

UIC CLASS I (Non-hazardous) INJECTION WELL DISCHARGE PERMIT WDW-2 RENEWAL APPROVAL CONDITIONS

All discharge permits are subject to Water Quality Control Commission (WQCC) Regulations (20.6.2 NMAC).

1. GENERAL PROVISIONS:

1.A. PERMITTEE AND PERMITTED FACILITY: The Director of the New Mexico Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department issues Discharge Permit UICI-8-2 (Facility ID# fCJC2117351808) Discharge Permit to HF Sinclair Navajo Refining, LLC (Permittee) to operate its Underground Injection Control (UIC) Class I non-hazardous waste injection well "Waste Disposal Well No. 2 (WDW-2) API No. 30-015-20894, located 1,980 FNL 660 FWL, Unit Letter "E", Section 12, Township 18 South, Range 27 East, (Lat. 32.76366, Long. -104.23849 NAD83), NMPM, Eddy County, New Mexico. WDW-2 is located approximately 10 miles Southeast of intersection of US-285 and US-82 or approximately 3-miles South of the intersection of US-82 and CR-204 (Hilltop Road).

The Permittee is permitted to dispose of only non-hazardous (RCRA exempt and RCRA non-exempt) oil field waste fluids into WDW-2. This permit also covers the wastewater from the Permittee's refinery situated in Artesia approximately 11 miles West of WDW-2. The conveyance pipeline is handled under the refinery discharge permit (GW-28) except for the pipeline segment feeding into the well which is handled under this discharge permit. Groundwater that may be affected by a spill, leak, or accidental discharge occurs at a depth of approximately ??? feet below ground level (bgl) and has a total dissolved solids (TDS) concentration of approximately ??? mg/L.

1.B. SCOPE OF PERMIT: OCD has been granted the authority by statute and by delegation from the Water Quality Control Commission (WQCC) to administer the Water Quality Act (Chapter 74, Article 6 NMSA 1978) as it applies to Class I non-hazardous waste injection wells (See Section 74-6-4, 74-6-5 NMSA 1978).

The Water Quality Act and the rules promulgated pursuant to the Act protect groundwater and surface water of the State of New Mexico by providing that, unless otherwise allowed by 20.6.2 NMAC, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into groundwater unless such discharge is pursuant to an approved discharge plan (see 20.6.2.3104 NMAC, 20.6.2.3106 NMAC, and 20.6.2.5000 through 20.6.2.5299 NMAC).

This Discharge Permit for a Class I non-hazardous waste injection well (WDW-2) is issued pursuant to the Water Quality Act and WQCC rules, 20.6.2 NMAC. This Discharge Permit does not authorize any treatment of, or on-site disposal of, any materials, product, by-product, or oil field waste, other than non-hazardous oil field waste fluids into its Class I non-hazardous waste injection well (WDW-2), including, but not limited to, the on-site disposal of lube oil, glycol, antifreeze, and wash-down water. The Permittee may not dispose of any industrial waste fluid that is not oil field waste that is generated at its refinery. The Groundwater Quality Bureau of the New Mexico Environment Department permits the management of all industrial fluids that are not generated in the oil field.

Pursuant to 20.6.2.5004A NMAC, the following underground injection activities are prohibited:

1. The injection of fluids into a motor vehicle waste disposal well is prohibited.
2. The injection of fluids into a large capacity cesspool is prohibited.
3. The injection of any hazardous or radioactive waste into a well is prohibited except as provided by 20.6.2.5004A(3) NMAC. Naturally Occurring Radioactive Material (NORM) waste disposal beyond OCD Regulatory Jurisdiction is not allowed in WDW-2. These NORM wastes shall be handled through the New Mexico Environment Department, Radiation Control Bureau.
4. Class IV wells are prohibited, except for wells re-injecting treated groundwater into the same formation from which it was drawn as part of a removal or remedial action.
5. Barrier wells, drainage wells, recharge wells, return flow wells, and motor vehicle waste disposal wells are prohibited.

This Discharge Permit does not convey any property rights of any sort nor any exclusive privilege, and does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of state, federal, or local laws, rules or regulations.

The Permittee shall operate in accordance with the terms and conditions specified in this Discharge Permit to comply with the Water Quality Act and the rules issued pursuant to that Act, so that neither a hazard to public health nor undue risk to property will result (see 20.6.2.3109C NMAC); so that no discharge will cause or may cause any stream standard to be violated (see 20.6.2.3109H(2) NMAC); so that no discharge of any water contaminant will result in a hazard to public health (see 20.6.2.3109H(3) NMAC); so that the numerical standards specified in 20.6.2.3103 NMAC are not exceeded; and, so that the technical criteria and performance standards (see 20.6.2.5000 through 20.6.2.5299 NMAC) for Class I non-hazardous waste injection wells are met. Pursuant to 20.6.2.5003B NMAC, the Permittee shall comply with 20.6.2.1 through 20.6.2.5299 NMAC.

