

NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY
PUBLIC NOTICE TO
REVISE AN UNDERGROUND INJECTION CONTROL PERMIT

November 3, 2022

PURPOSE OF PUBLIC NOTICE

THE PURPOSE OF THIS NOTICE IS TO STATE THE DEPARTMENT'S INTENTION TO REVISE A CLASS I UNDERGROUND INJECTION CONTROL PERMIT UNDER THE AUTHORITY OF ARTICLE 33.1-25 OF THE NORTH DAKOTA ADMINISTRATIVE CODE.

PERMIT INFORMATION

APPLICANT NAME: Rainbow Energy Center
MAILING ADDRESS: 2875 Third Street SW
Underwood, ND 58576
FACILITY LOCATION: Coal Creek Station
2875 Third Street SW
Underwood, ND 58576
TELEPHONE NUMBER: 701-207-9988
APPLICATION NUMBER: ND-UIC-106

Underground Injection Control Permit Modification

It is the intent of the North Dakota Department of Environmental Quality (Department), Division of Water Quality, to revise Rainbow Energy Center's (Rainbow) Class I non-hazardous waste underground injection control permit ND-UIC-106 (Permit). Rainbow currently operates a Class I non-hazardous waste underground injection well (Well #1) at Coal Creek Station, a coal-fired electric generation facility located near Underwood, North Dakota. Well #1 is used for the disposal of non-hazardous plant process water into the Inyan Kara formation, at a depth between 3,531 and 3,916 feet below ground surface. The injection zone is located approximately 2,421 feet below the Fox Hills formation, which is currently identified as the lower most underground source of drinking water in the vicinity of Coal Creek Station.

Currently, the maximum permitted injection rate for Well #1 is 700 gallons per minute (gpm). Existing permit conditions also include (1) a maximum surface injection pressure of 1,200 pound per square inch (psi), (2) a minimum pressure differential of 100 psi between the injection pressure and the annulus pressure during injection activities, (3) a maximum particle travel distance, radially from the well into the formation, of 2,880 feet, and (4) a maximum cumulative injection volume of approximately 13 billion gallons.

The Permit allows Rainbow to operate the well continuously, as long as all Permit conditions are met; however, Rainbow has been operating the well on an intermittent basis.

Rainbow's existing Permit will be modified to allow Rainbow to accept commercial industrial waste fluids from the Blue Flint Ethanol Plant and from Great River Energy's (GRE) former Stanton Station. The Blue Flint Energy waste streams include reverse osmosis water, ultrafiltration blowdown water, and boiler blowdown water. The waste stream from GRE's former Stanton Station consists of porewater from their closed Bottom Ash Impoundment. All waste streams have been determined to be non-hazardous.

PUBLIC COMMENTS

The Draft Permit will be available for public review and comment for thirty (30) days following publication of the Public Notice. The public comment period begins November 3, 2022, and ends December 5, 2022. Interested persons may submit written comments to the Department on the Draft Permit during this period. Interested persons may request a public hearing by stating the nature the specific issues to be raised.

The Department will consider all comments prior to taking any action on the permit. Comments, questions, and written communication should be directed to:

Karl Rockeman, Director
North Dakota Department of Environmental Quality
Division of Water Quality
4201 Normandy Street
Bismarck, ND 58503-1324

The Draft Permit is available for review during the hours of 8:30 a.m. to 4:30 p.m., Monday through Friday, at the North Dakota Department of Environmental Quality, Division of Water Quality, 4201 Normandy Street, Bismarck, North Dakota. A copy of this Public Notice is also on the Department's website at: <http://deq.nd.gov>. Anyone requiring special access or accommodations to review the Draft Permit may contact the Department at 701-328-5210.

DEQ Non-discrimination Statement

The Department will consider every request for reasonable accommodation to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. To request accommodations, contact Jennifer Skjod, Acting Non-discrimination Coordinator at 701-328-5226 or jskjod@nd.gov. TTY users may use Relay North Dakota at 711 or 1-800-366-6888.

