Texas Commission on Environmental Quality
Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

Novus International, Inc.
20 Research Park Drive
Saint Charles, MO 63304

Facility Owner

INEOS USA LLC
P.O. Box 659
Port Lavaca, Texas 77979

II. Type of Permit

Initial__X__ Renewal_____ Amended_____
Commercial_____ Noncommercial_X____
Hazardous__X___ Nonhazardous__X____
Onsite __X__ Offsite_____
Authorizing Disposal of Waste from Captured Facility_____
Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator_____

CONTINUED on Pages 2 through 6

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

_____
For The Commission

III. Nature of Business

The applicant proposes to operate a chemical manufacturing facility at which methionine, hydrogen cyanide, and 3-methylthiopropionaldehyde will be produced.

IV. General Description and Location of Injection Activity

The disposal well will be used to dispose of hazardous wastes generated by the permittee's facility during the manufacture of methionine, hydrogen cyanide, and 3-methylthiopropionaldehyde, and to dispose of hazardous and nonhazardous wastes described in permit provisions VI.A.2. and 3. The facility is located four miles north of the intersection of State Highway 185 and State Highway 35, Calhoun County, Texas. The well will be located approximately 9,430 feet from the northeast line and 990 feet from the southeast line of the J.M. Arocha Survey, A-40, North Latitude 28°33'53", West Longitude 96°51'21". The injection zone is within the Frio Formation at the approximate depths of 4,680 to 8,250 feet below ground level. The authorized injection interval is within the Frio Formation at the approximate depths of 5,840 to 6,460 feet below ground level.

V. Drilling and Completion Requirements

A. The drilling and completion of the well shall be done in accordance with 30 TAC Section (§) 331.62, the plans and specifications of the permit application, and the following conditions.

B. The permittee shall set and cement surface casing to a minimum subsurface depth of 1,700 feet below ground level, and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.

C. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.

D. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

A. Industrial hazardous and nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:

1. Process waste containing pyridine, acetonitrile, acrylonitrile, formic acid, methanol, chlorides, cyanide, phenols, and benzene.

2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.

3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted wastes, injection zone and the well.

B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Frio Formation within the injection zone between the approximate depths of 4,680 to 8,250 feet below ground level.

C. The pH of injected waste streams shall not be greater than 9.0.

D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not be greater than 1.50 or less than 1.07 as measured at 68°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited:

A. Wastes prohibited from injection in 40 CFR Part 148, Subpart B, are specifically prohibited from injection by this permit, unless an exemption from prohibition has been granted pursuant to 40 CFR Part 148, Subpart C, or the wastes meet or exceed the applicable treatment standards in 40 CFR Part 268, Subpart D;

B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);

C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;

D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and

E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 TAC Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

A. Surface injection pressure shall not cause pressure in the injection zone to:

1. initiate any new fractures or propagate existing fractures in the injection zone;
2. initiate new fractures or propagate existing fractures in the confining zone; or
3. cause movement of fluid out of the injection zone that may contaminate USDWs and fresh water.

B. The operating surface injection pressure shall not exceed 550 psig.

C. For WDW452 and WDW453, the maximum cumulative instantaneous injection rate shall not exceed 150 gallons per minute, and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 120 gallons per minute.

D. The cumulative volume of wastewater injected into WDW452 and WDW453 shall not exceed 5,356,800 gallons per month, or 63,072,000 gallons per year, based on the maximum cumulative injection rate of 120 gallons per minute.

E. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall notify the Texas Commission on Environmental Quality (TCEQ) and commence shut-in procedures on the well. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.

F. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of all well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.

B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.

C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.

D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.

E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient

reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.

F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.

G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.

H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.

I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of EPA SW-846, ASTM or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of $304,000 (cost estimate prepared December 16, 2015 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.

B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code, Chapter 361.

D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.

E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.

F. The following rules are incorporated as terms and conditions of this permit by reference:

1. 30 TAC Chapter 305, Consolidated Permits;
2. 30 TAC Chapter 331, Underground Injection Control; and
3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste.

G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.

H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated December 16, 2015 as revised on February 23, 2016, August 5, 2016, and October 26, 2016.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

I. The terms and provisions of Permit No. WDW453 are incorporated by reference.

J. All pre-injection units servicing this well must be authorized under a hazardous waste permit issued by the TCEQ under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.69.

K. Prior to injection into WDW452, the permittee must obtain a Texas solid waste registration number and an EPA identification number for this site.