The Permittee shall not allow or cause water pollution, discharge, or release of any water contaminant that exceeds the Water Quality Control Commission (WQCC) standards specified in 20.6.2.3101 NMAC and 20.6.2.3103 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams). Pursuant to 20.6.2.5101A NMAC, the Permittee shall not inject waste fluids into groundwater containing 10,000 mg/l or less total dissolved solids (TDS).

The issuance of this permit does not relieve the Permittee from the responsibility of complying with the provisions of the Water Quality Act, any applicable regulations or water quality standards of the WQCC, or any applicable federal laws, regulations or standards (See Section 74-6-5 NMSA 1978).

1.C. DISCHARGE PERMIT: This Discharge Permit (UICI-8-2) is a UIC Class I (non-hazardous) Discharge Permit Renewal under permit renewal conditions and allows for continued use of the well.

1.D. DEFINITIONS: Terms not specifically defined in this Discharge Permit shall have the same meanings as those in the Water Quality Act or the rules adopted pursuant to the Act, as the context requires.

1.E. FILING FEES AND PERMIT FEES: Pursuant to 20.6.2.3114 NMAC, every facility that submits a Discharge Permit application for initial approval shall pay the permit fees specified in Table 1 and the filing fee specified in Table 2 of 20.6.2.3114 NMAC. OCD has already received the required \$100 filing fee. The Permittee shall submit the final \$4,500 permit fee for a Class I non-hazardous waste injection well to OCD with a check made payable to "Water Quality Management Fund" no later than thirty days after the date that this permit is issued.

1.F. EFFECTIVE DATE, EXPIRATION, RENEWAL CONDITIONS, AND PENALTIES FOR OPERATING WITHOUT A DISCHARGE PERMIT: This Discharge Permit is effective immediately or until the permit is terminated or expires. This Discharge Permit will **expire on February 17, 2028**. The Permittee shall submit an application for renewal no later than 120 days before that expiration date, pursuant to 20.6.2.5101F NMAC. If a Permittee submits a renewal application at least 120 days before the Discharge Permit expires and is in compliance with the approved Discharge Permit, then the existing Discharge Permit will not expire until OCD has approved or disapproved the renewal application. A discharge permit continued under this provision remains fully effective and enforceable. Operating with an expired Discharge Permit may subject the Permittee to civil and/or criminal penalties (See Sections 74-6-10.1 NMSA 1978 and 74-6-10.2 NMSA 1978).

1.G. MODIFICATIONS AND TERMINATIONS: The Permittee shall notify the OCD Director and the OCD's Engineering Bureau of any facility expansion, any injection increase above the approved pressure limit or volume limit specified in Permit Condition 3.B.2, or process modification that would result in any significant modification in the discharge of water contaminants (see 20.6.2.3107C NMAC). The OCD Director may require the Permittee to submit a Discharge Permit modification application pursuant to 20.6.2.3109E NMAC and may modify or terminate a Discharge Permit pursuant to Sections 74-6-5(M) through (N) NMSA 1978 and 20.6.2.3109E and 20.6.2.5101I NMAC. OCD may issue administrative amendments as needed to this permit if the amendments do not qualify as a permit modification under the applicable regulations herein.

1. If data submitted pursuant to any monitoring requirements specified in this Discharge Permit or other information available to the OCD Director indicate that 20.6.2 NMAC is being or may be violated, then the OCD Director may require modification or, if it is determined by the OCD Director that the modification may not be adequate, may terminate this Discharge Permit for a Class I non-hazardous waste injection well (WDW-2) that was approved pursuant to the requirements of this 20.6.2.5000 through 20.6.2.5299 NMAC for the following reasons:

- a. Noncompliance by Permittee with any condition of this Discharge Permit; or,
- b. Failure in the discharge permit application or during the discharge permit review process to disclose fully all relevant facts, or Permittee's misrepresentation of any relevant facts at any time; or,
- c. Determination that the permitted activity may cause a hazard to public health or undue risk to property and can only be regulated to acceptable levels by discharge permit modification or termination (See Sections 75-6-6 NMSA 1978; 20.6.2.5101I NMAC; and 20.6.2.3109E NMAC).

2. This Discharge Permit may also be modified or terminated for any of the following reasons:

- a. Violation of any provisions of the Water Quality Act or any applicable regulations, standard of performance or water quality standards;
- b. Violation of any applicable state or federal effluent regulations or limitations; or
- c. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge (See Section 74-6-5M NMSA 1978).

1.H. TRANSFER OF CLASS I NON-HAZARDOUS WASTE INJECTION WELL DISCHARGE PERMIT:

1. The transfer provisions of 20.6.2.3111 NMAC do not apply to a discharge permit for a Class I non-hazardous waste injection well.

2. Pursuant to 20.6.2.5101H NMAC, the Permittee may request to transfer its Class I non-hazardous waste injection well discharge permit if:

- a. The OCD Director receives written notice 30 days prior to the transfer date; and
- b. The OCD Director does not object prior to the proposed transfer date. OCD may require modifications to the discharge permit as a condition of transfer, and may require demonstration of adequate financial responsibility.