PUBLIC NOTICE NUMBER: ND-2022-020

Permit No.: ND-UIC-106

Effective Date: May 1, 2022
Expiration Date: May 12, 2025

UNDERGROUND INJECTION WELL PERMIT

AUTHORIZATION TO INJECT UNDER THE NORTH DAKOTA UNDERGROUND INJECTION CONTROL PROGRAM

In compliance with Chapter 33.1-25-01 (Underground Injection Control Program) of the North Dakota Department of Environmental Quality (Department) rules, as promulgated under Chapter 61-28 (North Dakota Water Pollution Control Act) of the North Dakota Century Code, Rainbow Energy Center, LLC. is authorized to inject waste fluids in accordance with limitations, monitoring requirements, and other conditions set forth in this Permit.

This Permit shall become effective on xx, 2022 and shall expire at midnight on May 12, 2025, unless amended or terminated by the Department.

Karl Rockeman, Director
Division of Water Quality
Date: _____

I. NAME OF PERMITTEE

Rainbow Energy Center, LLC,
2875 Third Street SW
Underwood, North Dakota 58576

II. NATURE OF BUSINESS

Rainbow Energy Center is a 1,200-megawatt coal-fired electric generation facility located approximately 6 miles south of Underwood in McLean County, North Dakota (see Figure 1). The main plant area occupies five sections of land and portions of additional nearby sections (see Figure 2) in Township 145 North, Range 82 West.

Plant operations began in the late 1970s. The fuel source for the plant is lignite coal that is supplied by the adjoining Falkirk Mine. Coal Creek Station uses about 22,000 tons of lignite per day to generate electricity.

Rainbow Energy Center will operate the permitted Class I injection well as a commercial injection well for the disposal of non-hazardous industrial waste fluids.

III. DESCRIPTION AND LOCATION OF INJECTION ACTIVITY

Well Location. North Dakota Underground Injection Permit ND-UIC-106 (Permit) authorizes Rainbow Energy Center, LLC. (Permittee) to dispose of non-hazardous industrial wastewater into one (1) Class I non-hazardous waste underground injection well (Well #1). The injection well is located within the plant's property boundary, approximately 160 feet north of the Drains Pond (SE ¼, NE ¼, S17, T145N, R82W).

Wastewater Description. The permitted waste streams include plant process water from Rainbow Energy Center's coal-fired electric generation facility and industrial wastewater from off-site commercial sources.

Rainbow Energy Center Waste Streams. The permitted waste stream consists of water from the process water recycle system (PWRS), primarily water from Evaporation Pond 91. The PWRS consists of the Drains Pond, two coal combustion product (CCP) management facilities (Upstream Raise 91 and Upstream Raise 92), Evaporation Pond 91, the ash water conveyance tanks, and the scrubbers.

Within the PWRS, the Drains Pond is the low point where recycled water is accumulated and reused. Recycled process water from the Drains Pond is pumped to the ash water conveyance tanks where it is used to hydraulically convey CCPs (e.g., bottom ash, economizer ash) as well as process rejects (e.g., mill rejects, lime grit) to the CCP management facilities. Recycled process water from the Drains Pond is also pumped to the scrubbers for flue gas desulfurization (FGD) process make-up. Recycled process water returns to the Drains Pond from the CCP disposal facilities. As the recycled process water is used for CCP conveyance

and FGD make-up, some portion is retained with the CCP materials or lost through evaporation. Water make-up to the process water recycle system comes from cooling water, captured precipitation, and plant drains. Evaporation Pond 91 is used as a sink-source for the PWRS to either consume excess inventory or to provide additional water when needed.

Water make-up to the PWRS includes the following:

- Cooling water (cooling tower blowdown and auxiliary cooling water) from the site cooling water system (Extended Basin);
- Captured precipitation from the plant and pond areas; and
- Plant drains.

Although not adding make-up water to the PWRS, the following two flow streams do have the potential for adding constituents to the system:

- Flue gas desulfurization blowdown (FGD) from the scrubber; and
- Contact water from the CCP management facilities.