Permit No. WDW453

Texas Commission on Environmental Quality

Austin, Texas

Permit to Conduct
Class I Underground Injection
Under Provisions of Texas Water Code
Chapter 27 and Texas Health and Safety
Code Chapter 361

I. Permittee

Novus International, Inc.
20 Research Park Drive
Saint Charles, MO 63304

Facility Owner

INEOS USA LLC
P.O. Box 659
Port Lavaca, Texas 77979

II. Type of Permit

Initial__X___ Renewal_____ Amended_____
Commercial_____ Noncommercial__X__
Hazardous__X__ Nonhazardous__X___
Onsite _X___ Offsite_____
Authorizing Disposal of Waste from Captured Facility_____
Authorizing Disposal of Waste from Off-site Facilities Owned by Owner/Operator_____

CONTINUED on Pages 2 through 6

The permittee is authorized to conduct injection in accordance with limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules and orders of the Commission, and the laws of the State of Texas. The permit will be in effect for ten years from the date of approval or until amended or revoked by the Commission. If this permit is appealed and the permittee does not commence any action authorized by this permit during judicial review, the term will not begin until judicial review is concluded.

DATE ISSUED:

_____
For The Commission

III. Nature of Business

The applicant proposes to operate a chemical manufacturing facility at which methionine, hydrogen cyanide, and 3-methylthiopropionaldehyde will be produced.

IV. General Description and Location of Injection Activity

The disposal well will be used to dispose of hazardous wastes generated by the permittee's facility during the manufacture of methionine, hydrogen cyanide, and 3-methylthiopropionaldehyde, and to dispose of hazardous and nonhazardous wastes described in permit provisions VI.A.2 and 3. The facility is located four miles north of the intersection of State Highway 185 and State Highway 35, Calhoun County, Texas. The well will be located approximately 1,240 feet from the northeast line and approximately 2,580 feet from the southeast line of the J. M. Arocha Survey, A-40, Latitude 28°34'53" North, Longitude 96°50'17" West. The injection zone is within the Frio Formation at the approximate depths of 4,635 to 8,250 feet below ground level. The authorized injection interval is within the Frio Formation at the approximate depths of 5,795 to 6,495 feet below ground level.

V. Drilling and Completion Requirements

A. The drilling and completion of the well shall be done in accordance with 30 TAC Section (§) 331.62, the plans and specifications of the permit application, and the following conditions.

B. The permittee shall set and cement surface casing to a minimum subsurface depth of 1,700 feet below ground level, and long string casing into or through the injection zone in order to properly protect each underground source of drinking water (USDW) or freshwater aquifer.

C. Mechanical integrity shall be demonstrated prior to authorization by the Executive Director to conduct injection operations.

D. Any changes to the plans and specifications in the original application shall be approved in writing by the Executive Director that said changes provide protection standards equivalent to or greater than the original design criteria.

VI. Character of the Waste Streams

A. Industrial hazardous and nonhazardous waste authorized to be injected by this permit shall consist solely of the following waste streams:

1. Process waste containing pyridine, acetonitrile, acrylonitrile, formic acid, methanol, chlorides, cyanide, phenols, and benzene.

2. Other associated wastes such as groundwater and rainfall contaminated by the above authorized wastes, spills of the above authorized wastes, and wash waters and solutions used in cleaning and servicing the waste disposal well system equipment which are compatible with the permitted waste streams, injection zone and well materials.

3. Wastes generated during well construction or closure of the well and associated facilities that are compatible with permitted wastes, injection zone and the well.

B. The injection of wastes is limited to those wastes authorized in Provision VI.A. above, into the Frio Formation within the injection zone between the approximate depths of 4,635 to 8,250 feet below ground level.

C. The pH of injected waste streams shall not be greater than 9.0.

D. Except when authorized by the Executive Director, the specific gravity of injected fluids shall not be greater than 1.50 or less than 1.07 as measured at 68°F.

VII. Waste Streams Prohibited From Injection

Unless authorized by Provision VI.A., the following waste streams are prohibited:

A. Wastes prohibited from injection in 40 CFR Part 148, Subpart B, are specifically prohibited from injection by this permit, unless an exemption from prohibition has been granted pursuant to 40 CFR Part 148, Subpart C, or the wastes meet or exceed the applicable treatment standards in 40 CFR Part 268, Subpart D;

B. Any by-product material as defined by Texas Health and Safety Code §401.003(3);

C. Any low-level radioactive waste as defined by Texas Health and Safety Code §401.004;

D. Any naturally occurring radioactive material (NORM) waste as defined by Texas Health and Safety Code §401.003(26); and

E. Any oil and gas NORM waste as defined by Texas Health & Safety Code §401.003(27).

VIII. Operating Parameters

The well shall be operated in compliance with the requirements of 30 TAC Chapters 305, 331, and 335; the plans and specifications of the permit application; and the following conditions:

A. Surface injection pressure shall not cause pressure in the injection zone to:

1. initiate any new fractures or propagate existing fractures in the injection zone;
2. initiate new fractures or propagate existing fractures in the confining zone; or
3. cause movement of fluid out of the injection zone that may contaminate USDWs and fresh water.

