/31/2014 | N/A | Safe Drinking Water Act and Regulations at 40 C.F.R. 124 | N/A | N/A |

f. Other documents contained in the supporting file for the draft permit (40 C.F.R. § 124.9(b)(5))

| | | | | | | |
|---|---|---|---|---|---|---|
| 19 | 2/6/2013 | 2/6/2013 | 14:42 | Fw: 2.0 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 20 | 2/6/2013 | 2/6/2013 | 20:50 | Re: 2.0 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 21 | 3/12/2013 | 3/12/2013 | 12:24 | Copies | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 22 | 3/12/2013 | 3/12/2013 | 12:52 | Re: Copies | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 23 | 4/9/2013 | 4/22/2013 | N/A | Completeness Review of Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 24 | 4/26/2013 | 4/26/2013 | 15:28 | UIC Questions | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 25 | 4/30/2013 | 4/30/2013 | 16:41 | Followup | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 26 | 5/10/2013 | 5/10/2013 | 13:35 | UIC Re-Issue based on Completeness Review | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 27 | 5/13/2013 | 5/15/2013 | N/A | Revised Supporting Documentation | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 28 | 5/14/2013 | 5/14/2013 | 16:14 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 29 | 5/14/2013 | 5/14/2013 | 17:06 | Re: UIC Re-Issue based on Completeness Review | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 30 | 5/14/2013 | 5/14/2013 | 16:22 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 31 | 5/14/2013 | 5/14/2013 | 17:45 | FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 32 | 5/14/2013 | 5/14/2013 | 16:59 | Re: FutureGen Industrial Alliance; non profit status | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 33 | 5/14/2013 | 5/14/2013 | 17:01 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 34 | 5/23/2013 | 5/23/2013 | 10:06 | FutureGen Permit Application - FOI Request | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 35 | 5/23/2013 | 5/23/2013 | 10:14 | Re: FutureGen Permit Application - FOI Request | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 36 | 5/23/2013 | 5/23/2013 | 11:08 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 37 | 5/23/2013 | 5/23/2013 | 11:28 | Alliance General Counsel Information | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 38 | 5/23/2013 | 5/23/2013 | 12:47 | Re: Alliance General Counsel Information | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 39 | 5/23/2013 | 5/23/2013 | 15:42 | FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 40 | 5/29/2013 | 5/29/2013 | 15:25 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 41 | 5/29/2013 | 5/29/2013 | 15:34 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 42 | 6/3/2013 | 6/3/2013 | 12:06 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 43 | 6/5/2013 | 6/5/2013 | 14:43 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 44 | 6/5/2013 | 6/5/2013 | 16:36 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 45 | 6/5/2013 | 6/5/2013 | 16:39 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 46 | 6/5/2013 | 6/5/2013 | 16:54 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Lucinda Swartz, FutureGen; Mary McAuliffe, EPA |
| 47 | 6/11/2013 | 6/11/2013 | 9:42 | Fw: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 48 | 6/26/2013 | 6/26/2013 | 10:06 | FutureGen UIC Permit Question | Betty Niemann | Janette Hansen, EPA |
| 49 | 6/26/2013 | 6/26/2013 | 11:00 | Re: FutureGen UIC Permit Question | Janette Hansen, EPA | Betty Niemann |
| 50 | 7/30/2013 | 7/30/2013 | N/A | Phone Log Janette Hansen | N/A | N/A |
| 51 | 8/8/2013 | 8/8/2013 | 7:56 | FutureGen 2.0 - Listing of Materials to be Provided | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 52 | 8/8/2013 | 8/8/2013 | 10:14 | Re: FutureGen 2.0 - Listing of Materials to be Provided | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 53 | 8/12/2013 | 8/12/2013 | 15:46 | Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 54 | 8/26/2013 | 8/26/2013 | 11:04 | Fw: Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 55 | 8/26/2013 | 8/26/2013 | 12:21 | Re: Input Advisor For FutureGen Data | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 56 | 8/28/2013 | 8/28/2013 | 9:36 | Upcoming Hearings for Water Discharge (NPDES) 4Permit and for the Air Prevention of Significant Deterioration (PSD) and Construction Permit for FutureGen | Dean Studer, Illinois EPA | Brian Urbaszewski et al. |
| 57 | 8/28/2013 | 8/28/2013 | 11:45 | Upcoming Hearing for Water Discharge (NPDES) Permit and for the Air Construction Permits for FutureGen | Dean Studer, Illinois EPA | A. Buhl et al. |
| 58 | 8/30/2013 | 8/30/2013 | 21:06 | FutureGen Data Set | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 59 | 9/4/2013 | 9/4/2013 | 14:06 | FutureGen Schedule | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 60 | 9/4/2013 | 9/4/2013 | 14:21 | Re: FutureGen Schedule | Tyler Gilmore, FutureGen | Janette Hansen, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 61 | 9/29/2013 | 9/29/2013 | 11:23 | FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 62 | 9/30/2013 | 9/30/2013 | 7:31 | Re: FutureGen 2.0 in Illinois | Janette Hansen, EPA | Lillian Korous |
| 63 | 9/30/2013 | 9/30/2013 | 18:53 | Re: FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 64 | 10/7/2013 | 10/7/2013 | 16:05 | Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 65 | 10/17/2013 | 10/17/2013 | 13:38 | Re: Meredosia Hearing | Janette Hansen, EPA | Danny Little |
| 66 | 10/17/2013 | 10/17/2013 | 9:27 | Re: Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 67 | 10/31/2013 | N/A | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 68 | 11/14/2013 | 11/19/2013 | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 69 | 11/14/2013 | 11/14/2013 | 17:11 | FutureGen 2.0 Request for Additional Information | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 70 | 11/14/2013 | 11/14/2013 | 17:34 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Andrew Greenhagen, EPA |
| 71 | 11/15/2013 | 11/21/2013 | N/A | National Historic Preservation Act Inquiry; Location is at 39.800266N, 90.07469W (SE 1/4, SE 1/4, SW 1/4, SE 1/4, Section 26, T16N, R9W) | Rebecca Harvey, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 72 | 11/15/2013 | 11/15/2013 | 6:36 | Re: FutureGen 2.0 Request for Additional Information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 73 | 11/15/2013 | 11/15/2013 | 8:55 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 74 | 11/22/2013 | 11/22/2013 | 12:05 | FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA; Rebecca Harvey, EPA |
| 75 | 11/22/2013 | 11/22/2013 | 14:07 | RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 76 | 11/22/2013 | 11/22/2013 | 14:26 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 77 | 12/3/2013 | 12/3/2013 | 10:35 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 78 | 12/3/2013 | 12/3/2013 | 9:27 | Re: FutureGen 2.0 Class VI Well Permit Application | Jeffrey McDonald, EPA | Betty Niemann |
| 79 | 12/3/2013 | 12/3/2013 | 14:05 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 80 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 81 | 12/6/2013 | 12/6/2013 | 15:48 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 82 | 12/9/2013 | 12/9/2013 | N/A | National Historic Preservation Act Inquiry | Anne Haaker, Illinois Historic Preservation Agency | Rebecca Harvey, EPA |
| 83 | 12/9/2013 | 12/9/2013 | 11:08 | FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 84 | 12/9/2013 | 12/9/2013 | 11:13 | Re: FutureGen 2.0 | Janette Hansen, EPA | Dean Studer, Illinois EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 85 | 12/9/2013 | 12/9/2013 | 14:40 | Re: FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 86 | 12/10/2013 | 12/10/2013 | 8:37 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 87 | 12/10/2013 | 12/10/2013 | 15:30 | FutureGen 2.0 EIS Referenced Document | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 88 | 12/10/2013 | 12/10/2013 | N/A | Memo: Consideration of other laws under 40 CFR 144.4 | N/A | N/A |
| 89 | 12/11/2013 | 12/11/2013 | 14:56 | Re: Salinity in Ironton Sandstone | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 90 | 12/13/2013 | 12/13/2013 | 15:45 | Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 91 | 12/16/2013 | 12/16/2013 | 9:09 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 92 | 12/19/2013 | 12/19/2013 | 11:46 | Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 93 | 12/20/2013 | 12/20/2013 | 15:58 | FGA FR and other requests: 12-20-2013 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 94 | 12/31/2013 | 12/31/2013 | 11:49 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 95 | 12/31/2013 | 12/31/2013 | 12:35 | Re: Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 96 | 12/31/2013 | 12/31/2013 | 13:06 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 97 | 1/2/2014 | 1/2/2014 | 13:09 | Erratum to August 2013 Input Advisor File | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 98 | 1/2/2014 | 1/2/2014 | 13:20 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 99 | 1/2/2014 | 1/2/2014 | 16:13 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 100 | 1/3/2014 | 1/3/2014 | 12:03 | You have files ready for pickup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 101 | 1/3/2014 | 1/3/2014 | 13:13 | Re: You have files ready for pickup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 102 | 1/3/2014 | 1/3/2014 | 16:38 | 01-03-2014 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 103 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 104 | 1/3/2014 | 1/3/2014 | 19:08 | You have files ready for pickup | David Lanigan, FutureGen | Jeffrey McDonald, EPA |
| 105 | 1/10/2014 | 1/10/2014 | 14:38 | Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 106 | 1/14/2014 | 1/14/2014 | 15:52 | IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 107 | 1/14/2014 | 1/14/2014 | 14:49 | Re: IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 108 | 1/16/2014 | 1/16/2014 | 12:24 | IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 109 | 1/16/2014 | 1/16/2014 | 16:21 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 110 | 1/16/2014 | 1/16/2014 | 14:52 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 111 | 1/16/2014 | 1/16/2014 | 17:07 | Draft Minutes and Meeting followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 112 | 1/16/2014 | 1/16/2014 | 17:14 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 113 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 114 | 1/17/2014 | 1/17/2014 | 16:09 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 115 | 1/17/2014 | 1/17/2014 | 16:10 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 116 | 1/21/2014 | 1/21/2014 | 12:40 | Fw: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 117 | 1/21/2014 | 1/21/2014 | 17:01 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 118 | 1/22/2014 | 1/22/2014 | 10:08 | Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 119 | 1/22/2014 | 1/22/2014 | 14:39 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 120 | 1/22/2014 | 1/22/2014 | 15:54 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 121 | 1/22/2014 | 1/22/2014 | 16:12 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 122 | 1/23/2014 | 1/28/2014 | N/A | Notification of Class VI permit applications in the State of Illinois | Stephen Jann, EPA | Stephen Nightingale, Illinois EPA |
| 123 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 124 | 1/23/2014 | 1/23/2014 | 17:24 | Analysis of Pressure Impacts and Protection of USDW | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 125 | 1/24/2014 | 1/24/2014 | 16:22 | Re: Analysis of Pressure Impacts and Protection of USDW | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 126 | 1/27/2014 | 1/27/2014 | 11:13 | Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 127 | 1/27/2014 | 1/27/2014 | 11:22 | Re: Insurance and Trust Fund Followup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 128 | 1/27/2014 | 1/27/2014 | 12:03 | Re: Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 129 | 1/28/2014 | 1/28/2014 | 11:39 | FR Trust Fund feedback | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 130 | 1/28/2014 | 1/28/2014 | 17:41 | Timing of Trust Funding | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 131 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 132 | 1/29/2014 | 1/29/2014 | 8:39 | Re: Informal Request #5 EPA_IR5 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 133 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 134 | 1/29/2014 | 1/29/2014 | 13:50 | Re: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 135 | 1/30/2014 | 1/30/2014 | 17:59 | Followup Call on Trust Fund and Insurance | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 136 | 1/31/2014 | 1/31/2014 | 9:48 | Re: Followup Call on Trust Fund and Insurance | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 137 | 1/31/2014 | 1/31/2014 | 11:52 | Fw: Message from "R5-16-21" | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 138 | 1/31/2014 | 1/31/2014 | 15:28 | Quick Answer | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 139 | 1/31/2014 | 1/31/2014 | 16:26 | Re: Quick Answer | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 140 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delineation and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 141 | 2/4/2014 | 2/4/2014 | 8:28 | Re: Area of Review Delineation and Maximum Well Pressure Calculations | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 142 | 2/4/2014 | 2/4/2014 | 14:46 | Re: Timing of Trust Funding | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 143 | 2/5/2014 | 2/5/2014 | 16:37 | 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 144 | 2/5/2014 | 2/5/2014 | 16:55 | Re: 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 145 | 2/5/2014 | 2/5/2014 | 18:38 | Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |

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| 146 | 2/6/2014 | 2/6/2014 | 13:20 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 147 | 2/6/2014 | 2/6/2014 | 15:07 | Re: Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 148 | 2/6/2014 | 2/6/2014 | 15:10 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 149 | 2/6/2014 | 2/6/2014 | 15:11 | Re: Information on Insurance Requirements | Joseph Tiago, EPA | Jeffrey McDonald, EPA et al. |
| 150 | 2/7/2014 | 2/7/2014 | 16:27 | Re: UIC Insurance Discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 151 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 152 | 2/7/2014 | 2/7/2014 | 16:28 | Re: Annular Pressurization System for Injection Wells | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 153 | 2/7/2014 | 2/7/2014 | 16:30 | Re: UIC Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 154 | 2/12/2014 | 2/12/2014 | 11:16 | Fw: ADM QASP Plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 155 | 2/12/2014 | 2/12/2014 | 12:13 | Re: ADM QASP Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 156 | 2/12/2014 | 2/12/2014 | 13:41 | draft AOR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 157 | 2/13/2014 | 2/13/2014 | 18:25 | Plugging and Abandonment Plan Revision | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 158 | 2/14/2014 | 2/14/2014 | 9:27 | Re: Plugging and Abandonment Plan Revision | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 159 | 2/14/2014 | 2/14/2014 | 15:11 | draft testing and monitoring plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 160 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 161 | 2/17/2014 | 2/17/2014 | 15:29 | Conference Call Times | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 162 | 2/18/2014 | 2/18/2014 | 8:58 | Re: EPA's IR#9 01-31-2014 ready to be send | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 163 | 2/18/2014 | 2/18/2014 | 9:10 | Re: Conference Call Times | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 164 | 2/18/2014 | 2/18/2014 | 11:40 | discussion points for 2/19 phone call on critical pressure calculations at FG | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 165 | 2/18/2014 | 2/18/2014 | 17:54 | Fw: discussion points for 2/19 phone call on critical pressure calculations at FG | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Andrew Greenhagen, EPA |
| 166 | 2/19/2014 | 2/19/2014 | 14:29 | 2/19/14 brief phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 167 | 2/20/2014 | 2/20/2014 | 9:40 | Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 168 | 2/20/2014 | 2/20/2014 | 9:41 | Re: Draft Trust Agreement | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 169 | 2/20/2014 | 2/20/2014 | 10:02 | Fw: Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 170 | 2/20/2014 | 2/20/2014 | 13:34 | IR#10 02-20-14; question about pressure front tracking | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 171 | 2/21/2014 | 2/21/2014 | 13:16 | draft ERR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 172 | 2/21/2014 | 2/21/2014 | 14:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 173 | 2/21/2014 | 2/21/2014 | 16:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 174 | 2/21/2014 | 2/21/2014 | 16:02 | Re: draft PISC plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 175 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 176 | 2/21/2014 | 2/21/2014 | 16:49 | draft Trust Fund language | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 177 | 2/24/2014 | 2/24/2014 | 13:40 | updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 178 | 2/24/2014 | 2/24/2014 | 13:49 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 179 | 2/25/2014 | 2/25/2014 | 9:50 | Re: updated draft PISC for your review and reply | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 180 | 2/25/2014 | 2/25/2014 | 10:17 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 181 | 2/25/2014 | 2/25/2014 | 11:35 | Fw: Demonstration of Non Endangerment | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 182 | 2/25/2014 | 2/25/2014 | 16:15 | Injection Intervals and Injection Zone for each well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 183 | 2/26/2013 | 2/26/2013 | 9:34 | trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 184 | 2/26/2013 | 2/26/2013 | 10:02 | Re: trust fund language corrections | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 185 | 2/26/2013 | 2/26/2013 | 10:53 | Re: trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 186 | 2/26/2013 | 2/26/2013 | 13:53 | Plugging and Construction plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 187 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Champaign - The News-Gazette | N/A | N/A |
| 188 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Decatur - The Decatur Tribune | N/A | N/A |
| 189 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Springfield - The State Journal-Register | N/A | N/A |
| 190 | 2/27/2014 | 2/27/2014 | 13:26 | Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 191 | 2/27/2014 | 2/27/2014 | 15:09 | 2/25/14 phone memo | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 192 | 2/27/2014 | 2/27/2014 | 15:33 | AoR delineation | Jeffrey McDonald, EPA | Mark Williams, FutureGen |
| 193 | 2/27/2014 | 2/27/2014 | N/A | Class VI Mailing List Solicitation - Jacksonville - The Source | N/A | N/A |
| 194 | 2/28/2014 | 2/28/2014 | 5:27 | Re: Trust Agreement language for FGA FR | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 195 | 2/28/2014 | 2/28/2014 | 7:24 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 196 | 2/28/2014 | 2/28/2014 | 10:10 | Re: AoR delineation | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Mark Williams, FutureGen |
| 197 | 2/28/2014 | 2/28/2014 | 11:16 | Re: Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 198 | 2/28/2014 | 2/28/2014 | 14:51 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 199 | 2/28/2014 | 2/28/2014 | 15:10 | Re: AoR delineation | Stephen Roy, EPA | Jeffrey McDonald, EPA et al. |
| 200 | 2/28/2014 | 2/28/2014 | 15:13 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA et al. |
| 201 | 2/28/2014 | 2/28/2014 | 16:07 | Re: AoR delineation | Stephen Roy, EPA | Tyler Gilmore, FutureGen |

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| 202 | 2/28/2014 | 2/28/2014 | 16:13 | Fw: Another equation for calculating the critical pressure | Stephen Roy, EPA | Tyler Gilmore, FutureGen |
| 203 | 2/28/2014 | 2/28/2014 | 17:35 | Re: AoR delineation | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 204 | 2/28/2014 | 2/28/2014 | 17:57 | Re: AoR delineation | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 205 | 3/3/2014 | 3/3/2014 | 13:02 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 206 | 3/3/2014 | 3/3/2014 | 13:09 | Quick Request | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 207 | 3/3/2014 | 3/3/2014 | 13:28 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 208 | 3/3/2014 | 3/3/2014 | 14:09 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 209 | 3/3/2014 | 3/3/2014 | 15:24 | Re: Quick Request | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 210 | 3/3/2014 | 3/3/2014 | 22:23 | FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 211 | 3/4/2014 | 3/4/2014 | 12:15 | FG-EPA Call Notes: March | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 212 | 3/4/2014 | 3/4/2014 | 17:31 | Emergency and Remedial Response Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 213 | 3/4/2014 | 3/4/2014 | 18:00 | Addition of AoR "Triggers" and Pressure Monitoring Well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 214 | 3/4/2014 | 3/4/2014 | 18:15 | Post Injection Site Care Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 215 | 3/4/2014 | 3/4/2014 | 18:54 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 216 | 3/4/2014 | 3/4/2014 | 19:11 | Testing and Monitoring Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 217 | 3/5/2014 | 3/5/2014 | 1:32 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 218 | 3/5/2014 | 3/5/2014 | 8:40 | Re: FutureGen QASP | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 219 | 3/5/2014 | 3/5/2014 | 9:15 | AoR File - Follow-Up | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen; Delphine Appriou, FutureGen |
| 220 | 3/5/2014 | 3/5/2014 | 10:19 | Re: FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 221 | 3/5/2014 | 3/5/2014 | 12:21 | You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 222 | 3/5/2014 | 3/5/2014 | 12:27 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 223 | 3/5/2014 | 3/5/2014 | 12:29 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 224 | 3/5/2014 | 3/5/2014 | 12:43 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 225 | 3/5/2014 | 3/5/2014 | 12:53 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 226 | 3/5/2014 | 3/5/2014 | 12:59 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |

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| 227 | 3/5/2014 | 3/5/2014 | 13:18 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 228 | 3/5/2014 | 3/5/2014 | 16:08 | Re: FutureGen QASP | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 229 | 3/5/2014 | 3/5/2014 | 17:44 | Injection well plugging plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 230 | 3/6/2014 | 3/6/2014 | 8:35 | Re: Injection well plugging plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 231 | 3/6/2014 | 3/6/2014 | 9:41 | Fw: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 232 | 3/6/2014 | 3/6/2014 | 15:08 | Calculations of Critical Pressure | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 233 | 3/6/2014 | 3/6/2014 | 15:25 | Updated Microseismic Sensitivity Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 234 | 3/6/2014 | 3/6/2014 | 22:07 | AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 235 | 3/6/2014 | 3/6/2014 | 22:55 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 236 | 3/7/2014 | 3/7/2014 | 8:36 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 237 | 3/7/2014 | 3/7/2014 | 10:06 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 238 | 3/7/2014 | 3/7/2014 | 13:13 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 239 | 3/7/2014 | 3/7/2014 | 17:37 | Insurance and CO2 Storage Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 240 | 3/7/2014 | 3/7/2014 | 20:23 | Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 241 | 3/8/2014 | 3/8/2014 | 12:50 | Transmittal of AoR information and Request | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 242 | 3/10/2014 | 3/10/2014 | 10:47 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen; MaryRose Bayer, EPA |
| 243 | 3/10/2014 | 3/10/2014 | 14:48 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 244 | 3/10/2014 | 3/10/2014 | 17:39 | Last Transmittal of AoR information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 245 | 3/11/2014 | 3/11/2014 | 13:05 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 246 | 3/11/2014 | 3/11/2014 | 15:50 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 247 | 3/11/2014 | 3/11/2014 | 16:49 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 248 | 3/11/2014 | 3/11/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 249 | 3/11/2014 | 3/11/2014 | N/A | Insurance Checklist | N/A | N/A |
| 250 | 3/12/2014 | 3/12/2014 | 5:51 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 251 | 3/12/2014 | 3/12/2014 | 11:20 | Re: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 252 | 3/12/2014 | 3/12/2014 | 10:28 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 253 | 3/12/2014 | 3/12/2014 | 11:54 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 254 | 3/12/2014 | 3/12/2014 | 14:13 | pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 255 | 3/12/2014 | 3/12/2014 | 14:05 | Fw: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 256 | 3/12/2014 | 3/12/2014 | 14:08 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 257 | 3/12/2014 | 3/12/2014 | 14:13 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 258 | 3/12/2014 | 3/12/2014 | 16:46 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 259 | 3/13/2014 | 3/13/2014 | 4:32 | Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 260 | 3/13/2014 | 3/13/2014 | 9:58 | Re: Conference Call(s) | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 261 | 3/13/2014 | 3/13/2014 | 9:58 | Re: pressure differential and plume boundary graphic | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 262 | 3/13/2014 | 3/13/2014 | 10:02 | Re: pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 263 | 3/13/2014 | 3/13/2014 | 10:03 | Re: Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 264 | 3/13/2014 | 3/13/2014 | 13:21 | Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 265 | 3/13/2014 | 3/13/2014 | 14:26 | Re: Saw that you called | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 266 | 3/13/2014 | 3/13/2014 | 13:30 | Re: Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Thomas Krueger, EPA |
| 267 | 3/13/2014 | 3/13/2014 | 15:28 | Insurance Files | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 268 | 3/13/2014 | 3/13/2014 | 15:39 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 269 | 3/13/2014 | 3/13/2014 | 16:13 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 270 | 3/13/2014 | 3/13/2014 | 16:23 | Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 271 | 3/14/2014 | 3/14/2014 | 10:16 | insurance issues raised from our contractor to help guide the discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 272 | 3/14/2014 | 3/14/2014 | 10:27 | Re: Conference Call(s) | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 273 | 3/14/2014 | 3/14/2014 | 10:28 | Re: Conference Call(s) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 274 | 3/14/2014 | 3/14/2014 | 14:23 | well test procedures | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 275 | 3/14/2014 | 3/14/2014 | 15:26 | All Plugging Plans | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 276 | 3/14/2014 | 3/14/2014 | 15:28 | Re: All Plugging Plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 277 | 3/14/2014 | 3/14/2014 | 17:15 | Re: Final Draft CO2 Trust Agreement | Tom Maple, US Bank | Lucinda Swartz, FutureGen |
| 278 | 3/15/2014 | 3/15/2014 | 9:40 | Pressure front elevation and New Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 279 | 3/17/2014 | 3/17/2014 | 12:00 | Fw: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 280 | 3/17/2014 | 3/17/2014 | 12:32 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 281 | 3/17/2014 | 3/17/2014 | 14:12 | Re: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 282 | 3/17/2014 | 3/17/2014 | 14:24 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 283 | 3/19/2014 | 3/19/2014 | 16:49 | Re: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

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| 284 | 3/20/2014 | 3/20/2014 | 16:16 | Re: Insurance info | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 285 | 3/21/2014 | 3/21/2014 | 11:49 | Location of future pressure monitoring well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 286 | 3/21/2014 | 3/21/2014 | 13:08 | Re: Location of future pressure monitoring well | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 287 | 3/21/2014 | 3/21/2014 | 16:24 | Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 288 | 3/21/2014 | 3/21/2014 | 16:40 | Re: Executed Trust Fund Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 289 | 3/21/2014 | 3/21/2014 | 16:45 | Re: Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 290 | 3/24/2014 | 3/24/2014 | 17:00 | Re: FG App Missing Refs | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 291 | 3/24/2014 | 3/24/2014 | 18:15 | insurance options | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 292 | 3/25/2014 | 3/25/2014 | 11:28 | Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 293 | 3/25/2014 | 3/25/2014 | 11:23 | Re: Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 294 | 3/25/2014 | 3/25/2014 | 14:14 | Re: Insurance for FGA | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 295 | 3/25/2014 | 3/25/2014 | 18:10 | Re: Insurance Coverage for Emergency and Remedial Response Actions | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 296 | 3/25/2014 | 3/25/2014 | N/A | FutureGen Alliance Class VI Injection Project: Evaluation of Area of Review Delineation and Corrective Action (Due to the large volume of underlying data summarized in the AoR report, including the sensitivity analyses performed by FG and EPA, this information is not physically included in the administrative record, but is available upon request.) | N/A | N/A |
| 297 | 3/26/2014 | 3/26/2014 | 7:05 | Re: Insurance for FGA | Joseph Tiago, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 298 | 3/26/2014 | 3/26/2014 | 8:28 | Re: Insurance for FGA | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 299 | 3/26/2014 | 3/26/2014 | 14:53 | Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 300 | 3/26/2014 | 3/26/2014 | 15:39 | Re: Your address? | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 301 | 3/26/2014 | 3/26/2014 | 19:36 | Re: Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 302 | 3/27/2014 | 3/27/2014 | 7:16 | Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 303 | 3/27/2014 | 3/27/2014 | 9:13 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 304 | 3/27/2014 | 3/27/2014 | 11:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 305 | 3/27/2014 | 3/27/2014 | 12:03 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 306 | 3/27/2014 | 3/27/2014 | 12:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 307 | 3/27/2014 | 3/27/2014 | 12:58 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 308 | 3/27/2014 | 3/27/2014 | 15:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 309 | 3/27/2014 | 3/27/2014 | 14:51 | Memo: Growth Fault and Surface Air Monitoring | N/A | N/A |
| 310 | 3/27/2014 | 3/27/2014 | N/A | Memo: EJ Analysis for FutureGen 2.0 in Morgan County | N/A | N/A |
| 311 | 3/28/2014 | 3/28/2014 | 8:20 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 312 | 3/28/2014 | 3/28/2014 | 8:27 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 313 | 3/28/2014 | 3/28/2014 | 8:39 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 314 | 3/28/2014 | 3/28/2014 | 8:52 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 315 | 3/28/2014 | 3/28/2014 | 10:54 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 316 | 3/28/2014 | 3/28/2014 | 13:31 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 317 | 3/28/2014 | 3/28/2014 | 13:54 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 318 | 3/28/2014 | 3/28/2014 | 17:24 | Fw: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 319 | 3/28/2014 | 3/28/2014 | N/A | Illinois State Treasurer Approved Financial Institutions - US Bank | N/A | N/A |
| 320 | 3/28/2014 | 3/28/2014 | N/A | Financial Responsibility Estimates for FutureGen Based on Cost Tool Options | N/A | N/A |
| 321 | 3/29/2014 | 3/29/2014 | 15:25 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 322 | 3/31/2014 | 3/31/2014 | N/A | Induced Seismicity Evaluation Using the EPA-Developed Decision Model | N/A | N/A |
| 323 | 3/31/2014 | 3/31/2014 | N/A | USGS; 2009 Earthquake Probability Mapping; 2014 | N/A | N/A |
| 324 | 3/31/2014 | 3/31/2014 | N/A | USGS; Earthquake Archive Search; 2014 | N/A | N/A |
| 325 | 3/31/2014 | 3/31/2014 | N/A | USGS; Quaternary Fault and Fold Database of the United States; 2014 | N/A | N/A |
| 326 | 3/31/2014 | 3/31/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 327 | N/A | N/A | N/A | 40 CFR 144.3; Underground Injection Control Program Definitions; Code of Federal Regulations; | N/A | N/A |
| 328 | N/A | N/A | N/A | 40 CFR 144.31; Underground Injection Control Program; Code of Federal Regulations; | N/A | N/A |
| 329 | N/A | N/A | N/A | 40 CFR 146; Underground Injection Control Program: Criteria and Standards; Code of Federal Regulations; | N/A | N/A |
| 330 | N/A | N/A | N/A | 75 FR 77230; Federal Requirements Under the Underground Injection Control Program for Carbon Dioxide Geologic Sequestration Wells; Federal Register; 2010 | N/A | N/A |
| 331 | N/A | N/A | N/A | 76 FR 29728; Notice of Intent to Prepare an Environmental Impact Statement and Notice of Potential Floodplain and Wetlands Involvement for the FutureGen 2.0 Program; Federal Register; 2011 | N/A | N/A |
| 332 | N/A | N/A | N/A | Akaike H.; A New Look at Statistical-Model Identification; IEEE Automat. Contr.; 1974 | N/A | N/A |