The wastewater consists primarily of water classified as magnesium/sodium sulfate type with total dissolved solids (TDS) averaging 28,000 milligrams per liter (mg/l). The speciation of average process water composition shows it be supersaturated with respect to both carbonates and gypsum. An evaluation of this wastewater stream indicates that it is classified as a non-hazardous waste.

Commercial Facility Waste Streams. Permitted commercial waste streams include process water from the Blue Flint Ethanol facility and from Great River Energy's (GRE) former Stanton Station. The Blue Flint Energy waste streams include reverse osmosis water, ultrafiltration blowdown water, and boiler blowdown water. The waste stream from GRE's former Stanton Station consists of porewater from their closed Bottom Ash Impoundment. All waste streams have been determined to be non-hazardous.

Well #1 Information. Well #1 injects wastewater into the Inyan Kara Formation in the interval from 3,531 to 3,916 feet below ground surface (bgs). The Inyan Kara Formation is part of the Dakota Group, which also includes the Mowry, Newcastle, and Skull Creek Formations. While various terms have been used to describe this geologic unit, including the Lower Cretaceous aquifer, Inyan Kara Group, and Lakota Formation, it is generally acceptable to simply reference it as the "Dakota aquifer". The uppermost perforated injection interval in Well #1 is approximately 2,421 feet below the lowermost underground source of drinking water (USDW), the Fox Hills Sand.

Well #1 is constructed with a 16-inch outside diameter (OD) conductor casing set from ground surface to a depth of 60 feet bgs, an 11-3/4 -inch OD surface casing set from ground surface to 1,232 feet bgs, and a 7-inch OD production casing that extends from ground surface to a depth of 3,531 feet bgs. Wastewater is injected through 4 1/2-inch OD tubing with a packer set at an approximate depth of 3,507 feet bgs, or approximately 24 feet above the top of the targeted injection zone. The annulus between the injection tubing and protection casing is filled to the surface with fresh water mixed with CI-811 (a blend of amine-based corrosion

inhibitors and oxygen scavengers). Injection pressure, flow rate, and tubing/long string annulus pressure are continuously monitored. The maximum permitted injection rate for Well #1 is 700 gallons per minute (gpm). The maximum permitted volume of injected fluids is 1.3×10^{10} gallons.

Should the well need corrective maintenance or be shut-in for testing, the injectate will be diverted to the evaporation ponds located on-site. The ponds shall have enough capacity to contain all waste fluids generated during continued plant operation.

The Permittee is authorized to conduct injection activity in Well #1 in accordance with the provisions of Chapter 33.1-25-01 (Underground Injection Control Program) of the North Dakota Administrative Code and with the limitations, requirements, and other conditions set forth in this Permit.

IV. WELL CONSTRUCTION REQUIREMENTS

- A. Casing and Cementing. The construction details submitted with the Injection Well Completion Report are hereby incorporated into this Permit and are binding on the Permittee. Any proposed changes to the construction of the wells must be submitted to the Department for review and written approval.
- B. Tubing and Packer Specifications. The wells shall have a tubing and packer construction of materials of sufficient quality and strength for the proposed injection activity.
- C. Monitoring Devices. The primary method of monitoring shall be continuous pressure monitoring of the injection and casing tubing annulus pressure (at the wellhead) and continuous monitoring of the injection rate and total volume. Prior to commencement of injection activities, the operator shall install and maintain in good operation condition the following equipment:
 - (1) Injection Pressure Monitoring Device. The injection pressure will be monitored using a digital, continuous reading pressure monitoring device in the injection tubing at the wellhead.
 - (2) Wellhead Annulus Pressure Monitoring Device. The wellhead pressure of the tubing/casing annular space will be monitored using a digital continuous reading pressure monitoring device in the wellhead casing/tubing annulus. The tubing/casing annulus shall be maintained with an inhibited brine fluid that is under a differential pressure of at least 100 pounds per square inch (psi). The annulus pressure may be maintained above or below the wellhead injection pressure as long as the absolute differential pressure is at least 100 psi. The annulus pressure can be transitioned from positive differential (annulus pressure greater than the wellhead tubing pressure) to a negative differential (annulus pressure less than the wellhead tubing pressure) or the reverse in 30 minutes

without being in violation of the minimum 100 psi differential pressure requirement. The minimum annulus differential pressure of 100 psi must be restored within 30 minutes. A mineral oil freeze blanket, or other fluid as approved in writing by the Director, may be circulated from surface to below frost level at completion to prevent freezing and possible equipment failure during winter months.