B. The operating surface injection pressure shall not exceed 550 psig.

C. For WDW452 and WDW453, the maximum cumulative instantaneous injection rate shall not exceed 150 gallons per minute, and the average cumulative injection rate, as calculated on a monthly basis, shall not exceed 120 gallons per minute.

D. The cumulative volume of wastewater injected into WDW452 and WDW453 shall not exceed 5,356,800 gallons per month, or 63,072,000 gallons per year, based on the maximum cumulative injection rate of 120 gallons per minute.

E. A positive pressure of at least 100 psig over tubing injection pressures shall be maintained in the tubing-casing annulus for the purpose of leak detection. Temporary deviations from this requirement which are a part of normal well operations are authorized but may not exceed 15 minutes in duration. For 15 minutes after the pressure differential drops below 100 psig, the permittee shall conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 15 minutes, the permittee shall notify the Texas Commission on Environmental Quality (TCEQ) and commence shut-in procedures on the well. The permittee may continue to operate the well under flow conditions that maintain a minimum 100 psig pressure differential.

F. The permittee shall notify the Executive Director at least 24 hours prior to commencing any workover which involves taking the injection well out of service. Approval by the Executive Director shall be obtained before the permittee may begin work. Notification shall be in writing and shall include plans for the proposed work. The Executive Director may grant an exception in accordance with 30 TAC §331.63(i) when immediate action is required to comply with 30 TAC §331.63(b). Completion of the well outside the approved injection interval, by perforation of casing, setting of screen, or establishment of open hole section, requires that the permitted injection interval be changed according to 30 TAC §331.62(a)(3)(B) to include the depths of all well completion. Pressure control equipment shall be installed and maintained during workovers which involve the removal of tubing.

IX. Monitoring and Testing Requirements

A. Monitoring and testing shall be in compliance with the requirements of 30 TAC §305.125, §331.64, the plans and specifications of the permit application, and the following conditions.

B. The integrity of the long string casing, injection tubing, and annular seal shall be tested by means of an approved pressure test with a liquid or gas annually and whenever there has been a well workover. The integrity of the cement within the injection zone shall be tested by means of an approved radioactive tracer survey annually. A radioactive tracer survey may be required after workovers that have the potential to damage the cement within the injection zone.

C. The pressure buildup in the injection zone shall be monitored annually, including at a minimum, a shutdown of the well for a sufficient time to conduct a valid observation of the pressure fall-off curve.

D. A temperature log, noise log, oxygen activation log or other approved log is required at least once every five years to test for fluid movement along the entire borehole.

E. A casing inspection, casing evaluation, or other approved log shall be run whenever the owner or operator conducts a workover in which the injection string is pulled, unless the Executive Director waives this requirement due to well construction or other factors which limit the test's reliability, or based upon the satisfactory results of a casing inspection log run within the previous five years. The Executive Director may require that a casing inspection log be run every five years if there is sufficient

reason to believe the integrity of the long string casing of the well may be adversely affected by naturally occurring or man-made events.

F. Injection fluids shall be tested in accordance with 30 TAC §331.64(b) and the approved waste analysis plan.

G. The pH and specific gravity of the injected waste shall be monitored continuously at a minimum frequency of at least once every 24 hours and whenever the waste stream changes.

H. Corrosion monitoring of well materials shall be conducted quarterly and in accordance with 30 TAC §331.64(g). Test materials shall be the same as those used in the wellhead, injection tubing, packer, and long string casing, and shall be continuously exposed to the waste fluids except when the well is taken out of service.

I. The permittee shall ensure that all waste analyses used for waste identification or verification and other analyses for environmental monitoring have been performed in accordance with methods specified in the current editions of EPA SW-846, ASTM or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control program that is consistent with EPA SW-846 and the TCEQ Quality Assurance Project Plan.

X. Record Keeping Requirements

The permittee shall keep complete and accurate records as required by 30 TAC Chapters 305, 331, and 335.