3. The written notice required in accordance with Permit Condition 1.H.2.a shall:

- a. Have been signed by the Permittee and the succeeding Permittee, and shall include an acknowledgment that the succeeding Permittee shall be responsible for compliance with the Class I non-hazardous waste injection well discharge permit upon taking possession of the facility;
- b. Set a specific date for transfer of the discharge permit responsibility, coverage and liability; and
- c. Include information related to the succeeding Permittee's financial responsibility required by 20.6.2.5210B(17) NMAC.

1.I. COMPLIANCE AND ENFORCEMENT: If the Permittee violates or is violating a condition of this Discharge Permit, OCD may issue a compliance order that requires compliance immediately or within a specified time period, or assess a civil penalty, or both (See Section 74-6-10 NMSA 1978). The compliance order may also include a suspension or termination of this Discharge Permit. OCD may also commence a civil action in District Court for appropriate relief, including injunctive relief (See Section 74-6-10(A)(2) NMSA 1978). The Permittee may be subject to criminal penalties for discharging a water contaminant without a discharge permit or in violation of a condition of a discharge permit; making any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the Water Quality Act; falsifying, tampering with or rendering inaccurate any monitoring device, method or record required to be maintained under the

Water Quality Act; or failing to monitor, sample or report as required by a Discharge Permit issued pursuant to a state or federal law or regulation (See Section 74-6-10.2 NMSA 1978).

2. GENERAL FACILITY OPERATIONS:

2.A. QUARTERLY MONITORING REQUIREMENTS FOR CLASS I NON-HAZARDOUS WASTE

INJECTION WELL: The Permittee shall properly conduct waste management injection operations at its facility by injecting only non-hazardous (RCRA exempt and/or non-exempt non-hazardous) oil field waste fluids. Injected waste fluids shall not exhibit the RCRA characteristics, i.e., ignitability, reactivity, corrosivity, or toxicity under 40 CFR §261 Subpart "C" 261.21 – 261.24 (July 1, 1992, as amended), at the point of injection into WDW-2, based upon environmental analytical laboratory testing and/or monitoring requirements herein. Pursuant to 20.6.2.5207(B) NMAC, the Permittee shall provide analyses of the injected fluids at least quarterly to yield data representative of the wastewater characteristics.

The Permittee shall also analyze the injected fluids quarterly for the following characteristics:

- pH (Method 9040),
- E_h , (Redox Potential)
- Specific conductance,
- Specific gravity,
- Temperature,
- Major dissolved cations and anions, including fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, bromide, total dissolved solids, and cation/anion balance using the methods specified in 40 CFR §136.3; and,
- EPA RCRA Characteristics for Ignitability (ASTM Methods); Corrosivity (SW-846) and Reactivity as specified in 40 CFR §261.20-.24, as amended.

The Permittee shall analyze the injected fluids quarterly for the constituents identified in the Quarterly Monitoring List (below) to demonstrate that the injected fluids do not exhibit the characteristic of toxicity using the Toxicity Characteristic Leaching Procedure, EPA SW-846 Test Method 1311 (see Table 1, 40 CFR §261.24(b)).

QUARTERLY MONITORING LIST			
EPA HW No.	Contaminant	SW-846 Methods	Regulatory Limit (mg/L)
D004	Arsenic	1311	5.0
D005	Barium	1311	100.0
D018	Benzene	8021B	0.5
D006	Cadmium	1311	1.0
D019	Carbon tetrachloride	8021B 8260B	0.5
D020	Chlordane	8081A	0.03
D021	Chlorobenzene	8021B 8260B	100.0
D022	Chloroform	8021B 8260B	6.0
D007	Chromium	1311	5.0
D023	o-Cresol	8270D	200.0
D024	m-Cresol	8270D	200.0
D025	p-Cresol	8270D	200.0
D026	Cresol	8270D	200.0
D027	1,4-Dichlorobenzene	8021B 8121 8260B 8270D	7.5

D028	1,2-Dichloroethane	8021B 8260B	0.5
D029	1,1-Dichloroethylene	8021B 8260B	0.7
D030	2,4-Dinitrotoluene	8091 8270D	0.13
D032	Hexachlorobenzene	8121	0.13
D033	Hexachlorobutadiene	8021B 8121 8260B	0.5
D034	Hexachloroethane	8121	3.0
D008	Lead	1311	5.0
D009	Mercury	7470A 7471B	0.2
D035	Methyl ethyl ketone	8015B 8260B	200.0
D036	Nitrobenzene	8091 8270D	2.0
D037	Pentachlorophenol	8041	100.0
D038	Pyridine	8260B 8270D	5.0
D010	Selenium	1311	1.0
D011	Silver	1311	5.0
D039	Tetrachloroethylene	8260B	0.7
D040	Trichloroethylene	8021B 8260B	0.5
D041	2,4,5-Trichlorophenol	8270D	400.0
D042	2,4,6-Trichlorophenol	8041A 8270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

If *o*-, *m*-, and *p*-cresol concentrations cannot be differentiated, then the total cresol (D026) concentration is used. The regulatory limit (RL) of total cresol is 200 mg/L.