- (3) Well Shutdown Switch. The maximum surface injection (tubing) pressures with fresh water specific gravity fluid shall be less than 1,200 psi in Well #1. Any increase in pressure that exceeds the allowable injection pressure shall result in an immediate shutdown of the injection pump.
- (4) Flow Meters. Flow meters and digital, continuous recording devices shall be installed in the injection line immediately upstream of the wellhead to track and document disposal fluid flow rates and total fluid volumes. For a given injection rate, the injection pressure should remain relatively constant. Input flow volumes shall be cross checked against injection pressure records to identify any possible divergence in the injection pressure for a given flow rate. A drop in injection pressure without a corresponding reduction in input flow rate may indicate a possible casing, packer, or other failure.
- (5) Fluid Sampling Ports. The injection line shall be equipped with sampling ports and appropriate connections to facilitate the periodic collection of injection fluid samples for chemical analysis. The sampling port is located on the injection line at a point immediately following the injection pump.

V. WELL LOGGING AND TESTING REQUIREMENTS

The Permittee shall give at least a two-week, advance written notice to the Director of any planned well logging or testing. This notice shall include a plan for conducting the proposed test or log.

- A. Cement Bond Log. Following completion of the well, a cement bond log will be run to verify the adequacy of the cement placement. The Permittee shall also run a new cement bond log following any remedial work or repair work that involves cementing.
- B. Pressure Fall-Off Test. A pressure fall-off test is required for Class I operations [40 CFR 146.13 (d) (1)] and must be performed at least once every twelve months to detect any significant loss of fluids due to fracturing in the injection and/or confining zone and to aid in determining the lateral extent of the injection plume. The test shall conform to the test plan provided to the Department. The Permittee shall analyze test results and provide a report with an appropriate narrative interpretation of the test results, including an estimate of reservoir parameters, information on any reservoir boundaries, an estimate of the well skin effect, and a summary of reservoir flow conditions. The report shall also compare the test results with the previous year's test data and shall be prepared by a knowledgeable analyst.

- C. Mechanical Integrity Testing. Prior to commencement of injection, the mechanical integrity of the well will be demonstrated using the methods listed under Title 40 CFR Part 146, Section 146.8(b). The mechanical integrity testing will also be conducted at least every five years.

VI. WELL OPERATING PARAMETERS

- A. Injection Rate and volume. This Permit authorizes injection for one well. The maximum instantaneous injection rate shall be 700 gpm in Well #1. The maximum permitted injection volume is 1.3×10^{10} gallons.
- B. Injection Interval. Injection into Well #1 is limited to the Inyan Kara Formation, a Cretaceous sandstone unit, in the interval from 3,531 to 3,916 feet bgs. The uppermost perforated injection interval in Well #1 is approximately 2,421 feet below the lowermost underground source of drinking water (USDW), the Fox Hills Sand.
- C. Injection Pressure. The wellhead injection pressure with fresh water specific gravity fluid shall not exceed 1,200 psi in Well #1 to assure that fracturing of the injection zone and confining zone does not occur.
- D. Annular Fluid. The tubing/long string casing annulus shall be filled with a fluid containing corrosion inhibitors. A pressure with a differential (positive or negative) from injection pressure of at least 100 psi, measured at the surface, shall be maintained on the annulus to detect well malfunctions. The annulus pressure can be transitioned from positive differential (annulus pressure greater than the wellhead tubing pressure) to a negative differential (annulus pressure less than the wellhead tubing pressure) or the reverse within 30 minutes without being in violation of the minimum 100 psi differential pressure requirement. The minimum annulus differential pressure of 100 psi must be restored within 30 minutes. For 30 minutes after the pressure differential drops below 100 psig, the Permittee can conduct troubleshooting and proceed to restore a minimum 100 psig pressure differential. If a minimum 100 psig pressure differential cannot be achieved within 30 minutes, the Permittee shall notify the Department 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.
- E. Injection Fluid. The injected wastewater stream shall consist of the stream specified in Section III of this Permit. However, with prior written approval from the Department, injection of wastewater streams other than those specified may be allowed if they meet the following conditions:
1. The wastewater stream is compatible to those streams outlined in Section III.
 2. The wastewater is nonhazardous.
 3. The wastewater stream will not interfere with the operation of the facility or its