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| 335 | N/A | N/A | N/A | ASTM; Standard Practice for Preparing, Cleaning, and Evaluating Corrosion Test Specimens; ASTM G1-03(2011); 2011 | N/A | N/A |
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| 342 | N/A | N/A | N/A | Bickford, M.E., W.R. Van Schmus, and Isidore Zietz; Proterozoic history of the midcontinent region of North America; Geology; 1986 | N/A | N/A |
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| 345 | N/A | N/A | N/A | Birkholzer, J.T., Q. Zhou, J. Rutqvist, P. Jordan, K. Zhang, and C.F. Tsang; Research Project on CO2 Geological Storage and Groundwater Resources Large-Scale Hydrological Evaluation and Modeling of the Impact on Groundwater Systems Annual Report: October 1, 2006 to September 30, 2007; LBNL-63544; 2007 | N/A | N/A |
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| 354 | N/A | N/A | N/A | Cihan A., Q. Zhou, and J-T. Birkholzer; Analytical solutions for pressure perturbation and fluid leakage through aquitards and wells in multilayered-aquifer systems; Water Resources Research; 2011 | N/A | N/A |
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| 472 | N/A | N/A | N/A | Clean Air Act Section 7401; 42 USC 7401; | N/A | N/A |
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| 474 | N/A | N/A | N/A | Marine Protection, Research, and Sanctuaries Act of 1972; 16 USC 1431 and 33 USC 1401; | N/A | N/A |
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| 476 | N/A | N/A | N/A | Resource Conservation and Recovery Act; 42 USC 6901; | N/A | N/A |
| 477 | N/A | N/A | N/A | Safe Drinking Water Act of 1974; 42 USC 300f; | N/A | N/A |

**II. All Comments Received During the Public Comment Period (40 C.F.R. § 124.18(b)(1))**

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|---|---|---|---|---|---|---|
| 478 | 5/15/2014 | 5/15/2014 | | USEPA Region 5 - FutureGen Additional Public Comments | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/3/2014 | 4/3/2014 | | Question and Concern | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/1/2014 | 4/1/2014 | | Public Hearing Question on FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA |
| 479 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Bradley Zeller | Jeffrey McDonald, EPA |
| 480 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | Carl Hankel | Jeffrey McDonald, EPA |
| 481 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Central Illinois Building & Construction Trades Council | Jeffrey McDonald, EPA |
| 482 | 4/29/2014 | 4/29/2014 | | FutureGen Alliance Public Comments | Clearstack Combustion Corp. | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 483 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Danny Little | Jeffrey McDonald, EPA |
| 484 | 4/4/2014 | 4/4/2014 | | FutureGen Alliance Public Comments | Ed Shaw | Jeffrey McDonald, EPA |
| 485 | 5/7/2014 | 5/7/2014 | | USEPA Region 5 - FutureGen Public Comments | Elizabeth Rigor | Jeffrey McDonald, EPA |
| 486 | 5/14/2014 | 5/14/2014 | | Comments on the Class VI permits 137-6A-0001, -0002, 0003 and 0004 | FutureGen Industrial Alliance | Jeffrey McDonald, EPA |
| 487 | 5/12/2015 | 5/12/2015 | | FutureGen Alliance Public Comments | Global Carbon Capture and Storage Institute | Jeffrey McDonald, EPA |
| 488 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Coal Assoc. | Jeffrey McDonald, EPA |
| 489 | 5/13/2014 | 5/13/2014 | | Submission from the Illinois Chamber of Commerce | Illinois Chamber of Commerce | Jeffrey McDonald, EPA |
| 490 | 5/15/2014 | 5/15/2014 | | FutureGen 2.0 Project Comments | American Coalition for Clean Coal Electricity, Coal Utilization Research Council, Edison Electric Institute, Illinois Coal Association, National Mining Association (NMA), and National Rural Electric Cooperative Association | Jeffrey McDonald, EPA |
| 491 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Department of Commerce and Economic Opportunity (DCEO) | Jeffrey McDonald, EPA |
| 492 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Boilermakers Local 363 | Jeffrey McDonald, EPA |
| 493 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Electrical Workers (IBEW) Local 193 | Jeffrey McDonald, EPA |
| 494 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Jacksonville Regional Economic Development Corporation (EDC) | Jeffrey McDonald, EPA |
| 495 | 4/5/2014 | 4/5/2014 | | FutureGen Alliance Public Comments | Karen Shaw | Jeffrey McDonald, EPA |
| 496 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Laborers' International Union of North America (LIUNA) | Jeffrey McDonald, EPA |
| 497 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen's UIC Draft Permits | Leinberger & Critchelow Families / Nijman Franzetti, LLP | Jeffrey McDonald, EPA |
| 498 | 4/10/2014 | 4/10/2014 | | FutureGen 2 to EPA | Lillian Korous | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 499 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Marc Landers | Jeffrey McDonald, EPA |
| 500 | 4/2/2014 | 4/2/2014 | | carbon capture plan | Mick Mcintyre | Jeffrey McDonald, EPA |
| 501 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen Alliance 2.0 Class VI Permit Application | Natural Resources Defense Council (NRDC), Clean Air Task Force, and Sierra | Jeffrey McDonald, EPA |
| 502 | 5/8/2014 | 5/8/2014 | | FutureGen Alliance Public Comments | Pipefitters Local 137 | Jeffrey McDonald, EPA |
| 503 | 5/5/2014 | 5/5/2014 | | FutureGen Permit Comments | Robert J. Finley | Jeffrey McDonald, EPA |
| 504 | 5/15/2014 | 5/15/2014 | | Comments on Draft FutureGen Class VI Well Permits for Wells #1, #2, #3, and #4 | U.S. Carbon Sequestration Council (CSC) | Jeffrey McDonald, EPA |
| 505 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | US Fish and Wildlife Service | Jeffrey McDonald, EPA |
| 506 | 5/5/2014 | 5/5/2014 | | FutureGen Alliance Public Comments | Wilmot McCutchen | Jeffrey McDonald, EPA |
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**III. Tape or Transcript of Public Hearings (40 C.F.R. § 124.18(b)(2))**

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|---|---|---|---|---|---|---|
| 506 | * | 6/4/2014 | 13:50 | Underground Injection Control Draft Permits for the FutureGen Industrial Alliance - Revised Final transcripts - Public Hearing of May 7, 2014, at MacMurray College, Jacksonville, Illinois | Robin L. Stranimeier, of Jane Rose Reporting | Jeffrey McDonald, Jeffrey Wawczak, Lillateese Simmons, EPA |
| 507 | | | | | | |

**IV. Written Materials Submitted at Public Hearings (40 C.F.R. § 124.18(b)(3))**

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| 508 | * | | | Comments of the Illinois Department of Commerce and Economic Opportunity's Office of Coal Development | * | |
| 509 | | | | Comment of Phil Gonet, Illinois Coal Assoc. | | |
| 510 | | | | Jacksonville Regional Economic Development Corporation (EDC), Terry Denison | | |

**V. Response to Comments (40 C.F.R. § 124.18(b)(4))**

a. Response to comments

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|---|---|---|---|---|---|---|
| 511 | * | 8/29/2014 | | Response to Comments for Draft Class VI Permits Issued to the FutureGen Industrial Alliance | Tinka Hyde, EPA | Commenters |