If the quantitation limit is greater than the regulatory limit, then the quantitation limit becomes the RL.

EPA 1311 TCLP Laboratory Method is required for wastewater media.

Updated or amended EPA/SW groundwater environmental analytical lab methods may be applied when detection limits do not exceed RLs.

1. Monitor and Piezometer Wells: Groundwater with a total dissolved solids concentration of less than 10,000 mg/L occurs at an estimated depth of approximately ??? ft. below ground surface at the WDW-2 well (hereafter, “uppermost water-bearing unit”). A groundwater monitoring well (MW) with groundwater sampling capability shall be installed within 180 days of permit issuance proximal to and hydrogeologically downgradient from WDW-2 (piezometer wells as needed to triangulate groundwater flow direction when unknown) to monitor the uppermost water-bearing unit unless a MW is already present and/or approved by the OCD. The monitoring well shall be screened (15 ft. screen with top of screen positioned 5 ft. above water table or as approved by the OCD) into the uppermost water-bearing unit. The Permittee shall initially measure and record the static water level; and sample the MW for General Chemistry, field parameters, i.e., Oxidation/Reduction Potential- eH, organic parameters (i.e., Volatile Organic Compounds- VOCs, Semi-volatile Compounds- SVOCs, Polycyclic Aromatic Hydrocarbons- PAHs and Pesticides) and metals (i.e., RCRA 8) for WQCC water quality parameter assessment and to establish a “baseline” of the groundwater quality. Thereafter, the Permittee shall propose water quality sampling parameters based on the baseline to the OCD for approval of future quarterly monitoring events or continue with the baseline sampling. OCD may modify the chemical parameters and/or frequency of sampling based on environmental analytical laboratory data results.

2.B. CONTINGENCY PLANS: The Permittee shall implement its proposed contingency plan(s) included in its application to cope with failure of a system(s) in the Discharge Permit.

2.C. CLOSURE: Prior to closure of the facility, the Permittee shall submit via E-Permitting for OCD's approval, a closure plan including a completed OCD Form C-103 (Plug & Abandon) for the Class I non-hazardous waste injection well (WDW-2). The Permittee shall plug and abandon WDW-2 pursuant to 20.6.2.5209 NMAC and as specified in Permit Condition 2.D.

1. Pre-Closure Notification: Pursuant to 20.6.2.5005A NMAC, the Permittee shall submit a pre-closure notification to OCD's Engineering Bureau at least 30 days prior to the date that it proposes to close or to discontinue operation of WDW-2. Pursuant to 20.6.2.5005B NMAC, OCD's Engineering Bureau must approve all proposed well closure activities before the Permittee may implement its proposed closure plan.

2. Required Information: The Permittee shall provide OCD's Engineering Bureau with the following information in the pre-closure notification specified in Permit Condition 2.C.1:

- Name of facility;
- Address of facility;
- Name of Permittee (and owner or operator, if appropriate);
- Address of Permittee (and owner or operator, if appropriate);
- Contact person;
- Phone number;
- Number and type of well(s);
- Year of well construction;
- Well construction details;
- Type of discharge;
- Average flow (gallons per day);
- Proposed well closure activities (*e.g.*, sample fluids/sediment, appropriate disposal of remaining fluids/sediments, remove well and any contaminated soil, clean out well, install permanent plug, conversion to other type of well, groundwater and vadose zone investigation, *etc.*);
- Proposed date of well closure;
- Name of Preparer; and
- Date.

3. Closure Plan: OCD may require the Permittee to revise or update the Closure Plan prior to closure. The obligation to implement the Closure Plan and the requirement of this plan survives the termination or expiration of this Discharge Permit.

2.D. PLUGGING AND ABANDONMENT PLAN: Pursuant to 20.6.2.5209(A) NMAC, when the Permittee proposes to plug and abandon WDW-2, it shall submit via E-Permitting to OCD a plugging and abandonment plan (plan) that meets the requirements of 20.6.2.3109(C) NMAC, 20.6.2.5101(C) NMAC, and 20.6.2.5005 NMAC for protection of groundwater. If requested by OCD, the Permittee shall submit for approval prior to closure, a revised or updated plan. The obligation to implement the plan and requirements of this plan survives the termination or expiration of this Discharge Permit. The Permittee shall comply with 20.6.2.5209 NMAC.

2.E. RECORD KEEPING: The Permittee shall maintain records of all information required by this Discharge Permit at its Facility office for a minimum of five years and shall make those records available for inspection by OCD.