ability to meet Permit conditions.

VII. INJECTION WELL MONITORING

- A. Pressure Gauges. Pressure gauges shall be installed and maintained in proper operating conditions at all times on the injection tubing and on the tubing/long string casing annulus of the wellhead.
- B. Recording Devices. Continuous recording devices shall be installed and maintained in proper operating conditions at all times to record injection tubing pressures, injection flow rates, injection total volumes, and tubing/long string casing annulus pressures
- C. Mechanical Integrity. The mechanical integrity of the well shall be verified by the continuous monitoring of the tubing/long string casing annulus pressure. Mechanical integrity testing will be completed at least every five years using the methods listed under Title 40 CFR Part 146, Section 146.8(b).
- D. Monitoring. A grab sample of injected fluids shall be analyzed quarterly (during quarters in which the well is in operation) for the parameters listed in List C of Attachment A.
- E. Chemical Analysis. A complete chemical analysis shall be completed annually for the injected fluids. This complete analysis shall include parameters specified in Lists A and B, summarized in Attachment A. The permitted commercial waste streams must be analyzed within 14 days of commencement of injection to confirm that the waste fluids are classified as non-hazardous (List A); following the initial analyses, the waste streams will be sampled for List A analytes according to a sampling schedule established by the Department.
- F. Groundwater Monitoring. One of Rainbow Energy Center's onsite groundwater monitoring wells (to be specified by the Director) will be sampled on a semi-annual basis; the samples will be analyzed for the parameters specified in List C, Attachment A. The groundwater elevation in the well shall also be measured.

VIII. AMBIENT MONITORING PROGRAM

- A. Pressure Fall-Off Test. Minimum requirements are annual monitoring of the pressure buildup in the injection zone, including a shutdown of the well for a time sufficient to conduct a valid observation of the pressure fall-off curve. The zone of influence to date, the reservoir transmissivity, and the reservoir skin factor shall be calculated and submitted with the results of the pressure fall-off test.
- B. Additional Testing. The Department may also require any additional monitoring, based on a site-specific assessment of the potential for fluid movement from the well or injection zone and on the potential value of monitoring wells to detect such movement.

IX. PROPOSED CHANGES AND WELL WORKOVERS

The Permittee shall give at least two (2) week advance notice to the Department of any planned physical alterations or additions to the permitted well. A major alteration or workover shall be considered any work performed that affects the well casing, packer, or tubing. The notification shall be in writing and shall include plans for the workover. For emergency workover or well service, 24-hour prior notification to the Department will be provided with the proposed work plan also submitted for review.

The Permittee shall provide all records of well workovers, logging, or other test data to the Department as part of the quarterly report for the period in which the activity was completed. The report should include the reason for the workover or change and the details of the work performed.

A demonstration of mechanical integrity (tubing/casing annulus pressure test) shall be performed within thirty (30) days of completion of any change or workover and prior to resuming injection activities.

X. REPORTING

- A. The Permittee shall file quarterly reports within thirty (30) days after the last day of March, June, September, and December of each year. The report should include:
1. Monthly average, maximum and minimum values for injection pressure, injection rate and volume, and annular pressure for each well. The report should include summary graphs of the data collected during the reporting period.
 2. Results of analyses of the injected fluids.
 3. Results of the groundwater monitoring well analyses.