XI. Financial Assurance for Well Closure

In accordance with 30 TAC Chapter 37, §305.154(a)(9), and §§331.142-144, the permittee shall secure and maintain financial assurance, in a form approved by the Executive Director, in the amount of $304,000 (cost estimate prepared December 16, 2015 in current dollars). Adjustments to the cost estimates for plugging and abandonment in current dollars, and to financial assurance based thereon, shall be made in accordance with 30 TAC §331.143(d) and Chapter 37. Financial assurance shall be obtained at least 60 days prior to the commencement of drilling of the well.

XII. Additional Requirements

A. The base of the wellhead shall be enclosed by a diked, impermeable pad or sump to protect the ground surface from spills and releases. Any liquid collected shall be disposed of in an appropriate manner.

B. Acceptance of this permit by the permittee constitutes an acknowledgment and agreement that the permittee will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

C. This permit is subject to further orders and rules of the Commission. In accordance with the procedures for amendments and orders, the Commission may incorporate into permits already granted, any condition, restriction, limitation, or provision reasonably necessary for the administration and enforcement of Texas Water Code, Chapter 27 and Texas Health and Safety Code, Chapter 361.

D. This permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee.

E. The issuance of this permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations.

F. The following rules are incorporated as terms and conditions of this permit by reference:

1. 30 TAC Chapter 305, Consolidated Permits;
2. 30 TAC Chapter 331, Underground Injection Control; and
3. 30 TAC Chapter 335, Industrial Solid Waste and Municipal Hazardous Waste.

G. The express incorporation of the above rules as terms and conditions of this permit does not relieve the permittee of an obligation to comply with all other laws or regulations which are applicable to the activities authorized by this permit.

H. Incorporated Application Materials. This permit is based on, and the permittee shall follow, the plans and specifications contained in the Class I Underground Injection Control Application dated December 16, 2015 as revised on February 23, 2016, August 5, 2016, and October 26, 2016.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

I. The terms and provisions of Permit No. WDW452 are incorporated by reference.

J. All pre-injection units servicing this well must be authorized under a hazardous waste permit issued by the TCEQ under 30 TAC Chapter 335 or must be exempt from the requirement for a permit under 30 TAC §335.69.

K. Prior to injection into WDW453, the permittee must obtain a Texas solid waste registration number and an EPA identification number for this site.

November 30, 2016

TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Description of Application

Applicant: Novus International, Inc.
Proposed Underground Injection Control (UIC) Permit Nos. WDW452 and WDW453.

Location: The Novus International, Inc. (Novus) proposed Green Lake Facility is located four miles north of the intersection of State Highway 185 and State Highway 35, Calhoun County, Texas. The proposed waste disposal wells are to be located as follows:

WDW452: Approximately 9430 feet from the northeast line and 990 feet from the southeast line of the J.M. Arocha Survey, A-40 (North Latitude 28°33'53", West Longitude 96°51'21").

WDW453: Approximately 1240 feet from the northeast line and 2580 feet from the southeast line of the J.M. Arocha Survey, A-40 (North Latitude 28°34'53", West Longitude 96°50'17").

General: The applicant proposes to operate a chemical manufacturing facility at which methionine, hydrogen cyanide, and 3-methylthiopropionaldehyde will be produced. Wastes are generated on-site at the Novus manufacturing plant. Methionine is an amino acid necessary for milk and egg production and for muscle growth, which is added to livestock feed grains. Hydrogen cyanide is a chemical product used in fumigation, electroplating, mining, chemical synthesis, and the production of synthetic fibers, plastics, dyes, and pesticides. 3-methylthioproionaldehyde is used nearly exclusively as an intermediate in chemical synthesis. It also used in small quantities as a flavoring agent. Wastes that will be disposed at this facility include a process wastewater that contains pyridine, acetonitrile, formic acid, methanol, chlorides, cyanide, phenols, and benzene. Novus anticipates that a cumulative annual average volume of approximately 63 million gallons of waste will be disposed in the two proposed wells.

Request: Novus submitted an application to the Texas Commission on Environmental Quality (TCEQ) dated December 16, 2015 for permits for the construction of underground injection wells for disposal of industrial hazardous waste. The application was received on December 21, 2015.

Authority: The proposed permits are required by the Injection Well Act, Texas Water Code §27.011 and Solid Waste Disposal Act, Texas Health and Safety Code §361.061. Draft permits have been prepared in accordance with applicable requirements of 30 Texas Administrative Code (TAC) Chapters 281, 305 and 331, which have been adopted under the authority of the Texas Water Code, Chapters 5 and Texas Health and Safety Code, Chapter 361.