b. New records considered by the Agency in Developing response to comments

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|---|---|---|---|---|---|---|
| 512 | * | 8/14/2014 | 11:29 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 513 | | 8/14/2014 | 11:19 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 514 | | 8/14/2014 | 10:41 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 515 | | 8/13/2014 | 13:21 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 516 | | 7/14/2014 | 09:46 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 517 | | 7/11/2014 | 10:25 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 518 | | 7/17/2014 | 11:53 | ISGS well data in West Central Illinois | Jeffrey McDonald, EPA | Alison Lecouris, ISGS |
| 519 | | 7/17/2014 | 14:18 | ISGS well data in West Central Illinois | Alison Lecouris, ISGS | Jeffrey McDonald, EPA |
| 520 | | 7/22/2014 | 05:17 | shape files | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 521 | | 7/25/2014 | 11:02 | shape files | Jeffrey McDonald, EPA | David Lanigan, Tyler Gilmore, PNNL |
| 522 | | 7/25/2014 | 13:43 | shape files | David Lanigan, PNNL | Jeffrey McDonald, EPA |
| 523 | | 6/13/2014 | 15:32 | Agenda for Tuesday's Meeting | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 524 | | 8/14/2014 | 11:12 | Criswell Plugging Affidavit [and attached OG-6 Well Plugging Report form, cementing service report from Franklin Well Services, 1965 Illinois Well Completion Report, and 1965 permit] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 525 | | 8/14/2014 | 11:19 | re: Criswell Plugging Affidavit | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 526 | | 8/14/2014 | 11:24 | re: Criswell Plugging Affidavit | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 527 | | 8/21/2014 | 14:15 | link [NRDC editorial] | Robert Finley, ISGS | Jeffrey McDonald, EPA |
| 528 | | 8/28/2014 | | Meeting between FutureGen, EPA and EPA's contractor, The Cadmus Group | Tyler Gilmore, Lucinda Swartz | Mary Rose Bayer, Joseph Tiago, Andrew Greenhagen, Mary McAuliffe, Tom Krueger, Jason Deardorff, Jeffrey McDonald, and Jaime Rooke (Cadmus) |
| 529 | | 8/27/2014 | 12:10 | Cost Tool for ERR activities | MaryRose Bayer, EPA | Jeffrey McDonald, EPA |
| 530 | | 7/28/2014 | 13:34 | downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 531 | | 8/14/2014 | 14:20 | re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 532 | | 8/14/2014 | 12:26 | re: downhole pressure gauge question [and use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 533 | | 8/14/2014 | 16:27 | re: downhole pressure gauge question [and use of tracers] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 534 | | 7/15/2014 | 12:36 | Letter of Intent to Drill Stratigraphic Well [e-mail and letter] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 535 | | 7/9/2014 | 15:22 | e-mail re: CO2 Flow | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 536 | | na | | Illinois Compiled Statues [20 ILCS 1108/1] | na | na |
| 537 | 7/25/2008 | | | Federal Register Vol. 73; No. 144; Federal Requirements Under the Underground Injection (UIC) Program for Carbon Dioxide (CO2) Geologic Sequestration (GS) | na | na |
| 538 | 7/1/2014 | | | FutureGen Corrective Action Evaluation; Illinois State Geological Survey (ISGS) Well Data | na | na |
| 539 | 4/15/2010 | | | API Comments on: Sequestering Carbon Dioxide in a Closed Underground Volume | American Petroleum Institute | na |
| 540 | 4/1/2010 | | | A Brief Technical Critique of Ehlig-Economides and Economides 2010: "Sequestering Carbon Dioxide in a Closed Underground Volume" | Pacific Northwest National Laboratory | na |
| 541 | 4/9/2014 | 4/15/2014 | | Class VI Injection well permit - FutureGen Industrial Alliance, Inc. | Anne E. Haaker, Illionois Historic Preservation Agency | Lisa Perenchio, EPA |
| 542 | | 3/31/2014 | | Certificate of Service | Denice Dumas, NAAPCA | na |
| 543 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Matt Mangan, U.S. Fish and Wildlife Service |
| 544 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Bill Hoback, Ill. Dept. of Commerce and Economic Opportunity |
| 545 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Robert Flider, Ill. Dept. of Agriculture |
| 546 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Adam Pollet, Ill. Dept. of Commerce and Economic Opportunity |
| 547 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Todd Rettig, IDNR |
| 548 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marc Miller, IDNR |
| 549 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Karen Miller, IDNR |
| 550 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Arland Juhl, IDNR |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 551 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Andree DuVarney, U.S. Dept. of Agriculture |
| 552 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Kenneth Westlake, EPA |
| 553 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Charles L. Walthall, U.S. Dept. of Agriculture |
| 554 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Dr. LaMar Hasbrouck, Illinois Dept. of Public Health |
| 555 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Jonathan Feipel, Ill. Commerce Commission |
| 556 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Chuck Ingersoll, Ill. Dept. of Transportation |
| 557 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marthea Roundtree, EPA |
| 558 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Steve Nightengale, IEPA |
| 559 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Lisa Bonnett, IEPA |
| 560 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | David Bloomberg, IEPA |
| 561 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 562 | 3/31/2014 | 3/31/2014 | | U.S. Environmental Protection Agency Draft Permit Numbers: IL-137-6A-0001, -0002, -0003, and -0004 for the Wells #1, #2,#3, and #4 (respectively) in Morgan County, Illinois | Tinka G. Hyde, EPA | Kenneth K. Humphreys, FutureGen Industrial Alliance, Inc. |
| 563 | 3/31/2014 | 3/31/2014 | | Draft Class VI permits respository | Stephen M. Jann, EPA | Jacksonville Public Library |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 564 | 8/26/2014 | 8/1/2014 | | Phone conversation with ISGS regarding Mt. Simon formation flow rates and their consideration with FutureGen permit applications | Jeffrey McDonald, EPA | Robert Finley and Edward Mehnert, Illinois State Geol. Survey |
| 565 | 8/26/2014 | 7/30/2014 | | Phone conversation with Battelle/PNNL and Cadmus regarding the FutureGen permit applications numerical modeling | Jeffrey McDonald, EPA | Signe White, PNNL and Inci Demirkanli, Cadmus |
| 566 | 8/28/2014 | 7/11/2014 | | Phone conversation memo with Pan Handle, operators of the gas storage field in Waverly, Illinois | Jeffrey McDonald, EPA | Dave Hegemann and Larry Jenkins, Pan Handle |
| 567 | na | na | | data sheet on Halliburton's Hydromite | na | na |
| 568 | 2/11/2011 | | | "Investigation of gridding effects for numerical simulations of CO2 geologic sequestration" by Yamamoto and Doughty | | |
| 569 | 2/1/2008 | na | | Determination of Mechanical Integrity of Injection Wells; Region 5 guidance document # 5 | | |
| 570 | 3/1/2012 | | | Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio, Area | Ohio DNR | |
| 571 | 8/28/2014 | 6/27/2014 | | Phone conversation record with Bryan Huff of ISGS regarding Criswell and Whitlock well records | Jeffrey McDonald, EPA | Bryan Huff, ISGS |
| 572 | 6/30/2014 | 6/30/2014 | | e-mail from Bryan Huff with ISGS records on Criswell and Whitlock wells | Bryan Huff, ISGS | Jeffrey McDonald, EPA |
| 573 | | 6/17/2014 | | CO2Flow Software Documentation: Hydraulic Model for CO2 Pipelines and Injection wells (January and June, 2014 versions) | PNNL | |
| 574 | | 6/17/2014 | | Testing of CO2Flow Pipeline and Injection Well Simulation Program (April 2014 version) | PNNL | |
| 575 | 3/27/2014 | 6/17/2014 | | AIG Insurance specimen policy | FutureGen | |
| 576 | 7/9/2014 | 7/9/2014 | 16:08 | Well files [database and other info on Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 577 | 7/10/2014 | 7/10/2014 | 11:01 | re: Well files [Criswell and Whitlock] | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 578 | 7/11/2014 | 7/11/2014 | 09:25 | re: Well files [Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 579 | 8/28/2014 | 7/9/2014 | | Phone conversation with Doug Shutt of the IDNR | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 580 | 7/30/2014 | 7/30/2014 | 14:27 | e-mail re: More Concerns over FutureGen | Betty Niemann | Jeffrey McDonald, EPA |
| 581 | 8/28/2014 | 7/25/2014 | | Phone conversations with Mike Elliott of PNNL | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 582 | 7/28/2014 | 7/28/2014 | 13:34 | e-mail: downhole pressure gauge question | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 583 | 8/14/2014 | 8/14/2014 | 14:20 | e-mail: re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 584 | 8/14/2014 | 8/14/2014 | 14:26 | e-mail: re: downhole pressure gauge question [requesting clarification on use or non-use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| **VI. Other Records in the Supporting File for the Permit (40 C.F.R. § 124.18(b)(6))** | | | | | | |
| 585 | 3/31/2014 | 3/31/2014 | N/A | Public Notice Mailed to EPA List | EPA | Numerous Parties |
| 586 | 3/31/2014 | 3/31/2014 | N/A | Public Notice sent via Certified Mail to EPA List | EPA | Numerous Parties |
| 587 | 4/1/2014 | 4/1/2014 | 17:33 | Public Notice E-mailed to EPA List | EPA | Numerous Parties |
| 588 | 4/2/2014 | 4/2/2014 | 10:32 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 589 | 4/2/2014 | 4/2/2014 | 13:33 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 590 | 4/4/2014 | 4/4/2014 | 17:17 | Public Notice E-mailed to EPA List - Second attempt to send the notice to those returned as undeliverable | EPA | Numerous Parties |
| 591 | | 8/28/2014 | | Phone conversation record with Tyler Gilmore (PNNL) and Doug Shutt (IDNR) regarding alleged water well issues while drilling the stratigraphic test well at FutureGen | Jeffrey McDonald, EPA | Tyler Gilmore,PNNL and Doug Shutt, IDNR |
| 592 | | 8/28/2014 | | memo to file regarding description of the Potosi formation's lost circulation as "leakage" | Jeffrey McDonald, EPA | na |
| 593 | | 1/13/2014 | 19:13 | ISWS well record search - Morgan County IL | William Saylor, ISWS | William Tong, EPA |
| **VII. Final Permit (40 C.F.R. § 124.18(b)(7))** | | | | | | |
| 594 | * | 8/28/2014 | | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0003, FutureGen 2.0 Well #3 | | |

I, Jeffrey R. McDonald, am the permit writer for U.S. EPA permit # IL-137-6A-0003, FutureGen 2.0 Well #3. The administrative record for this final permit decision includes, to the best of my knowledge, the documents that form the basis for the final permit decision, as required by 40 C.F.R. § 124.18. The above Administrative Record Index references the documents in the administrative record for this final permit decision.

Jeffrey R. McDonald, Permit Writer,
Underground Injection Control Branch, U.S. EPA Region 5

8/28/14
Date

# Exhibit B-4

**Index to the Administrative Record, Final Decision**
**FutureGen 2.0 Well #4; Permit #IL-137-6A-0004**

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|

**I. Draft Permit Administrative Record (40 C.F.R. § 124.18(b))**

a. Permit application (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 3/1/2013 | 3/15/2013 | N/A | Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |
| 2 | 5/1/2013 | 5/15/2013 | N/A | Revised Underground Injection Control Permit Applications for FutureGen 2.0 | FutureGen Alliance | EPA Region 5 |

b. Supporting documentation supplied by permit applicant (40 C.F.R. § 124.9(b)(1))

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 11/19/2013 | 12/12/2013 | N/A | Request for Additional Information #1 | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 4 | 12/10/2013 | 12/16/2013 | N/A | Request for Additional Information #2 | Kenneth Humphreys, FutureGen | Stephen Jann, EPA |
| 5 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 6 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 7 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) #3 (IR3-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 8 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 9 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 10 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 11 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delination and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 12 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 13 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 14 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

c. Draft permit or notice of intent to deny the application or terminate the permit (40 C.F.R. § 124.9(b)(2))

| | | | | | | |
|---|---|---|---|---|---|---|
| 15 | 3/31/2014 | 3/31/2014 | N/A | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0004, FutureGen 2.0 Well #4 | N/A | N/A |

d. Statement of basis or fact sheet (40 C.F.R. § 124.9(b)(3))

| | | | | | | |
|---|---|---|---|---|---|---|
| 16 | 3/31/2014 | 3/31/2014 | N/A | Public Comment on First Carbon Storage Draft Permits | N/A | N/A |
| 17 | 3/31/2014 | 3/31/2014 | N/A | Statement of Basis for Issuance of Class VI Underground Injection Control Permits | N/A | N/A |

e. All documents cited in the statement of basis or fact sheet (40 C.F.R. § 124.9(b)(4))

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 18 | 3/31/2014 | 3/31/2014 | N/A | Safe Drinking Water Act and Regulations at 40 C.F.R. 124 | N/A | N/A |

f. Other documents contained in the supporting file for the draft permit (40 C.F.R. § 124.9(b)(5))