The results of periodic tests of mechanical integrity, annual ambient monitoring, and well workovers shall be submitted as part of the first quarterly report following their completion.

- B. The Permittee shall report orally within twenty-four (24) hours from the time these circumstances are made aware of:
1. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an USDW.
 2. Any noncompliance with a Permit condition or malfunction of the injection system such as loss of mechanical integrity which may cause fluid migration into or between USDWs.

A written report shall follow within five (5) days. The written report shall contain a description of the noncompliance and its causes, the period of noncompliance (including exact date and times), and if the noncompliance has not been corrected, the anticipated time it is expected to continue. Steps should be taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- C. The Permittee shall report all other instances of noncompliance at the time monitoring reports are submitted. The report shall contain the information listed above.
- D. In the event that the Permittee is placed on a compliance schedule, report of compliance or noncompliance with the requirements of the schedule shall be submitted no later than fourteen (14) days following each schedule date.
- E. If the Permittee becomes aware that he failed to submit any relevant facts in a Permit application or submitted incorrect information he shall promptly submit such facts and information.
- F. The Permittee shall notify the director at least (sixty) 60 days before conversion or abandonment of any disposal well.

XI. RECORDKEEPING

- A. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the sample measurement, report, or application. Records of monitoring information shall include:
 - 1. The date, exact place and time of sampling or measurements.
 - 2. The name of individual(s) who performed the sampling or measurements.
 - 3. The date(s) analyses were performed.
 - 4. The name of the laboratory and individual(s) who performed the analyses.
 - 5. The analytical techniques or methods used.
 - 6. The results of such analyses.
- B. The Permittee shall retain all records concerning the nature and composition of injected fluids for five (5) years after completion of plugging and abandonment procedures.

XII. PLUGGING AND ABANDONMENT

- A. Notification. The Permittee shall notify the Department in writing sixty (60) days prior to commencing plugging operations.
- B. Injection Well Closure Plan. The Permittee shall plug and abandon the wells in accordance with the Injection Well Closure Plan.

If the Permittee wishes to modify the plugging procedure, he shall furnish the Department the following information:

1. The location of the plugs,
 2. The type of grades and quantity of cement to be used,
 3. The method of placement of the plugs,
 4. The method for insuring static equilibrium in the well prior to the placement of the plugs.
- C. Plugging and Abandonment Report. Within sixty (60) days after plugging the well, the Permittee shall submit a report to the Department. The person who performed the plugging operation shall certify the report as accurate and the report should consist of either (1) a statement that the well was plugged in accordance with the plan, or (2) where actual plugging differed from the plan, a statement that specifies the different procedures followed.

XIII. FINANCIAL RESPONSIBILITY

The Permittee is required to maintain continuous financial responsibility and resources to close, plug, and abandon the injection well as provided in the plugging and abandonment plan. The Permittee has submitted a \$300,000 Surety Performance Bond for the plugging and abandonment of the injection well.

XIV. GENERAL CONDITIONS

- A. Duty to Comply. The Permittee must comply with all conditions of this Permit. Any permit noncompliance constitutes a violation of Chapter 33.1-25-01 of the N.D.A.C. and is grounds for enforcement action; for Permit termination, revocation and reissuance or modification; or for denial of a Permit renewal application.
- B. Injection Period. The Permit will expire at midnight on May 12, 2025. The Permittee must apply for and obtain a new Permit in order to continue injection after the expiration date of this Permit.
- C. Halting or Reducing Injection. The Permittee must halt or reduce injection if necessary, to maintain compliance with the conditions of this Permit.