2.F. RELEASE REPORTING: The Permittee shall comply with the following Permit Conditions, pursuant to 20.6.2.1203 NMAC, if it determines that a release of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public safety, welfare or the use of property, has occurred. The Permittee shall report unauthorized releases of water contaminants in accordance with any additional commitments made in its approved Contingency Plan. If the Permittee determines that any constituent exceeds the regulatory limits specified in 20.6.2.3103 NMAC, then it shall report a release to OCD's Engineering Bureau. The Permittee shall report WQCC releases via E-Permitting (non-fee) on

OCD's Form C-141 (Release Notification and Corrective Action).

1. Oral Notification: As soon as possible after having knowledge of a discharge or environmental release, but in no event more than twenty-four (24) hours thereafter, the Permittee shall notify OCD's Engineering Bureau. Discovery of pre-existing environmental contamination shall be handled in accordance with the OCD directive(s) received during a notification. The Permittee shall provide the following information:

- Name, address, and telephone number of the person or persons in charge of the facility, the owner and/or operator of the facility;
- Name and location of the facility;
- Any immediate public safety concerns and associated injuries, if any;
- Date, time, location (NAD83 Latitude/Longitude if known), and duration of the discharge;
- Source, cause and description of the discharge;
- Description of the discharge, including its chemical composition;
- Estimated volume of the discharge; and
- Any corrective or abatement actions taken to mitigate immediate impacts to land surface, groundwater, and public safety from the discharge.

2. Written Notification: Within one week after the Permittee has discovered a discharge, the Permittee shall submit via E-Permitting (non-fee) written notification (OCD Form C-141 (Release Notification and Corrective Action)) with attachments to OCD's Engineering Bureau verifying the prior oral notification as to each of the foregoing items and provide any appropriate additions or corrections to the information from the prior oral notification. The Permittee shall provide subsequent written reports via E-Permitting or as instructed or directed by OCD's Engineering Bureau.

2.G. OTHER REQUIREMENTS:

1. Inspection and Entry: Pursuant to Sections 74-6-9 NMSA 1978 and 20.6.2.3107(A) NMAC, the Permittee shall allow any authorized representative of the OCD Director to:

- Upon the presentation of proper credentials or professional working knowledge, enter the premises at reasonable times;
- Meet and communicate directly with Permittee and/or representatives of the Permittee;
- Inspect and copy records required by this Discharge Permit;
- Inspect and collect or split samples with Permittee at any environmental monitoring well, environmental release location(s) or suspected location(s), treatment works, monitoring, analytical equipment, and permitted systems;
- Sample any effluent before or after discharge; and
- Use the Permittee's monitoring systems, equipment, and wells in order to collect environmental samples.

2. Advance Notice: The Permittee shall provide OCD's Engineering Bureau and Artesia Office with at least five (5) working days' advance notice of any environmental sampling to be performed pursuant to this Discharge Permit, or any well subsurface work, i.e., Mechanical Integrity Testing, well logging, well plugging, abandonment or decommissioning of any equipment associated with WDW-2.

3. Environmental Monitoring: The Permittee shall ensure that any environmental sampling and analytical laboratory data collected meets the standards specified in 20.6.2.3107(B) NMAC. The Permittee shall ensure that all environmental samples are analyzed by an accredited "National Environmental Laboratory Accreditation Conference" (NELAC) Laboratory. The Permittee shall submit, in associated reports to OCD, data summary tables, all raw analytical data, and EPA laboratory Quality Assurance/Quality Control (QA/QC) and Data Quality Objectives (DQOs) documentation to comply with OCD environmental sampling and analytical laboratory test

methods and data reporting requirements in New Mexico.

2.H. BONDING OR FINANCIAL ASSURANCE: Pursuant to 20.6.2.5210(B)(17) NMAC, the Permittee shall maintain at a minimum, a single well plugging bond in the amount that OCD may approve to cover potential costs associated with plugging and abandonment of WDW-2, surface restoration, and for any current required corrective action(s). Financial Assurance under the WQCC Regulations is typically assessed during the permitting process or transfer of permit via the Closure Plan with cost estimate included in the application submittal or subsequent to that submittal directly through the OCD Bond Administrator. Financial account related documents and information is excluded from the OCD E-Permitting System.

Methods by which the Permittee shall demonstrate the ability to undertake these measures shall include submission of adequate assurances, such as financial statements or other materials acceptable to the OCD Director, such as: (1) surety bond; (2) trust fund with a New Mexico Bank in the name of the State of New Mexico, with the State as Beneficiary; (3) a non-renewable letter of credit made out to the State of New Mexico; (4) liability insurance specifically covering the contingencies listed in this paragraph; or (5) a performance bond, generally in conjunction with another type of financial assurance. If an adequate bond is posed by the Permittee to a federal or another state agency, and this bond covers all of the measures specified above, the OCD Director shall consider this bond as satisfying the bonding or financial assurance requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC wholly or in part, depending upon the extent to which such bond is adequate to ensure that the Permittee will fully perform the measures required herein.