| | | | | | | |
|---|---|---|---|---|---|---|
| 19 | 2/6/2013 | 2/6/2013 | 14:42 | Fw: 2.0 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 20 | 2/6/2013 | 2/6/2013 | 20:50 | Re: 2.0 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 21 | 3/12/2013 | 3/12/2013 | 12:24 | Copies | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 22 | 3/12/2013 | 3/12/2013 | 12:52 | Re: Copies | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 23 | 4/9/2013 | 4/22/2013 | N/A | Completeness Review of Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 24 | 4/26/2013 | 4/26/2013 | 15:28 | UIC Questions | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 25 | 4/30/2013 | 4/30/2013 | 16:41 | Followup | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 26 | 5/10/2013 | 5/10/2013 | 13:35 | UIC Re-Issue based on Completeness Review | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 27 | 5/13/2013 | 5/15/2013 | N/A | Revised Supporting Documentation | Kenneth Humphreys, FutureGen | Rebecca Harvey, EPA |
| 28 | 5/14/2013 | 5/14/2013 | 16:14 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 29 | 5/14/2013 | 5/14/2013 | 17:06 | Re: UIC Re-Issue based on Completeness Review | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 30 | 5/14/2013 | 5/14/2013 | 16:22 | Re: UIC Re-Issue based on Completeness Review | Lucinda Swartz, FutureGen | Janette Hansen, EPA |
| 31 | 5/14/2013 | 5/14/2013 | 17:45 | FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 32 | 5/14/2013 | 5/14/2013 | 16:59 | Re: FutureGen Industrial Alliance; non profit status | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 33 | 5/14/2013 | 5/14/2013 | 17:01 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 34 | 5/23/2013 | 5/23/2013 | 10:06 | FutureGen Permit Application - FOI Request | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 35 | 5/23/2013 | 5/23/2013 | 10:14 | Re: FutureGen Permit Application - FOI Request | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 36 | 5/23/2013 | 5/23/2013 | 11:08 | Re: FutureGen Industrial Alliance; non profit status | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 37 | 5/23/2013 | 5/23/2013 | 11:28 | Alliance General Counsel Information | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |
| 38 | 5/23/2013 | 5/23/2013 | 12:47 | Re: Alliance General Counsel Information | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 39 | 5/23/2013 | 5/23/2013 | 15:42 | FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 40 | 5/29/2013 | 5/29/2013 | 15:25 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 41 | 5/29/2013 | 5/29/2013 | 15:34 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen |
| 42 | 6/3/2013 | 6/3/2013 | 12:06 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | Lucinda Swartz, FutureGen; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 43 | 6/5/2013 | 6/5/2013 | 14:43 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Mary McAuliffe, EPA |
| 44 | 6/5/2013 | 6/5/2013 | 16:36 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Mary McAuliffe, EPA | Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 45 | 6/5/2013 | 6/5/2013 | 16:39 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Lucinda Swartz, FutureGen | Mary McAuliffe, EPA; Penny Goodwyn, McGriff, Seibels & Williams, Inc. |
| 46 | 6/5/2013 | 6/5/2013 | 16:54 | Re: FutureGen Industrial Alliance FOIA request/CBI substantiation letters - Response from McGriff | Penny Goodwyn, McGriff, Seibels & Williams, Inc. | Lucinda Swartz, FutureGen; Mary McAuliffe, EPA |
| 47 | 6/11/2013 | 6/11/2013 | 9:42 | Fw: FutureGen Industrial Alliance FOIA request/CBI substantiation letters | Mary McAuliffe, EPA | John Buchovecky, Van Ness Feldman PC; Penny Goodwyn, McGriff, Seibels & Williams, Inc.; Adrienne Levatino, Patrick Engineering |
| 48 | 6/26/2013 | 6/26/2013 | 10:06 | FutureGen UIC Permit Question | Betty Niemann | Janette Hansen, EPA |
| 49 | 6/26/2013 | 6/26/2013 | 11:00 | Re: FutureGen UIC Permit Question | Janette Hansen, EPA | Betty Niemann |
| 50 | 7/30/2013 | 7/30/2013 | N/A | Phone Log Janette Hansen | N/A | N/A |
| 51 | 8/8/2013 | 8/8/2013 | 7:56 | FutureGen 2.0 - Listing of Materials to be Provided | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 52 | 8/8/2013 | 8/8/2013 | 10:14 | Re: FutureGen 2.0 - Listing of Materials to be Provided | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 53 | 8/12/2013 | 8/12/2013 | 15:46 | Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 54 | 8/26/2013 | 8/26/2013 | 11:04 | Fw: Input Advisor For FutureGen Data | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 55 | 8/26/2013 | 8/26/2013 | 12:21 | Re: Input Advisor For FutureGen Data | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 56 | 8/28/2013 | 8/28/2013 | 9:36 | Upcoming Hearings for Water Discharge (NPDES) 4Permit and for the Air Prevention of Significant Deterioration (PSD) and Construction Permit for FutureGen | Dean Studer, Illinois EPA | Brian Urbaszewski et al. |
| 57 | 8/28/2013 | 8/28/2013 | 11:45 | Upcoming Hearing for Water Discharge (NPDES) Permit and for the Air Construction Permits for FutureGen | Dean Studer, Illinois EPA | A. Buhl et al. |
| 58 | 8/30/2013 | 8/30/2013 | 21:06 | FutureGen Data Set | Tyler Gilmore, FutureGen | Janette Hansen, EPA |
| 59 | 9/4/2013 | 9/4/2013 | 14:06 | FutureGen Schedule | Janette Hansen, EPA | Tyler Gilmore, FutureGen |
| 60 | 9/4/2013 | 9/4/2013 | 14:21 | Re: FutureGen Schedule | Tyler Gilmore, FutureGen | Janette Hansen, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 61 | 9/29/2013 | 9/29/2013 | 11:23 | FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 62 | 9/30/2013 | 9/30/2013 | 7:31 | Re: FutureGen 2.0 in Illinois | Janette Hansen, EPA | Lillian Korous |
| 63 | 9/30/2013 | 9/30/2013 | 18:53 | Re: FutureGen 2.0 in Illinois | Lillian Korous | Janette Hansen, EPA |
| 64 | 10/7/2013 | 10/7/2013 | 16:05 | Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 65 | 10/17/2013 | 10/17/2013 | 13:38 | Re: Meredosia Hearing | Janette Hansen, EPA | Danny Little |
| 66 | 10/17/2013 | 10/17/2013 | 9:27 | Re: Meredosia Hearing | Danny Little | Janette Hansen, EPA |
| 67 | 10/31/2013 | N/A | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 68 | 11/14/2013 | 11/19/2013 | N/A | Request for Additional Information Regarding four FutureGen 2.0 Wells, United States Environmental Protection Agency Underground Injection Control (UIC) Permit Applications for Four Geologic Sequestration Wells; United States Environmental Protection Agency UIC Permit Nos. IL-137-6A-0001, -0002, -0003, & -0004 | Rebecca Harvey, EPA | Kenneth Humphreys, FutureGen |
| 69 | 11/14/2013 | 11/14/2013 | 17:11 | FutureGen 2.0 Request for Additional Information | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 70 | 11/14/2013 | 11/14/2013 | 17:34 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Andrew Greenhagen, EPA |
| 71 | 11/15/2013 | 11/21/2013 | N/A | National Historic Preservation Act Inquiry; Location is at 39.800266N, 90.07469W (SE 1/4, SE 1/4, SW 1/4, SE 1/4, Section 26, T16N, R9W) | Rebecca Harvey, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 72 | 11/15/2013 | 11/15/2013 | 6:36 | Re: FutureGen 2.0 Request for Additional Information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 73 | 11/15/2013 | 11/15/2013 | 8:55 | Re: FutureGen 2.0 Request for Additional Information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 74 | 11/22/2013 | 11/22/2013 | 12:05 | FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA; Rebecca Harvey, EPA |
| 75 | 11/22/2013 | 11/22/2013 | 14:07 | RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 76 | 11/22/2013 | 11/22/2013 | 14:26 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 77 | 12/3/2013 | 12/3/2013 | 10:35 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 78 | 12/3/2013 | 12/3/2013 | 9:27 | Re: FutureGen 2.0 Class VI Well Permit Application | Jeffrey McDonald, EPA | Betty Niemann |
| 79 | 12/3/2013 | 12/3/2013 | 14:05 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 80 | 12/6/2013 | 12/6/2013 | 15:43 | Salinity in Ironton Sandstone | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 81 | 12/6/2013 | 12/6/2013 | 15:48 | Re: RAI #1 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 82 | 12/9/2013 | 12/9/2013 | N/A | National Historic Preservation Act Inquiry | Anne Haaker, Illinois Historic Preservation Agency | Rebecca Harvey, EPA |
| 83 | 12/9/2013 | 12/9/2013 | 11:08 | FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 84 | 12/9/2013 | 12/9/2013 | 11:13 | Re: FutureGen 2.0 | Janette Hansen, EPA | Dean Studer, Illinois EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 85 | 12/9/2013 | 12/9/2013 | 14:40 | Re: FutureGen 2.0 | Dean Studer, Illinois EPA | Janette Hansen, EPA |
| 86 | 12/10/2013 | 12/10/2013 | 8:37 | Re: RAI #1 Responses | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 87 | 12/10/2013 | 12/10/2013 | 15:30 | FutureGen 2.0 EIS Referenced Document | Andrew Greenhagen, EPA | Tyler Gilmore, FutureGen |
| 88 | 12/10/2013 | 12/10/2013 | N/A | Memo: Consideration of other laws under 40 CFR 144.4 | N/A | N/A |
| 89 | 12/11/2013 | 12/11/2013 | 14:56 | Re: Salinity in Ironton Sandstone | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 90 | 12/13/2013 | 12/13/2013 | 15:45 | Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 91 | 12/16/2013 | 12/16/2013 | 9:09 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 92 | 12/19/2013 | 12/19/2013 | 11:46 | Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 93 | 12/20/2013 | 12/20/2013 | 15:58 | FGA FR and other requests: 12-20-2013 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 94 | 12/31/2013 | 12/31/2013 | 11:49 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 95 | 12/31/2013 | 12/31/2013 | 12:35 | Re: Second Request for Additional Information (RAI #2) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 96 | 12/31/2013 | 12/31/2013 | 13:06 | Re: Second Request for Additional Information (RAI #2) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 97 | 1/2/2014 | 1/2/2014 | 13:09 | Erratum to August 2013 Input Advisor File | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 98 | 1/2/2014 | 1/2/2014 | 13:20 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 99 | 1/2/2014 | 1/2/2014 | 16:13 | Re: Erratum to August 2013 Input Advisor File | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 100 | 1/3/2014 | 1/3/2014 | 12:03 | You have files ready for pickup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 101 | 1/3/2014 | 1/3/2014 | 13:13 | Re: You have files ready for pickup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 102 | 1/3/2014 | 1/3/2014 | 16:38 | 01-03-2014 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 103 | 1/3/2014 | 1/3/2014 | 18:27 | RAI 4 Responses | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 104 | 1/3/2014 | 1/3/2014 | 19:08 | You have files ready for pickup | David Lanigan, FutureGen | Jeffrey McDonald, EPA |
| 105 | 1/10/2014 | 1/10/2014 | 14:38 | Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 106 | 1/14/2014 | 1/14/2014 | 15:52 | IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 107 | 1/14/2014 | 1/14/2014 | 14:49 | Re: IR4_01-14-2014 for the FGA permit applications | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 108 | 1/16/2014 | 1/16/2014 | 12:24 | IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 109 | 1/16/2014 | 1/16/2014 | 16:21 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 110 | 1/16/2014 | 1/16/2014 | 14:52 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 111 | 1/16/2014 | 1/16/2014 | 17:07 | Draft Minutes and Meeting followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 112 | 1/16/2014 | 1/16/2014 | 17:14 | Re: IR5 01-16-14 regarding the ERRP that would go into any potential permit | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 113 | 1/17/2014 | 1/17/2014 | 16:06 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 114 | 1/17/2014 | 1/17/2014 | 16:09 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 115 | 1/17/2014 | 1/17/2014 | 16:10 | Re: Informal Request (IR) # 3 (IR-01-10-14) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 116 | 1/21/2014 | 1/21/2014 | 12:40 | Fw: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 117 | 1/21/2014 | 1/21/2014 | 17:01 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 118 | 1/22/2014 | 1/22/2014 | 10:08 | Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

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| 119 | 1/22/2014 | 1/22/2014 | 14:39 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 120 | 1/22/2014 | 1/22/2014 | 15:54 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 121 | 1/22/2014 | 1/22/2014 | 16:12 | Re: Discussion on maximum allowable injection pressure calculations and critical pressure front methodology | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 122 | 1/23/2014 | 1/28/2014 | N/A | Notification of Class VI permit applications in the State of Illinois | Stephen Jann, EPA | Stephen Nightingale, Illinois EPA |
| 123 | 1/23/2014 | 1/23/2014 | 17:22 | Re: IR4_01-14-2014 for the FGA permit applications | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 124 | 1/23/2014 | 1/23/2014 | 17:24 | Analysis of Pressure Impacts and Protection of USDW | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 125 | 1/24/2014 | 1/24/2014 | 16:22 | Re: Analysis of Pressure Impacts and Protection of USDW | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 126 | 1/27/2014 | 1/27/2014 | 11:13 | Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 127 | 1/27/2014 | 1/27/2014 | 11:22 | Re: Insurance and Trust Fund Followup | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 128 | 1/27/2014 | 1/27/2014 | 12:03 | Re: Insurance and Trust Fund Followup | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 129 | 1/28/2014 | 1/28/2014 | 11:39 | FR Trust Fund feedback | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 130 | 1/28/2014 | 1/28/2014 | 17:41 | Timing of Trust Funding | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 131 | 1/28/2014 | 1/28/2014 | 18:03 | Informal Request #5 EPA_IR5 | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 132 | 1/29/2014 | 1/29/2014 | 8:39 | Re: Informal Request #5 EPA_IR5 | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 133 | 1/29/2014 | 1/29/2014 | 13:16 | Re: FG T&M table | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 134 | 1/29/2014 | 1/29/2014 | 13:50 | Re: FG T&M table | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 135 | 1/30/2014 | 1/30/2014 | 17:59 | Followup Call on Trust Fund and Insurance | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 136 | 1/31/2014 | 1/31/2014 | 9:48 | Re: Followup Call on Trust Fund and Insurance | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 137 | 1/31/2014 | 1/31/2014 | 11:52 | Fw: Message from "R5-16-21" | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 138 | 1/31/2014 | 1/31/2014 | 15:28 | Quick Answer | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 139 | 1/31/2014 | 1/31/2014 | 16:26 | Re: Quick Answer | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 140 | 1/31/2014 | 1/31/2014 | 23:31 | Area of Review Delineation and Maximum Well Pressure Calculations | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 141 | 2/4/2014 | 2/4/2014 | 8:28 | Re: Area of Review Delineation and Maximum Well Pressure Calculations | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 142 | 2/4/2014 | 2/4/2014 | 14:46 | Re: Timing of Trust Funding | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 143 | 2/5/2014 | 2/5/2014 | 16:37 | 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 144 | 2/5/2014 | 2/5/2014 | 16:55 | Re: 2/4/14 phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 145 | 2/5/2014 | 2/5/2014 | 18:38 | Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |

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| 146 | 2/6/2014 | 2/6/2014 | 13:20 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 147 | 2/6/2014 | 2/6/2014 | 15:07 | Re: Information on Insurance Requirements | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 148 | 2/6/2014 | 2/6/2014 | 15:10 | Re: Information on Insurance Requirements | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 149 | 2/6/2014 | 2/6/2014 | 15:11 | Re: Information on Insurance Requirements | Joseph Tiago, EPA | Jeffrey McDonald, EPA et al. |
| 150 | 2/7/2014 | 2/7/2014 | 16:27 | Re: UIC Insurance Discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 151 | 2/7/2014 | 2/7/2014 | 16:09 | Annular Pressurization System for Injection Wells | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 152 | 2/7/2014 | 2/7/2014 | 16:28 | Re: Annular Pressurization System for Injection Wells | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 153 | 2/7/2014 | 2/7/2014 | 16:30 | Re: UIC Insurance Discussion | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 154 | 2/12/2014 | 2/12/2014 | 11:16 | Fw: ADM QASP Plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 155 | 2/12/2014 | 2/12/2014 | 12:13 | Re: ADM QASP Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 156 | 2/12/2014 | 2/12/2014 | 13:41 | draft AOR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 157 | 2/13/2014 | 2/13/2014 | 18:25 | Plugging and Abandonment Plan Revision | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 158 | 2/14/2014 | 2/14/2014 | 9:27 | Re: Plugging and Abandonment Plan Revision | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 159 | 2/14/2014 | 2/14/2014 | 15:11 | draft testing and monitoring plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 160 | 2/17/2014 | 2/17/2014 | 11:21 | EPA's IR#9 01-31-2014 ready to be send | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 161 | 2/17/2014 | 2/17/2014 | 15:29 | Conference Call Times | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 162 | 2/18/2014 | 2/18/2014 | 8:58 | Re: EPA's IR#9 01-31-2014 ready to be send | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 163 | 2/18/2014 | 2/18/2014 | 9:10 | Re: Conference Call Times | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 164 | 2/18/2014 | 2/18/2014 | 11:40 | discussion points for 2/19 phone call on critical pressure calculations at FG | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 165 | 2/18/2014 | 2/18/2014 | 17:54 | Fw: discussion points for 2/19 phone call on critical pressure calculations at FG | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Andrew Greenhagen, EPA |
| 166 | 2/19/2014 | 2/19/2014 | 14:29 | 2/19/14 brief phone call | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 167 | 2/20/2014 | 2/20/2014 | 9:40 | Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 168 | 2/20/2014 | 2/20/2014 | 9:41 | Re: Draft Trust Agreement | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 169 | 2/20/2014 | 2/20/2014 | 10:02 | Fw: Draft Trust Agreement | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 170 | 2/20/2014 | 2/20/2014 | 13:34 | IR#10 02-20-14; question about pressure front tracking | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 171 | 2/21/2014 | 2/21/2014 | 13:16 | draft ERR plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 172 | 2/21/2014 | 2/21/2014 | 14:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 173 | 2/21/2014 | 2/21/2014 | 16:00 | draft PISC plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 174 | 2/21/2014 | 2/21/2014 | 16:02 | Re: draft PISC plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 175 | 2/21/2014 | 2/21/2014 | 16:20 | Re: IR#10 02-20-14; question about pressure front tracking | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 176 | 2/21/2014 | 2/21/2014 | 16:49 | draft Trust Fund language | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 177 | 2/24/2014 | 2/24/2014 | 13:40 | updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 178 | 2/24/2014 | 2/24/2014 | 13:49 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 179 | 2/25/2014 | 2/25/2014 | 9:50 | Re: updated draft PISC for your review and reply | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 180 | 2/25/2014 | 2/25/2014 | 10:17 | Re: updated draft PISC for your review and reply | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 181 | 2/25/2014 | 2/25/2014 | 11:35 | Fw: Demonstration of Non Endangerment | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 182 | 2/25/2014 | 2/25/2014 | 16:15 | Injection Intervals and Injection Zone for each well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 183 | 2/26/2013 | 2/26/2013 | 9:34 | trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 184 | 2/26/2013 | 2/26/2013 | 10:02 | Re: trust fund language corrections | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 185 | 2/26/2013 | 2/26/2013 | 10:53 | Re: trust fund language corrections | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 186 | 2/26/2013 | 2/26/2013 | 13:53 | Plugging and Construction plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 187 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Champaign - The News-Gazette | N/A | N/A |
| 188 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Decatur - The Decatur Tribune | N/A | N/A |
| 189 | 2/26/2013 | 2/26/2013 | N/A | Class VI Mailing List Solicitation - Springfield - The State Journal-Register | N/A | N/A |
| 190 | 2/27/2014 | 2/27/2014 | 13:26 | Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 191 | 2/27/2014 | 2/27/2014 | 15:09 | 2/25/14 phone memo | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 192 | 2/27/2014 | 2/27/2014 | 15:33 | AoR delineation | Jeffrey McDonald, EPA | Mark Williams, FutureGen |
| 193 | 2/27/2014 | 2/27/2014 | N/A | Class VI Mailing List Solicitation - Jacksonville - The Source | N/A | N/A |
| 194 | 2/28/2014 | 2/28/2014 | 5:27 | Re: Trust Agreement language for FGA FR | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 195 | 2/28/2014 | 2/28/2014 | 7:24 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 196 | 2/28/2014 | 2/28/2014 | 10:10 | Re: AoR delineation | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Mark Williams, FutureGen |
| 197 | 2/28/2014 | 2/28/2014 | 11:16 | Re: Trust Agreement language for FGA FR | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 198 | 2/28/2014 | 2/28/2014 | 14:51 | Re: AoR delineation | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; Mark Williams, FutureGen |
| 199 | 2/28/2014 | 2/28/2014 | 15:10 | Re: AoR delineation | Stephen Roy, EPA | Jeffrey McDonald, EPA et al. |
| 200 | 2/28/2014 | 2/28/2014 | 15:13 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA et al. |
| 201 | 2/28/2014 | 2/28/2014 | 16:07 | Re: AoR delineation | Stephen Roy, EPA | Tyler Gilmore, FutureGen |