Technical Information

The permit application has been evaluated in accordance with 30 TAC Chapters 305, 331. Based on this review, there are no artificial penetrations in the area of review that require corrective action to ensure that injection activities will not result in pollution of an underground source of drinking water. The maximum surface injection pressure and the injection rate will not initiate

any new fractures, propagate any existing fractures, or cause movement of fluid out of the injection zone. Well design and operation meet all applicable regulatory requirements in 30 TAC Chapter 331, Subchapter D, and well materials are compatible with the wastes authorized for injection.

The proposed injection zone is the Frio Formation from 4,680 to 8,250 feet below ground level in WDW452 and 4,635 to 8,250 feet in WDW453. The proposed injection interval is the Frio Formation from 5,840 to 6,460 feet below ground level in WDW452 and 5,795 to 6,495 feet in WDW453.

The Goliad Formation is the lowermost underground source of drinking water in the vicinity of the wells. Its base occurs at depths of approximately 1,575 feet below ground level in this area.

The proposed permits include the following:

A. standard provisions for construction, operation and closure of the subject injection wells, including requirements for testing, monitoring, and reporting; and

B. standard provisions to establish and maintain financial assurance to provide for proper facility closure;

Process for Reaching a Final Decision and Opportunities for Public Participation

Once the proposed permits are drafted, they are sent to the TCEQ Office of the Chief Clerk for public notice. Mailed and newspaper notice of the application and executive director's preliminary decision are provided in accordance with 30 TAC §39.651(d) with instructions for submitting public comments and requesting a public meeting. Written public comments and requests for a public meeting must be submitted to the Office of the Chief Clerk within 45 days from the date of publication of the newspaper notice.

The executive director will consider public comments in making a final decision on the application. The TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. The response to comments will include the executive director's decision on the application and will provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.

A contested case hearing will only be granted based on disputed issues of fact that are relevant and material to the commission's decision on the application on issues that were raised during the public comment period and not withdrawn. The executive director may issue final approval of the application unless a timely contested case hearing request or request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the executive director will not issue final approval of the permits and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled commission meeting. If hearing requests are granted, the hearings will be conducted by the State Office of Administrative Hearings. Decisions regarding the permits may be reconsidered in response to a Motion for Rehearing or a Motion for Reconsideration and by appeal to a District Court in Travis County.

Preliminary Decision

The executive director has made a preliminary decision that the proposed permits, if issued, meet all statutory and regulatory requirements.

The proposed permits do not authorize variances or alternatives to required standards.

Prepared by:

David H. Murry, P.G., Project Manager
UIC Permits Section
Radioactive Materials Division

Reviewed by:

Lorrie Council, P.G., Manager
UIC Permits Section
Radioactive Materials Division

The TCEQ is committed to accessibility.
To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.

Compliance History Report

Compliance History Report for CN605049394, RN108932146, Rating Year 2017 which includes Compliance History (CH) components from September 1, 2012, through August 31, 2017.

Customer, Respondent, or Owner/Operator: CN605049394, Novus International, Inc. **Classification:** UNCLASSIFIED **Rating:** -----

Regulated Entity: RN108932146, GREEN LAKE FACILITY **Classification:** UNCLASSIFIED **Rating:** -----

Complexity Points: 4 **Repeat Violator:** NO

CH Group: 14 - Other

Location: STATE HIGHWAY 185 6.5 MILES SOUTH OF BLOOMINGTON VICTORIA, TX, VICTORIA COUNTY

TCEQ Region: REGION 14 - CORPUS CHRISTI

ID Number(s):
UNDERGROUND INJECTION CONTROL PERMIT WDW452 **UNDERGROUND INJECTION CONTROL** PERMIT WDW453

Compliance History Period: September 01, 2012 to August 31, 2017 **Rating Year:** 2017 **Rating Date:** 09/01/2017

Date Compliance History Report Prepared: February 01, 2018

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: February 01, 2013 to February 01, 2018

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: David Murry **Phone:** (512) 239-6080

Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? NO
2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:
N/A

B. Criminal convictions:
N/A

C. Chronic excessive emissions events:
N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):
N/A

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):
A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.
N/A

F. Environmental audits:
N/A

G. Type of environmental management systems (EMSs):
N/A

H. Voluntary on-site compliance assessment dates:
N/A

I. Participation in a voluntary pollution reduction program:
N/A

J. Early compliance:
N/A

Sites Outside of Texas:
N/A