2.I. REPORTING:

1. Quarterly Reports: The Permittee shall submit via E-Permitting (UF-Discharge Permit) quarterly reports pursuant to 20.6.2.5208A NMAC to OCD's Engineering Bureau no later than 45 days following the end of each calendar quarter. The quarterly reports shall include the following:

- a. General summary of reportable events or special projects information, updates, i.e., new unit construction(s), modifications, major repairs, anomalous detections, problems encountered, etc.;
- b. Physical, chemical and other relevant characteristics of injection fluids;
- c. Provide a Table with monthly average, maximum and minimum values for surface injection pressure, flow rate and total volume (Include cumulative volume), and annular pressure with any exceedances identified;
- d. Results of monitoring prescribed under Section 20.6.2.5207B NMAC with any exceedances of Permit Condition 2.A;
- e. Piezometer and monitor well information from Permit Condition 2.A.1;
- f. Continuous monitoring chart(s) and information from Permit Condition 3.C. Provide a graph of the maximum surface injection pressure for the reporting period to address Permit Conditions 3.C and 2.I.1.c above. Raw data recorder documentation must be made available at the request of an OCD Representative.
- g. Include "Conclusions" and "Recommendations" sections at the end of the report.

2. Annual Reports: The Permittee shall submit via E-Permitting (UF-Discharge Permit) to the Engineering Bureau an annual report (Federal Fiscal Year ending in September) pursuant to 20.6.2.3107 NMAC to OCD's Engineering Bureau by **December 31st** of each year. The annual report shall include the following:

- Cover sheet marked as "Annual Class I Non-Hazardous Waste Injection Well (WDW-2), Name of Permittee, Discharge Permit Number, API number of well, date of report, and person submitting report;
- Summary of Class I non-hazardous waste injection well operations for the year including a description and reason for any remedial or major work on the well with a copy of **supporting** OCD Form C-103(s);
- **Copy of Monthly Continuous Monitoring Charts from Permit Condition 3.C;**

- Copy of Monthly injection/disposal volume, including the cumulative total carried over from the prior year;
- Maximum, minimum, and average surface injection pressures;
- Copy of the quarterly chemical analyses shall be included with data summary and all QA/QC and DQO associated information;
- Copy of any mechanical integrity test (MIT) chart(s), including the type of test, i.e., duration, gauge, pressure, chart recorder calibration record, etc. unless OCD has approved Monthly Continuous Monitoring Charts for MITs in lieu of individual MITs;
- Copy of Fall-Off Test charts, i.e., all including the Log-Log Chart;
- Summary tables listing environmental analytical laboratory data from quarterly waste effluent sampling. Any 20.6.2.3103 NMAC constituent(s) found to exceed a water quality standard shall be highlighted and noted in the annual report. The Permittee shall include copies of the most recent year's environmental analytical laboratory data sheets with QA/QC summary sheet information in conformance with the National Environmental Laboratory Accreditation Conference (NELAC) and EPA Standards;
- Brief explanation(s) describing deviation(s) from the normal injection operations;
- Results and status of any leaks and spill reports (include any OCD Form C-141 release notification or corrective action reports);
- Area of Review (AOR) annual update summary with any new wells penetrating the injection zone (Especially denote any and all other injection wells) within a 1-mile radius from WDW-2;
- Summary with interpretation of MITs, Fall-Off Tests, Bradenhead Tests, etc., with conclusion(s) and recommendation(s);
- Summary of all major Facility activities or events including area earthquakes with any actions taken, which occurred during the year;
- Summary of any new discoveries of groundwater contamination with all leaks, spills and releases and corrective actions taken or in progress; and
- Include "Conclusions" and "Recommendations" sections at end of the report.

3. CLASS I NON-HAZARDOUS WASTE INJECTION WELL OPERATIONS:

3.A. OPERATING REQUIREMENTS: The Permittee shall comply with the operating requirements specified in 20.6.2.5206A NMAC and 20.6.2.5206B NMAC to ensure that:

1. The maximum injection pressure at the wellhead shall not initiate new fractures or propagate existing fractures in the confining zone, or cause the movement of injection or formation fluids into groundwater having 10,000 mg/L or less TDS except for fluid movement approved pursuant to 20.6.2.5103 NMAC.
2. Injection between the outermost casing and the well bore is prohibited in a zone other than the authorized injection zone. If the Permittee determines that WDW-2 is discharging or suspects that it is discharging fluids into a zones other than the permitted injection zone specified in Permit Condition 3.B.1, then the Permittee shall cease operations until proper repairs are made, notify the OCD's Engineering Bureau and Artesia Office within 24 hours, and shall not resume injection until the Permittee has received approval from the OCD.
3. Except during well stimulation, the maximum injection pressure shall not initiate new fractures or propagate existing fractures in the injection zone.
4. The annulus between the injection tubing and the long string of injection casing shall be filled with a fluid approved by the OCD Director with an annulus pressure also approved by the OCD Director.