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| 202 | 2/28/2014 | 2/28/2014 | 16:13 | Fw: Another equation for calculating the critical pressure | Stephen Roy, EPA | Tyler Gilmore, FutureGen |
| 203 | 2/28/2014 | 2/28/2014 | 17:35 | Re: AoR delineation | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 204 | 2/28/2014 | 2/28/2014 | 17:57 | Re: AoR delineation | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 205 | 3/3/2014 | 3/3/2014 | 13:02 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 206 | 3/3/2014 | 3/3/2014 | 13:09 | Quick Request | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 207 | 3/3/2014 | 3/3/2014 | 13:28 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 208 | 3/3/2014 | 3/3/2014 | 14:09 | Re: AoR delineation | Tyler Gilmore, FutureGen | Stephen Roy, EPA |
| 209 | 3/3/2014 | 3/3/2014 | 15:24 | Re: Quick Request | Tyler Gilmore, FutureGen | MaryRose Bayer, EPA |
| 210 | 3/3/2014 | 3/3/2014 | 22:23 | FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 211 | 3/4/2014 | 3/4/2014 | 12:15 | FG-EPA Call Notes: March | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen |
| 212 | 3/4/2014 | 3/4/2014 | 17:31 | Emergency and Remedial Response Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 213 | 3/4/2014 | 3/4/2014 | 18:00 | Addition of AoR "Triggers" and Pressure Monitoring Well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 214 | 3/4/2014 | 3/4/2014 | 18:15 | Post Injection Site Care Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 215 | 3/4/2014 | 3/4/2014 | 18:54 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 216 | 3/4/2014 | 3/4/2014 | 19:11 | Testing and Monitoring Plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 217 | 3/5/2014 | 3/5/2014 | 1:32 | You have files ready for pickup | Delphine Appriou, FutureGen | Jeffrey McDonald, EPA et al. |
| 218 | 3/5/2014 | 3/5/2014 | 8:40 | Re: FutureGen QASP | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 219 | 3/5/2014 | 3/5/2014 | 9:15 | AoR File - Follow-Up | MaryRose Bayer, EPA | Tyler Gilmore, FutureGen; Delphine Appriou, FutureGen |
| 220 | 3/5/2014 | 3/5/2014 | 10:19 | Re: FutureGen QASP | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 221 | 3/5/2014 | 3/5/2014 | 12:21 | You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 222 | 3/5/2014 | 3/5/2014 | 12:27 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 223 | 3/5/2014 | 3/5/2014 | 12:29 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 224 | 3/5/2014 | 3/5/2014 | 12:43 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |
| 225 | 3/5/2014 | 3/5/2014 | 12:53 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 226 | 3/5/2014 | 3/5/2014 | 12:59 | Re: You have files ready for pickup | Delphine Appriou, FutureGen | MaryRose Bayer, EPA |

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| 227 | 3/5/2014 | 3/5/2014 | 13:18 | Re: You have files ready for pickup | MaryRose Bayer, EPA | Delphine Appriou, FutureGen |
| 228 | 3/5/2014 | 3/5/2014 | 16:08 | Re: FutureGen QASP | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 229 | 3/5/2014 | 3/5/2014 | 17:44 | Injection well plugging plan | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 230 | 3/6/2014 | 3/6/2014 | 8:35 | Re: Injection well plugging plan | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 231 | 3/6/2014 | 3/6/2014 | 9:41 | Fw: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 232 | 3/6/2014 | 3/6/2014 | 15:08 | Calculations of Critical Pressure | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 233 | 3/6/2014 | 3/6/2014 | 15:25 | Updated Microseismic Sensitivity Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 234 | 3/6/2014 | 3/6/2014 | 22:07 | AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 235 | 3/6/2014 | 3/6/2014 | 22:55 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 236 | 3/7/2014 | 3/7/2014 | 8:36 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 237 | 3/7/2014 | 3/7/2014 | 10:06 | Re: AoR Determination | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 238 | 3/7/2014 | 3/7/2014 | 13:13 | Re: AoR Determination | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; MaryRose Bayer, EPA |
| 239 | 3/7/2014 | 3/7/2014 | 17:37 | Insurance and CO2 Storage Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 240 | 3/7/2014 | 3/7/2014 | 20:23 | Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 241 | 3/8/2014 | 3/8/2014 | 12:50 | Transmittal of AoR information and Request | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 242 | 3/10/2014 | 3/10/2014 | 10:47 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen; MaryRose Bayer, EPA |
| 243 | 3/10/2014 | 3/10/2014 | 14:48 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 244 | 3/10/2014 | 3/10/2014 | 17:39 | Last Transmittal of AoR information | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA; MaryRose Bayer, EPA |
| 245 | 3/11/2014 | 3/11/2014 | 13:05 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 246 | 3/11/2014 | 3/11/2014 | 15:50 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 247 | 3/11/2014 | 3/11/2014 | 16:49 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 248 | 3/11/2014 | 3/11/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 249 | 3/11/2014 | 3/11/2014 | N/A | Insurance Checklist | N/A | N/A |
| 250 | 3/12/2014 | 3/12/2014 | 5:51 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 251 | 3/12/2014 | 3/12/2014 | 11:20 | Re: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 252 | 3/12/2014 | 3/12/2014 | 10:28 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 253 | 3/12/2014 | 3/12/2014 | 11:54 | Re: Last Transmittal of AoR information | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 254 | 3/12/2014 | 3/12/2014 | 14:13 | pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 255 | 3/12/2014 | 3/12/2014 | 14:05 | Fw: Information on AIG - Update 3/12 | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 256 | 3/12/2014 | 3/12/2014 | 14:08 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 257 | 3/12/2014 | 3/12/2014 | 14:13 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 258 | 3/12/2014 | 3/12/2014 | 16:46 | Re: Information on AIG - Update 3/12 | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 259 | 3/13/2014 | 3/13/2014 | 4:32 | Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 260 | 3/13/2014 | 3/13/2014 | 9:58 | Re: Conference Call(s) | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 261 | 3/13/2014 | 3/13/2014 | 9:58 | Re: pressure differential and plume boundary graphic | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 262 | 3/13/2014 | 3/13/2014 | 10:02 | Re: pressure differential and plume boundary graphic | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 263 | 3/13/2014 | 3/13/2014 | 10:03 | Re: Conference Call(s) | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 264 | 3/13/2014 | 3/13/2014 | 13:21 | Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 265 | 3/13/2014 | 3/13/2014 | 14:26 | Re: Saw that you called | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 266 | 3/13/2014 | 3/13/2014 | 13:30 | Re: Saw that you called | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA; Thomas Krueger, EPA |
| 267 | 3/13/2014 | 3/13/2014 | 15:28 | Insurance Files | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 268 | 3/13/2014 | 3/13/2014 | 15:39 | Re: Information on AIG | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 269 | 3/13/2014 | 3/13/2014 | 16:13 | Re: Information on AIG | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 270 | 3/13/2014 | 3/13/2014 | 16:23 | Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 271 | 3/14/2014 | 3/14/2014 | 10:16 | insurance issues raised from our contractor to help guide the discussion | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 272 | 3/14/2014 | 3/14/2014 | 10:27 | Re: Conference Call(s) | MaryRose Bayer, EPA | Jeffrey McDonald, EPA; Lucinda Swartz, FutureGen |
| 273 | 3/14/2014 | 3/14/2014 | 10:28 | Re: Conference Call(s) | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA et al. |
| 274 | 3/14/2014 | 3/14/2014 | 14:23 | well test procedures | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 275 | 3/14/2014 | 3/14/2014 | 15:26 | All Plugging Plans | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 276 | 3/14/2014 | 3/14/2014 | 15:28 | Re: All Plugging Plans | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 277 | 3/14/2014 | 3/14/2014 | 17:15 | Re: Final Draft CO2 Trust Agreement | Tom Maple, US Bank | Lucinda Swartz, FutureGen |
| 278 | 3/15/2014 | 3/15/2014 | 9:40 | Pressure front elevation and New Maps | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 279 | 3/17/2014 | 3/17/2014 | 12:00 | Fw: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 280 | 3/17/2014 | 3/17/2014 | 12:32 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 281 | 3/17/2014 | 3/17/2014 | 14:12 | Re: Final Draft CO2 Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 282 | 3/17/2014 | 3/17/2014 | 14:24 | Re: Final Draft CO2 Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 283 | 3/19/2014 | 3/19/2014 | 16:49 | Re: FG App Missing Refs | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |

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| 284 | 3/20/2014 | 3/20/2014 | 16:16 | Re: Insurance info | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 285 | 3/21/2014 | 3/21/2014 | 11:49 | Location of future pressure monitoring well | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 286 | 3/21/2014 | 3/21/2014 | 13:08 | Re: Location of future pressure monitoring well | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 287 | 3/21/2014 | 3/21/2014 | 16:24 | Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 288 | 3/21/2014 | 3/21/2014 | 16:40 | Re: Executed Trust Fund Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 289 | 3/21/2014 | 3/21/2014 | 16:45 | Re: Executed Trust Fund Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 290 | 3/24/2014 | 3/24/2014 | 17:00 | Re: FG App Missing Refs | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 291 | 3/24/2014 | 3/24/2014 | 18:15 | insurance options | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen; Lucinda Swartz, FutureGen |
| 292 | 3/25/2014 | 3/25/2014 | 11:28 | Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 293 | 3/25/2014 | 3/25/2014 | 11:23 | Re: Insurance for FGA | Jeffrey McDonald, EPA | Tyler Gilmore, FutureGen |
| 294 | 3/25/2014 | 3/25/2014 | 14:14 | Re: Insurance for FGA | Tyler Gilmore, FutureGen | Jeffrey McDonald, EPA |
| 295 | 3/25/2014 | 3/25/2014 | 18:10 | Re: Insurance Coverage for Emergency and Remedial Response Actions | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 296 | 3/25/2014 | 3/25/2014 | N/A | FutureGen Alliance Class VI Injection Project: Evaluation of Area of Review Delineation and Corrective Action (Due to the large volume of underlying data summarized in the AoR report, including the sensitivity analyses performed by FG and EPA, this information is not physically included in the administrative record, but is available upon request.) | N/A | N/A |
| 297 | 3/26/2014 | 3/26/2014 | 7:05 | Re: Insurance for FGA | Joseph Tiago, EPA | Jeffrey McDonald, EPA; Tyler Gilmore, FutureGen |
| 298 | 3/26/2014 | 3/26/2014 | 8:28 | Re: Insurance for FGA | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 299 | 3/26/2014 | 3/26/2014 | 14:53 | Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 300 | 3/26/2014 | 3/26/2014 | 15:39 | Re: Your address? | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 301 | 3/26/2014 | 3/26/2014 | 19:36 | Re: Your address? | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 302 | 3/27/2014 | 3/27/2014 | 7:16 | Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 303 | 3/27/2014 | 3/27/2014 | 9:13 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 304 | 3/27/2014 | 3/27/2014 | 11:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA et al. |
| 305 | 3/27/2014 | 3/27/2014 | 12:03 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 306 | 3/27/2014 | 3/27/2014 | 12:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 307 | 3/27/2014 | 3/27/2014 | 12:58 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen et al. |
| 308 | 3/27/2014 | 3/27/2014 | 15:19 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |

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| 309 | 3/27/2014 | 3/27/2014 | 14:51 | Memo: Growth Fault and Surface Air Monitoring | N/A | N/A |
| 310 | 3/27/2014 | 3/27/2014 | N/A | Memo: EJ Analysis for FutureGen 2.0 in Morgan County | N/A | N/A |
| 311 | 3/28/2014 | 3/28/2014 | 8:20 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 312 | 3/28/2014 | 3/28/2014 | 8:27 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 313 | 3/28/2014 | 3/28/2014 | 8:39 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 314 | 3/28/2014 | 3/28/2014 | 8:52 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 315 | 3/28/2014 | 3/28/2014 | 10:54 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 316 | 3/28/2014 | 3/28/2014 | 13:31 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 317 | 3/28/2014 | 3/28/2014 | 13:54 | Re: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 318 | 3/28/2014 | 3/28/2014 | 17:24 | Fw: Revised Trust Agreement | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 319 | 3/28/2014 | 3/28/2014 | N/A | Illinois State Treasurer Approved Financial Institutions - US Bank | N/A | N/A |
| 320 | 3/28/2014 | 3/28/2014 | N/A | Financial Responsibility Estimates for FutureGen Based on Cost Tool Options | N/A | N/A |
| 321 | 3/29/2014 | 3/29/2014 | 15:25 | Re: Revised Trust Agreement | Jeffrey McDonald, EPA | Lucinda Swartz, FutureGen |
| 322 | 3/31/2014 | 3/31/2014 | N/A | Induced Seismicity Evaluation Using the EPA-Developed Decision Model | N/A | N/A |
| 323 | 3/31/2014 | 3/31/2014 | N/A | USGS; 2009 Earthquake Probability Mapping; 2014 | N/A | N/A |
| 324 | 3/31/2014 | 3/31/2014 | N/A | USGS; Earthquake Archive Search; 2014 | N/A | N/A |
| 325 | 3/31/2014 | 3/31/2014 | N/A | USGS; Quaternary Fault and Fold Database of the United States; 2014 | N/A | N/A |
| 326 | 3/31/2014 | 3/31/2014 | N/A | Trust Fund Checklist | N/A | N/A |
| 327 | N/A | N/A | N/A | 40 CFR 144.3; Underground Injection Control Program Definitions; Code of Federal Regulations; | N/A | N/A |
| 328 | N/A | N/A | N/A | 40 CFR 144.31; Underground Injection Control Program; Code of Federal Regulations; | N/A | N/A |
| 329 | N/A | N/A | N/A | 40 CFR 146; Underground Injection Control Program: Criteria and Standards; Code of Federal Regulations; | N/A | N/A |
| 330 | N/A | N/A | N/A | 75 FR 77230; Federal Requirements Under the Underground Injection Control Program for Carbon Dioxide Geologic Sequestration Wells; Federal Register; 2010 | N/A | N/A |
| 331 | N/A | N/A | N/A | 76 FR 29728; Notice of Intent to Prepare an Environmental Impact Statement and Notice of Potential Floodplain and Wetlands Involvement for the FutureGen 2.0 Program; Federal Register; 2011 | N/A | N/A |
| 332 | N/A | N/A | N/A | Akaike H.; A New Look at Statistical-Model Identification; IEEE Automat. Contr.; 1974 | N/A | N/A |

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| 333 | N/A | N/A | N/A | American Petroleum Institute; Specification 6A – Specification for Wellhead and Christmas Tree Equipment. Twentieth Edition (ISO 10423:2009 Modification), Includes Errata (Jan. and Nov. 2011) and Addendum 1 (Nov. 2011) 20th Edition; Specification 6A – Specification for Wellhead and Christmas Tree Equipment. Twentieth Edition (ISO 10423:2009 Modification), Includes Errata (Jan. and Nov. 2011) and Addendum 1 (Nov. 2011) 20th Edition; 2010 | N/A | N/A |
| 334 | N/A | N/A | N/A | American Petroleum Institute ; Specification for Cements and Materials for Well Cementing; ANSI/API Specification 10A, Twenty-fourth edition; 2010 | N/A | N/A |
| 335 | N/A | N/A | N/A | ASTM; Standard Practice for Preparing, Cleaning, and Evaluating Corrosion Test Specimens; ASTM G1-03(2011); 2011 | N/A | N/A |
| 336 | N/A | N/A | N/A | ASTM; Standard Specification for Processing Additions for Use in the Manufacture of Hydraulic Cements; ASTM C465, 10th edition; 2010 | N/A | N/A |
| 337 | N/A | N/A | N/A | Bandilla, K.W., M.A. Celia, T.R. Elliot, M. Person, K.M. Ellet, J.A. Rupp, C. Gable, and Y. Zhang; Modeling carbon sequestration in the Illinois Basin using a vertically-integrated approach; Computing and Visualization in Science; 2012 | N/A | N/A |
| 338 | N/A | N/A | N/A | Battelle; Environmental Information Volume, Biological Resources Section; Prepared for FutureGen Alliance; 2011 | N/A | N/A |
| 339 | N/A | N/A | N/A | Bell, A.H.; Recent Developments in the Vicinity of Jacksonville; Illinois Petroleum Report 11; 1927 | N/A | N/A |
| 340 | N/A | N/A | N/A | Bergstrom, R.E. and A.J. Zeizel; Groundwater Geology in Western Illinois, South Part; ISGS Circular 232; 1957 | N/A | N/A |
| 341 | N/A | N/A | N/A | Bethke C.M. and S. Marshak; Brine Migrations across North America - The Plate Tectonics of Groundwater; Annual Review Earth and Planetary Sciences; 1990 | N/A | N/A |
| 342 | N/A | N/A | N/A | Bickford, M.E., W.R. Van Schmus, and Isidore Zietz; Proterozoic history of the midcontinent region of North America; Geology; 1986 | N/A | N/A |
| 343 | N/A | N/A | N/A | Birkholzer, J., A. Cihan, and K. Bandilla; A tiered area-of-review framework for geologic carbon sequestration; Greenhouse Gas Sci. Technol.; 2013 | N/A | N/A |

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| 344 | N/A | N/A | N/A | Birkholzer, J.T., J.P. Nicot, C.M. Oldenburg, Q. Zhou, D. Kraemer, and K.W. Bandilla; Brine flow up a borehole caused by pressure perturbation from CO2 storage: static and dynamic evaluations; International Journal of Greenhouse Gas Control; 2011 | N/A | N/A |
| 345 | N/A | N/A | N/A | Birkholzer, J.T., Q. Zhou, J. Rutqvist, P. Jordan, K. Zhang, and C.F. Tsang; Research Project on CO2 Geological Storage and Groundwater Resources Large-Scale Hydrological Evaluation and Modeling of the Impact on Groundwater Systems Annual Report: October 1, 2006 to September 30, 2007; LBNL-63544; 2007 | N/A | N/A |
| 346 | N/A | N/A | N/A | Birkholzer, J.T., Q. Zhou, K. Zhang, P. Jordan, J. Rutqvist, and C.F. Tsang; Research Project on CO2 Geological Storage and Groundwater Resources Large-Scale Hydrological Evaluation and Modeling of the Impact on Groundwater Systems Annual Report: October 1, 2007 to September 30, 2008; Research Project on CO2 Geological Storage and Groundwater Resources Large-Scale Hydrological Evaluation and Modeling of the Impact on Groundwater Systems Annual Report: October 1, 2007 to September 30, 2008; 2008 | N/A | N/A |
| 347 | N/A | N/A | N/A | Bowen, B.B., R. Ochoa, N.D. Wilkens, J. Brophy, T.R. Lovell, N. Fischietto, C. Medina, and J. Rupp; Depositional and Diagenetic Variability Within the Cambrian Mount Simon Sandstone: Implications for Carbon Dioxide Sequestration; Environmental Geosciences ; 2011 | N/A | N/A |
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| 353 | N/A | N/A | N/A | Cihan A., J-T. Birkholzer, and Q. Zhou; Pressure buildup and brine migration during CO2 storage in multilayered aquifers; Groundwater; 2013 | N/A | N/A |
| 354 | N/A | N/A | N/A | Cihan A., Q. Zhou, and J-T. Birkholzer; Analytical solutions for pressure perturbation and fluid leakage through aquitards and wells in multilayered-aquifer systems; Water Resources Research; 2011 | N/A | N/A |
| 355 | N/A | N/A | N/A | Clean Coal FutureGen for Illinois Act; Clean Coal FutureGen for Illinois Act; Illinois Public Act 097-0618; 2011 | N/A | N/A |
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| 357 | N/A | N/A | N/A | Daniels, D.L., R.P. Kucks, and P.L. Hill; Illinois, Indiana, and Ohio Magnetic and Gravity Maps and Data: A Website for Distribution of Data; USGS Data Series 321; 2008 | N/A | N/A |
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| 361 | N/A | N/A | N/A | DOE/NETL (U.S. Department of Energy National Energy Technology Laboratory); Best Practices for: Monitoring, Verification, and Accounting of CO2 Stored in Deep Geologic Formations; DOE/NETL-311/081508; 2009 | N/A | N/A |
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| 365 | N/A | N/A | N/A | EPA; Underground Injection Control Permit Application IL-ICCS Project; Underground Injection Control Permit Application IL-ICCS Project; 2011 | N/A | N/A |
| 366 | N/A | N/A | N/A | Finley, Robert. Leetaru, H.E. et al.; An Assessment of Geological Carbon Sequestration Options in the Illinois Basin; DOE Contract DE-FC26-03NT41994; 2005 | N/A | N/A |
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**II. All Comments Received During the Public Comment Period (40 C.F.R. § 124.18(b)(1))**

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|---|---|---|---|---|---|---|
| 478 | 5/15/2014 | 5/15/2014 | | USEPA Region 5 - FutureGen Additional Public Comments | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/3/2014 | 4/3/2014 | | Question and Concern | Betty Niemann | Jeffrey McDonald, EPA |
| | 4/1/2014 | 4/1/2014 | | Public Hearing Question on FutureGen 2.0 Class VI Well Permit Application | Betty Niemann | Jeffrey McDonald, EPA |
| 479 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Bradley Zeller | Jeffrey McDonald, EPA |
| 480 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | Carl Hankel | Jeffrey McDonald, EPA |
| 481 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Central Illinois Building & Construction Trades Council | Jeffrey McDonald, EPA |
| 482 | 4/29/2014 | 4/29/2014 | | FutureGen Alliance Public Comments | Clearstack Combustion Corp. | Jeffrey McDonald, EPA |

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| 483 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Danny Little | Jeffrey McDonald, EPA |
| 484 | 4/4/2014 | 4/4/2014 | | FutureGen Alliance Public Comments | Ed Shaw | Jeffrey McDonald, EPA |
| 485 | 5/7/2014 | 5/7/2014 | | USEPA Region 5 - FutureGen Public Comments | Elizabeth Rigor | Jeffrey McDonald, EPA |
| 486 | 5/14/2014 | 5/14/2014 | | Comments on the Class VI permits 137-6A-0001, -0002, 0003 and 0004 | FutureGen Industrial Alliance | Jeffrey McDonald, EPA |
| 487 | 5/12/2015 | 5/12/2015 | | FutureGen Alliance Public Comments | Global Carbon Capture and Storage Institute | Jeffrey McDonald, EPA |
| 488 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Coal Assoc. | Jeffrey McDonald, EPA |
| 489 | 5/13/2014 | 5/13/2014 | | Submission from the Illinois Chamber of Commerce | Illinois Chamber of Commerce | Jeffrey McDonald, EPA |
| 490 | 5/15/2014 | 5/15/2014 | | FutureGen 2.0 Project Comments | American Coalition for Clean Coal Electricity, Coal Utilization Research Council, Edison Electric Institute, Illinois Coal Association, National Mining Association (NMA), and National Rural Electric Cooperative Association | Jeffrey McDonald, EPA |
| 491 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Illinois Department of Commerce and Economic Opportunity (DCEO) | Jeffrey McDonald, EPA |
| 492 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Boilermakers Local 363 | Jeffrey McDonald, EPA |
| 493 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | International Brotherhood of Electrical Workers (IBEW) Local 193 | Jeffrey McDonald, EPA |
| 494 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Jacksonville Regional Economic Development Corporation (EDC) | Jeffrey McDonald, EPA |
| 495 | 4/5/2014 | 4/5/2014 | | FutureGen Alliance Public Comments | Karen Shaw | Jeffrey McDonald, EPA |
| 496 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Laborers' International Union of North America (LIUNA) | Jeffrey McDonald, EPA |
| 497 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen's UIC Draft Permits | Leinberger & Critchelow Families / Nijman Franzetti, LLP | Jeffrey McDonald, EPA |
| 498 | 4/10/2014 | 4/10/2014 | | FutureGen 2 to EPA | Lillian Korous | Jeffrey McDonald, EPA |

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| 499 | 5/7/2014 | 5/7/2014 | | FutureGen Alliance Public Comments | Marc Landers | Jeffrey McDonald, EPA |
| 500 | 4/2/2014 | 4/2/2014 | | carbon capture plan | Mick Mcintyre | Jeffrey McDonald, EPA |
| 501 | 5/15/2014 | 5/15/2014 | | Comments on FutureGen Alliance 2.0 Class VI Permit Application | Natural Resources Defense Council (NRDC), Clean Air Task Force, and Sierra | Jeffrey McDonald, EPA |
| 502 | 5/8/2014 | 5/8/2014 | | FutureGen Alliance Public Comments | Pipefitters Local 137 | Jeffrey McDonald, EPA |
| 503 | 5/5/2014 | 5/5/2014 | | FutureGen Permit Comments | Robert J. Finley | Jeffrey McDonald, EPA |
| 504 | 5/15/2014 | 5/15/2014 | | Comments on Draft FutureGen Class VI Well Permits for Wells #1, #2, #3, and #4 | U.S. Carbon Sequestration Council (CSC) | Jeffrey McDonald, EPA |
| 505 | 4/30/2014 | 4/30/2014 | | FutureGen Alliance Public Comments | US Fish and Wildlife Service | Jeffrey McDonald, EPA |
| 506 | 5/5/2014 | 5/5/2014 | | FutureGen Alliance Public Comments | Wilmot McCutchen | Jeffrey McDonald, EPA |
| | | | | | | |