- D. **Duty to Mitigate.** The Permittee shall minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.
- E. **Proper Operation and Maintenance.** The Permittee shall at all times properly operate and maintain the wells and all related appurtenances. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.
- F. **Modification, Reissuance, or Termination.** This Permit may be modified, revoked, and reissued or terminated for cause. The filing of a request by the Permittee for a Permit modification, revocation, and reissuance or termination, or a notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any Permit condition.
- G. **Conveyance of Rights.** This Permit does not convey any property rights of any sort or any exclusive privilege.
- H. **Duty to Provide Information.** The Permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this permit. The Permittee shall also furnish to the Department, upon request, copies of records required to be kept by this Permit.
- I. **Inspection and Entry.** The Permittee shall allow the Department or an authorized representative upon the presentation of credentials to:
1. Enter upon the Permittee's premises where the well or the records that must be kept under the conditions of this Permit are located.
 2. Have access to and copy, at reasonable times, the records that must be kept under the condition of this Permit.
3. At reasonable times, inspect the wells and the monitoring and control equipment.
4. Sample or monitor, at reasonable times, for the purpose of assuring Permit compliance.
- J. **Report Certification.** All reports or information submitted to the Department under the terms of this Permit shall be signed and certified as follows:
1. By a principal executive officer of at least the level of vice-president, or a duly authorized representative.
 2. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above.

- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the well.
 - c. The written authorization is submitted to the Department.
3. If an authorization is no longer accurate because a different individual has responsibility for the overall operation of the wells, a new authorization must be submitted to the Department prior to, or together with, any document signed by an authorized representative.
4. The person signing the document shall make the following certification:
- "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."
- K. Reporting on Noncompliance. The Permittee shall give advance notice to the Department of any planned changes in the operation of the well which may result in noncompliance with Permit requirements.
- L. Transfers. This Permit is not transferable to any person except after information is provided to the Department. The Department may require modification or revocation and reissuance of the Permit to change the name of the Permittee and to incorporate such other requirements as may be necessary under the Safe Drinking Water Act.

ATTACHMENT A

Parameters for Chemical Analysis

List A – Hazardous Waste Classification

Corrosivity by pH
Setaflash Flashpoint
Complete Toxicity Characteristic Leaching Procedure (TCLP)

TCLP Metals

Arsenic
Barium
Cadmium
Chromium
Lead
Mercury
Selenium
Silver

TCLP Pesticides

Endrin
Chlordane
Heptachlor
Heptachlor Epoxide
Methoxychlor

Toxaphene
Lindane

TCLP Herbicides

2,4-D
2,4,5-TP

TCLP Volatile Organic Compounds

Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
1,2-Dichloroethane
1,1-Dichloroethylene
Methyl Ethyl Ketone
Tetrachloroethylene
Trichloroethylene
Vinyl Chloride

TCLP Semi Volatile Compounds

Cresol
o-Cresol
m-Cresol
p-Cresol
Pentachlorophenol
1,4-Dichlorobenzene
2,4-Dinitrotoluene
Hexachlorobenzene
Nitrobenzene
Pyridine
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol

List B – General Waste Characterization

Volatile Organic Compounds (VOCs)
Semi Volatile Organic Compounds (SVOCs)
Total Suspended Solids (TSS)
Total Dissolved Solids (TDS)
pH
Specific Gravity
Specific Conductivity
Temperature

Arsenic (dissolved)
Barium (dissolved)
Cadmium (dissolved)
Calcium
Chloride
Total Chromium (dissolved)
Silver (dissolved)
Fluoride

Hardness
Total Organic Carbon (TOC)
Chemical Oxygen Demand (COD)
Turbidity
Sulfate
Sulfite
Nitrogen (Nitrate)
Nitrogen (Nitrite)
Total Kjeldahl Nitrogen
Ammonia (as N)
Viscosity
Alkalinity
Carbonate
Bicarbonate
Aluminum
Bromide
Antimony

Iron
Lead (dissolved)
Magnesium
Cyanide
Copper
Strontium
Manganese (dissolved)
Molybdenum (dissolved)
Nickel (dissolved)
Phosphorus (dissolved)
Potassium (total)
Selenium (dissolved)
Silver (dissolved)
Sodium
Mercury (dissolved)
Zinc (dissolved)
Calcium Carbonate

List C – Abbreviated Waste Characterization

pH
Total Dissolved Solids (TDS)
Sulfate
Calcium
Sodium
Chloride
.

Total Organic Carbon (TOC)
Specific Gravity
Magnesium
Temperature
Potassium
Calcium Carbonate