3.B. INJECTION OPERATIONS:

1. **Injection Formation, Interval (Zone) and Waste Fluids:** The Permittee shall inject only non-

hazardous (RCRA exempt and/or RCRA non-exempt) oil field waste fluids into the Wolfcamp and Cisco/Canyon Formations estimated to exist from ~ 7,557 to 7,723 and 7,813 to 8,386 feet below ground level (bgl), respectively at WDW-2. The conductor casing is set at about 460 feet bgl. The intermediate casing is set at 1,982 feet bgl. The long string casing is set at 8,853 feet bgl (PBSD at 8,757 feet bgl). The injection tubing is set in the injection packer at approximately 7,515 feet bgl, which isolates WDW-2 into the perforated injection intervals below the packer. The Permittee shall ensure that the injected oil field non-hazardous waste fluids enter perforations only within the specified effective injection intervals and are not permitted to escape into other formations, the underground source(s) of drinking water (USDW) estimated at a basal depth of 473 feet bgl or onto the land surface.

2. Well Injection Pressure Limit and Injection Flow Rate: The Permittee shall ensure that the maximum allowable surface injection pressure (MSIP) on WDW-2 shall not exceed 1,514 psig. Injection pressure increase requests require a Step-Rate Test (SRT) procedure submitted with OCD Form 103-X for approval with subsequent test results submitted under OCD Form 103-Z (applies to all well workover, testing and logging requests). The Permittee shall inspect and monitor the pressure-limiting device daily and shall report any pressure exceedances within 24 hours of detection to OCD's Engineering Bureau and Artesia Office.

3. Pressure-Limiting Device: The Permittee shall equip and operate its Class I non-hazardous waste injection well or system with a pressure limiting device, or equivalent (i.e., Murphy switch), in working condition which shall at all times limit surface injection pressure to the maximum allowable surface injection pressure limit.

The Permittee shall inspect and monitor the pressure-limiting device daily and shall report any pressure exceedances within 24 hours of detection to OCD's Engineering Bureau and Artesia Office. The Permittee shall take all steps necessary to ensure that the injected waste fluids enter only the permitted injection interval and not escape to other formations, USDW, or onto the land surface. The Permittee shall report to OCD's Engineering Bureau within 24 hours of discovery any indication that new fractures or existing fractures have been propagated under operational conditions, or that damage to the well, the injection zone, or formation, or USDW has occurred.

OCD may authorize an increase in maximum surface injection pressure (MSIP) if the Permittee demonstrates that higher pressure will not result in migration of the injected fluid from the designated injection zone or interval using a valid Step-Rate Test (SRT) run preferably in coordination with a Fall-Off Test (FOT). Any increase in MSIP following testing shall not exceed the formation parting pressure, as determined from any OCD approved testing, which shall initiate fractures or propagate existing fractures in the injection zone (See Permit Condition 3.B.2).

3.C. CONTINUOUS MONITORING DEVICE: The Permittee shall continue to use a continuous monitoring device in advance of injection that records the monthly (hourly basis) real-time injection pressure, injection rate, injection volume, and pressure on the annulus between the injection tubing and the long string of casing (See Permit Condition 3.B.3). When changing charts, the Permittee shall utilize a procedure that depressurizes and properly re-aligns the pens on the chart scale during changing to prevent anomalous pressure noise, i.e., MIT annulus pressure, etc. The Permittee shall notify OCD within 24 hours after having knowledge of an MIT failure. The Permittee shall not resume injection operations until approved by the OCD.

3.D. MECHANICAL INTEGRITY FOR CLASS I NON-HAZARDOUS WASTE INJECTION WELLS:

1. Pursuant to 20.6.2.5204 NMAC, the Permittee shall conduct a mechanical integrity test (MIT) for WDW-2 at least once every five years or more frequently as the OCD Director may require for good cause during the life of the well. In addition, an annual Bradenhead test shall be performed. The Permittee shall also demonstrate mechanical integrity for WDW-2 by completing an MIT after well workovers, including when it pulls the tubing or reseats the packer. All well testing and logging shall be approved by OCD via E-Permitting OCD Form C-103X (Sundry Notice) with final test reports submitted on OCD Form C-103Z. The Permittee shall notify OCD's Engineering Bureau at least five (5) working days prior to conducting any MIT to allow OCD the opportunity to witness the MIT.

The Permittee shall conduct a casing-tubing annulus MIT from the surface to the approved injection packer depth to assess casing and tubing integrity. The MIT shall consist of a 30-minute test at a minimum pressure of 500 psig measured at the surface. The Permittee shall follow OCD's 2004 *New Mexico Oil Conservation Division Underground Injection Control Program Manual* guidance when conducting an MIT. The Permittee shall submit all well test results via E-Permitting on OCD Form C-103Z with attached chart record, i.e., test chart with test information, witness signatures, chart recorder calibration sheet, recorder spring weight, proper clock setting, etc. within 30 days of test completion. If any remedial work or any other workover operations are necessary, the Permittee shall comply with Permit Condition 3.F.