**III. Tape or Transcript of Public Hearings (40 C.F.R. § 124.18(b)(2))**

| | | | | | | |
|---|---|---|---|---|---|---|
| 506 | * | 6/4/2014 | 13:50 | Underground Injection Control Draft Permits for the FutureGen Industrial Alliance - Revised Final transcripts - Public Hearing of May 7, 2014, at MacMurray College, Jacksonville, Illinois | Robin L. Stranimeier, of Jane Rose Reporting | Jeffrey McDonald, Jeffrey Wawczak, Lillateese Simmons, EPA |
| 507 | | | | | | |

**IV. Written Materials Submitted at Public Hearings (40 C.F.R. § 124.18(b)(3))**

| | | | | | | |
|---|---|---|---|---|---|---|
| 508 | * | | | Comments of the Illinois Department of Commerce and Economic Opportunity's Office of Coal Development | * | |
| 509 | | | | Comment of Phil Gonet, Illinois Coal Assoc. | | |
| 510 | | | | Jacksonville Regional Economic Development Corporation (EDC), Terry Denison | | |

**V. Response to Comments (40 C.F.R. § 124.18(b)(4))**

a. Response to comments

| | | | | | | |
|---|---|---|---|---|---|---|
| 511 | * | 8/29/2014 | | Response to Comments for Draft Class VI Permits Issued to the FutureGen Industrial Alliance | Tinka Hyde, EPA | Commenters |

b. New records considered by the Agency in Developing response to comments

| | | | | | | |
|---|---|---|---|---|---|---|
| 512 | * | 8/14/2014 | 11:29 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 513 | | 8/14/2014 | 11:19 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 514 | | 8/14/2014 | 10:41 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Saylor, Illinois State Water Survey | William Tong, EPA |
| 515 | | 8/13/2014 | 13:21 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 516 | | 7/14/2014 | 09:46 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 517 | | 7/11/2014 | 10:25 | Information regarding existing wells within a 5 mile radius of a location [new request for approx. 25 mi. AoR] | William Tong, EPA | William Saylor, Illinois State Water Survey |
| 518 | | 7/17/2014 | 11:53 | ISGS well data in West Central Illinois | Jeffrey McDonald, EPA | Alison Lecouris, ISGS |
| 519 | | 7/17/2014 | 14:18 | ISGS well data in West Central Illinois | Alison Lecouris, ISGS | Jeffrey McDonald, EPA |
| 520 | | 7/22/2014 | 05:17 | shape files | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 521 | | 7/25/2014 | 11:02 | shape files | Jeffrey McDonald, EPA | David Lanigan, Tyler Gilmore, PNNL |
| 522 | | 7/25/2014 | 13:43 | shape files | David Lanigan, PNNL | Jeffrey McDonald, EPA |
| 523 | | 6/13/2014 | 15:32 | Agenda for Tuesday's Meeting | Lucinda Swartz, FutureGen | Jeffrey McDonald, EPA |
| 524 | | 8/14/2014 | 11:12 | Criswell Plugging Affidavit [and attached OG-6 Well Plugging Report form, cementing service report from Franklin Well Services, 1965 Illinois Well Completion Report, and 1965 permit] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 525 | | 8/14/2014 | 11:19 | re: Criswell Plugging Affidavit | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 526 | | 8/14/2014 | 11:24 | re: Criswell Plugging Affidavit | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 527 | | 8/21/2014 | 14:15 | link [NRDC editorial] | Robert Finley, ISGS | Jeffrey McDonald, EPA |
| 528 | | 8/28/2014 | | Meeting between FutureGen, EPA and EPA's contractor, The Cadmus Group | Tyler Gilmore, Lucinda Swartz | Mary Rose Bayer, Joseph Tiago, Andrew Greenhagen, Mary McAuliffe, Tom Krueger, Jason Deardorff, Jeffrey McDonald, and Jaime Rooke (Cadmus) |
| 529 | | 8/27/2014 | 12:10 | Cost Tool for ERR activities | MaryRose Bayer, EPA | Jeffrey McDonald, EPA |
| 530 | | 7/28/2014 | 13:34 | downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 531 | | 8/14/2014 | 14:20 | re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 532 | | 8/14/2014 | 12:26 | re: downhole pressure gauge question [and use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 533 | | 8/14/2014 | 16:27 | re: downhole pressure gauge question [and use of tracers] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 534 | | 7/15/2014 | 12:36 | Letter of Intent to Drill Stratigraphic Well [e-mail and letter] | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |
| 535 | | 7/9/2014 | 15:22 | e-mail re: CO2 Flow | Tyler Gilmore, PNNL | Jeffrey McDonald, EPA |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| 536 | | na | | Illinois Compiled Statues [20 ILCS 1108/1] | na | na |
| 537 | 7/25/2008 | | | Federal Register Vol. 73; No. 144; Federal Requirements Under the Underground Injection (UIC) Program for Carbon Dioxide (CO2) Geologic Sequestration (GS) | na | na |
| 538 | 7/1/2014 | | | FutureGen Corrective Action Evaluation; Illinois State Geological Survey (ISGS) Well Data | na | na |
| 539 | 4/15/2010 | | | API Comments on: Sequestering Carbon Dioxide in a Closed Underground Volume | American Petroleum Institute | na |
| 540 | 4/1/2010 | | | A Brief Technical Critique of Ehlig-Economides and Economides 2010: "Sequestering Carbon Dioxide in a Closed Underground Volume" | Pacific Northwest National Laboratory | na |
| 541 | 4/9/2014 | 4/15/2014 | | Class VI Injection well permit - FutureGen Industrial Alliance, Inc. | Anne E. Haaker, Illionois Historic Preservation Agency | Lisa Perenchio, EPA |
| 542 | | 3/31/2014 | | Certificate of Service | Denice Dumas, NAAPCA | na |
| 543 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Matt Mangan, U.S. Fish and Wildlife Service |
| 544 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Bill Hoback, Ill. Dept. of Commerce and Economic Opportunity |
| 545 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Robert Flider, Ill. Dept. of Agriculture |
| 546 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Adam Pollet, Ill. Dept. of Commerce and Economic Opportunity |
| 547 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Todd Rettig, IDNR |
| 548 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marc Miller, IDNR |
| 549 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Karen Miller, IDNR |
| 550 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Arland Juhl, IDNR |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 551 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Andree DuVarney, U.S. Dept. of Agriculture |
| 552 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Kenneth Westlake, EPA |
| 553 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Charles L. Walthall, U.S. Dept. of Agriculture |
| 554 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Dr. LaMar Hasbrouck, Illinois Dept. of Public Health |
| 555 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Jonathan Feipel, Ill. Commerce Commission |
| 556 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Chuck Ingersoll, Ill. Dept. of Transportation |
| 557 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Marthea Roundtree, EPA |
| 558 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Steve Nightengale, IEPA |
| 559 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Lisa Bonnett, IEPA |
| 560 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | David Bloomberg, IEPA |
| 561 | 3/31/2014 | 3/31/2014 | | Public Notice and Public Comment Period of FutureGen Industrial Alliance, Inc. Class VI Underground Injection Control Draft Permits in Morgan County, Illinois | Lisa Perenchio, EPA | Amy Martin, Illinois Historic Preservation Agency |
| 562 | 3/31/2014 | 3/31/2014 | | U.S. Environmental Protection Agency Draft Permit Numbers: IL-137-6A-0001, -0002, -0003, and -0004 for the Wells #1, #2,#3, and #4 (respectively) in Morgan County, Illinois | Tinka G. Hyde, EPA | Kenneth K. Humphreys, FutureGen Industrial Alliance, Inc. |
| 563 | 3/31/2014 | 3/31/2014 | | Draft Class VI permits respository | Stephen M. Jann, EPA | Jacksonville Public Library |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
|---|---|---|---|---|---|---|
| 564 | 8/26/2014 | 8/1/2014 | | Phone conversation with ISGS regarding Mt. Simon formation flow rates and their consideration with FutureGen permit applications | Jeffrey McDonald, EPA | Robert Finley and Edward Mehnert, Illinois State Geol. Survey |
| 565 | 8/26/2014 | 7/30/2014 | | Phone conversation with Battelle/PNNL and Cadmus regarding the FutureGen permit applications numerical modeling | Jeffrey McDonald, EPA | Signe White, PNNL and Inci Demirkanli, Cadmus |
| 566 | 8/28/2014 | 7/11/2014 | | Phone conversation memo with Pan Handle, operators of the gas storage field in Waverly, Illinois | Jeffrey McDonald, EPA | Dave Hegemann and Larry Jenkins, Pan Handle |
| 567 | na | na | | data sheet on Halliburton's Hydromite | na | na |
| 568 | 2/11/2011 | | | "Investigation of gridding effects for numerical simulations of CO2 geologic sequestration" by Yamamoto and Doughty | | |
| 569 | 2/1/2008 | na | | Determination of Mechanical Integrity of Injection Wells; Region 5 guidance document # 5 | | |
| 570 | 3/1/2012 | | | Preliminary Report on the Northstar 1 Class II Injection Well and the Seismic Events in the Youngstown, Ohio, Area | Ohio DNR | |
| 571 | 8/28/2014 | 6/27/2014 | | Phone conversation record with Bryan Huff of ISGS regarding Criswell and Whitlock well records | Jeffrey McDonald, EPA | Bryan Huff, ISGS |
| 572 | 6/30/2014 | 6/30/2014 | | e-mail from Bryan Huff with ISGS records on Criswell and Whitlock wells | Bryan Huff, ISGS | Jeffrey McDonald, EPA |
| 573 | | 6/17/2014 | | CO2Flow Software Documentation: Hydraulic Model for CO2 Pipelines and Injection wells (January and June, 2014 versions) | PNNL | |
| 574 | | 6/17/2014 | | Testing of CO2Flow Pipeline and Injection Well Simulation Program (April 2014 version) | PNNL | |
| 575 | 3/27/2014 | 6/17/2014 | | AIG Insurance specimen policy | FutureGen | |
| 576 | 7/9/2014 | 7/9/2014 | 16:08 | Well files [database and other info on Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 577 | 7/10/2014 | 7/10/2014 | 11:01 | re: Well files [Criswell and Whitlock] | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 578 | 7/11/2014 | 7/11/2014 | 09:25 | re: Well files [Criswell and Whitlock] | Doug Shutt, IDNR | Jeffrey McDonald, EPA |
| 579 | 8/28/2014 | 7/9/2014 | | Phone conversation with Doug Shutt of the IDNR | Jeffrey McDonald, EPA | Doug Shutt, IDNR |
| 580 | 7/30/2014 | 7/30/2014 | 14:27 | e-mail re: More Concerns over FutureGen | Betty Niemann | Jeffrey McDonald, EPA |
| 581 | 8/28/2014 | 7/25/2014 | | Phone conversations with Mike Elliott of PNNL | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 582 | 7/28/2014 | 7/28/2014 | 13:34 | e-mail: downhole pressure gauge question | Jeffrey McDonald, EPA | Mike Elliott, PNNL |
| 583 | 8/14/2014 | 8/14/2014 | 14:20 | e-mail: re: downhole pressure gauge question | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |
| 584 | 8/14/2014 | 8/14/2014 | 14:26 | e-mail: re: downhole pressure gauge question [requesting clarification on use or non-use of tracers] | Jeffrey McDonald, EPA | Tyler Gilmore, PNNL |

| Doc | Date of doc | Date received | Time | Title/Description/Subject | Author/sender | Addressee |
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| | | | | **VI. Other Records in the Supporting File for the Permit (40 C.F.R. § 124.18(b)(6))** | | |
| 585 | 3/31/2014 | 3/31/2014 | N/A | Public Notice Mailed to EPA List | EPA | Numerous Parties |
| 586 | 3/31/2014 | 3/31/2014 | N/A | Public Notice sent via Certified Mail to EPA List | EPA | Numerous Parties |
| 587 | 4/1/2014 | 4/1/2014 | 17:33 | Public Notice E-mailed to EPA List | EPA | Numerous Parties |
| 588 | 4/2/2014 | 4/2/2014 | 10:32 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 589 | 4/2/2014 | 4/2/2014 | 13:33 | Public Notice E-mailed to Additional EPA List | EPA | Numerous Parties |
| 590 | 4/4/2014 | 4/4/2014 | 17:17 | Public Notice E-mailed to EPA List - Second attempt to send the notice to those returned as undeliverable | EPA | Numerous Parties |
| 591 | | 8/28/2014 | | Phone conversation record with Tyler Gilmore (PNNL) and Doug Shutt (IDNR) regarding alleged water well issues while drilling the stratigraphic test well at FutureGen | Jeffrey McDonald, EPA | Tyler Gilmore,PNNL and Doug Shutt, IDNR |
| 592 | | 8/28/2014 | | memo to file regarding description of the Potosi formation's lost circulation as "leakage" | Jeffrey McDonald, EPA | na |
| 593 | | 1/13/2014 | 19:13 | ISWS well record search - Morgan County IL | William Saylor, ISWS | William Tong, EPA |
| | | | | **VII. Final Permit (40 C.F.R. § 124.18(b)(7))** | | |
| 594 | * | 8/28/2014 | | U.S. EPA, Underground Injection Control Permit, Class VI, IL-137-6A-0004, FutureGen 2.0 Well #4 | | |

I, Jeffrey R. McDonald, am the permit writer for U.S. EPA permit # IL-137-6A-0004, FutureGen 2.0 Well #4. The administrative record for this final permit decision includes, to the best of my knowledge, the documents that form the basis for the final permit decision, as required by 40 C.F.R. § 124.18. The above Administrative Record Index references the documents in the administrative record for this final permit decision.

Jeffrey R. McDonald, Permit Writer,
Underground Injection Control Branch, U.S. EPA Region 5

8/28/14
Date