2. A Class I non-hazardous waste injection well has mechanical integrity if there is no detectable leak in the casing, tubing or packer which OCD considers to be significant at maximum operating temperature and pressure, and no detectable conduit for fluid movement out of the injection zone through the well bore, or vertical channels adjacent to the well bore, which the OCD considers to be significant. The following criteria will determine if the Class I non-hazardous waste injection well has passed an MIT:

- a. MIT passes if there is zero bleed-off during the test;
- b. MIT passes if there is a less than a 10% change in the final test pressure compared to the starting pressure, if approved by OCD;
- c. MIT fails if there is more than a 10% reduction in the final pressure compared to the starting pressure or that the pressure does not stabilize within 10% of the starting pressure before the end of the MIT. The Permittee shall immediately shut-in the well and investigate for leaks in accordance with Permit Conditions 3.B, 3.C, 3.D, and 3.F. The Permittee shall not resume injection operations until approved by OCD.
- d. When an MIT is not witnessed by OCD and fails, the Permittee shall immediately shut-in the well and investigate for leaks in accordance with Permit Conditions 3.C, 3.D, and 3.F. The Permittee shall notify OCD within 24 hours after having knowledge of the MIT failure. The Permittee shall not resume injection operations until approved by OCD.

3. Pursuant to 20.6.2.5204C NMAC, the OCD Director may consider the use of equivalent alternative test methods to determine mechanical integrity when witnessed by the OCD. The Permittee shall submit information on the proposed test and all technical data supporting its use. The OCD Director may approve the Permittee's request if it will reliably demonstrate the mechanical integrity of the well for which its use is proposed.

4. Pursuant to 20.6.2.5204(D) NMAC, when conducting and evaluating the MIT(s), the Permittee shall apply methods and standards generally accepted in the oil and gas industry. The Permittee shall follow Permit Condition 3.D.1 when reporting the well test results to the OCD Director.

5. The Permittee shall conduct a Bradenhead test at least annually and each time that it conducts an MIT (well construction permitting).

3.E. FALL-OFF TEST: The Permittee shall submit an initial C-103 (Sundry Notice) form for the annually required Fall-Off Test (FOT). The minimum FOT frequency shall be at least annually before September 30th and comply with OCD's 2007 *New Mexico Oil Conservation Division UIC Class I Well Fall-Off Test Guidance* for conducting a FOT and for reporting FOT results. Historical FOT results shall be included with the FOT results to monitor injection zone characteristics over time. The Permittee shall submit the FOT results to the OCD Engineering Bureau and Artesia Office within 60 days of FOT completion.

3.F. WELL WORKOVER OPERATIONS: The Permittee shall pursuant to 20.6.2.5205(A)(5) NMAC, provide notice to and shall obtain approval from the OCD Artesia Office prior to commencement of any remedial work or any other workover operations to allow OCD the opportunity to witness the operation. The Permittee shall request approval using OCD Form C-103 Workover (Sundry Notice) via E-Permitting. After completing remedial work, well tests, or any other workover operations, the Permittee shall run an MIT in accordance with Permit Condition 3.D to verify that the remedial work has successfully repaired the well. An OCD Form C-103 Final Workover (Sundry Notice) shall be

submitted via E-Permitting within 30-days of completion of a well workover.

3.G. INJECTION RECORD VOLUMES AND PRESSURES: The Permittee shall submit quarterly reports of its injection operations and well workovers. The Permittee shall record the minimum, maximum, and average flow waste injection volumes (including total volumes) and annular pressures of the injected waste fluids on a monthly basis, and shall submit the data to OCD via E-Permitting (UF-Discharge Permit) on a quarterly basis and in the annual report. The Permittee shall fill the casing-tubing annulus with an OCD-approved liquid and install a Murphy pressure switch or equivalent, as described in the Permittee's permit application, in order to detect leakage in the casing, tubing, or packer.

3.H. AREA OF REVIEW (AOR): The Permittee shall report to OCD's Engineering Bureau within 72 hours of discovery of any new wells, conduits, or any other device that penetrates or may penetrate or inject into the injection zone within a 1-mile radius from its Class I non-hazardous waste injection well. Any un-cemented wells within the injection interval shall be identified by the Permittee and reported to the OCD.

4. CLASS V WELLS: Pursuant to 20.6.2.5002(B) NMAC, leach fields and other waste fluids disposal systems that inject non-hazardous fluids into or above an USDW are UIC Class V injection wells. This Discharge Permit does not authorize the use of a Class V injection well for the disposal of industrial waste. Pursuant to 20.6.2.5005 NMAC, the Permittee shall close any Class V industrial waste injection well that injects non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes (e.g., septic systems, leach fields, dry wells, etc.) within 90 calendar days of the issuance of this Discharge Permit. The Permittee shall document the closure of any Class V wells used for the disposal of non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes other than contaminated groundwater in its Annual Report. Other Class V wells, including wells used only for the injection of domestic wastes, shall be permitted by the New Mexico Environment Department.

5. SCHEDULE OF COMPLIANCE:

5.A. QUARTERLY AND ANNUAL REPORTS: The Permittee shall submit its quarterly and annual reports to OCD as specified in Permit Condition 2.I.