

DISCHARGE PERMIT UICI-011 (WDW-2)

1. GENERAL PROVISIONS:

1.A. PERMITTEE AND PERMITTED FACILITY: The Director of the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department issues Discharge Permit UICI-011 (Discharge Permit Renewal) to WESTERN REFINING SOUTHWEST LLC (Permittee) to operate its Underground Injection Control (UIC) Class I (non-hazardous) waste disposal well "Waste Disposal Well No. 2 (WDW-2) API No. 30-045-35747, located 2028 FNL and 111 FEL, Unit Letter "H", Section 27, Township 29 North, Range 11 West, (Lat. 36.69861, Long. 107.97035), NMPM, San Juan County, New Mexico at its Disposal Well Facility (Facility). WDW-2 is located approximately 415 ft. N of the intersection of Sullivan Rd. and Wooten Rd. or approximately 1 mile E-NE of the intersection of Hwy 550 and Sullivan Rd.

The Permittee is permitted to dispose of only non-hazardous (RCRA exempt and RCRA non-exempt non-hazardous) oil field waste fluids into WDW-2. Groundwater that may be affected by a spill, leak, or accidental discharge occurs at a depth of approximately 10 - 30 feet below ground surface and has a total dissolved solids (TDS) concentration of approximately 3,020 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 disposal wells (see Section 74-6-4, 74-6-5 NMSA 1978).

The Water Quality Act and the rules promulgated pursuant to the Act protect ground water 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 ground water 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 20.6.2.5399 NMAC).

This Discharge Permit for a Class I non-hazardous waste disposal 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 disposal well (WDW-2), including, but not limited to, the on-site disposal of lube oil, glycol, antifreeze, and washdown water. The Permittee may not dispose of any industrial waste fluid that is not oil field waste that is generated at its pump station. The Ground Water 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 ground water 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 20.6.2.5399 NMAC) for Class I non-hazardous waste disposal wells are met. Pursuant to 20.6.2.5003B NMAC, the Permittee shall comply with 20.6.2.1 through 20.6.2.5399 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 oil field non-hazardous waste fluids into ground water having 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-011) is a UIC Class I (Non-hazardous) Discharge Permit renewal due to the plug and abandonment (November 2015) of the former San Juan Refining Company Disposal Well No. 1 (API# 30-045-29002) under former Discharge Permit UICI-009. This Discharge Permit replaces the closed Discharge Permit UICI-009.

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 or renewal 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 \$100.00 filing fee. The Permittee shall submit the final \$4,500.00 permit fee for a Class I non-hazardous waste disposal well to OCD with a check made payable to "Water Quality Management Fund" 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 becomes effective on the date that the Permittee receives this discharge permit or until the permit is terminated or expires. This Discharge Permit will expire on **June 26, 2026**. 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 Section 74-6-10.1 NMSA 1978 and Section 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. 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, he or she may terminate this Discharge Permit for a Class I non-hazardous waste disposal well (WDW-2) that was approved pursuant to the requirements of this 20.6.2.5000 through 20.6.2.5399 NMAC for the following causes:

a. Noncompliance by Permittee with any condition of this Discharge Permit;
or,

b. The Permittee's 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. A 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 Section 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 causes:

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 75-6-5M NMSA 1978).

1.H. TRANSFER OF CLASS I NON-HAZARDOUS WASTE DISPOSAL WELL (WDW-2) 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 disposal well.

2. Pursuant to 20.6.2.5101H NMAC, the Permittee may request to transfer its Class I non-hazardous waste disposal well (WDW-2) 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.G.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 disposal 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 relating 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 74-6-10A.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 a renewal 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 DISPOSAL WELL (WDW-2): The Permittee shall properly conduct waste management injection operations at its facility by injecting only non-hazardous (RCRA exempt and RCRA non-hazardous, non-exempt) oil field waste fluids. Injected waste fluids shall not exhibit the RCRA toxicity characteristics, i.e., ignitability, reactivity, corrosivity, and toxicity (the Toxicity Characteristic), under 40 CFR 261 Subpart "C" 261.21 – 261.24 (July 1, 1992), at the point of injection into WDW-2, based upon environmental analytical laboratory testing. Pursuant to 20.6.2.5207B, the Permittee shall provide analyses of the injected fluids at least quarterly to yield data representative of the toxicity characteristics.

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

- pH (Method 9040);
- Eh;
- Specific conductance;
- Specific gravity;
- Temperature;
- General ground water quality parameters (general chemistry/cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids, cation/anion balance, pH, and bromide using the methods specified in 40 CFR 136.3); and,
- EPA RCRA Characteristics for Ignitability (ASTM/SW-846 Methods); Corrosivity (ASTM/SW-846 Methods), and Reactivity (SW-846 Methods).

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 Level (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 level of total cresol is 200 mg/L.

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

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 10 - 30 ft. below ground surface at the WDW-2 well (hereafter, “uppermost water-bearing unit”). Groundwater monitoring wells (MWs) and/or piezometer wells (> 2 in. Dia. with GW sampling capability) shall be installed proximal to and hydrogeologically downgradient and upgradient from WDW-2 in order to monitor the uppermost water-bearing unit. The MWs or piezometer wells shall be screened (15 ft. screen with top of screen positioned 5 ft. above water table) into the uppermost water-bearing unit. The Permittee shall propose a monitoring frequency with chemical monitoring parameters in order to detect potential groundwater contamination either associated with or not associated with WDW-2. Piezometer wells shall be installed in the uppermost water-bearing unit to adequately monitor groundwater flow direction(s), hydrogeologic gradient(s), and to verify over time that the MWs or piezometer wells are positioned correctly. Groundwater flow direction(s) and hydraulic gradient shall be monitored on quarterly basis and the results provided in maps depicted to scale and included with the quarterly reports.

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 for OCD’s approval, a closure plan including a completed form C-103 for plugging and abandonment of the Class I non-hazardous waste disposal well (WDW-2). The Permittee shall plug and abandon its 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;
- Permit ID;
- 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, ground water and vadose zone investigation, *etc.*);
- Proposed date of well closure;
- Name of Preparer; and,
- Date.

2.D. PLUGGING AND ABANDONMENT PLAN: Pursuant to 20.6.2.5209A NMAC, when the Permittee proposes to plug and abandon WDW-2, it shall submit to OCD a plugging and abandonment plan that meets the requirements of 20.6.2.3109C NMAC, 20.6.2.5101C NMAC, and 20.6.2.5005 NMAC for protection of ground water. If requested by OCD, Permittee shall submit for approval prior to closure, a revised or updated plugging and abandonment plan. The obligation to implement the plugging and abandonment plan as well as the requirements of the 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 inspections 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 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 standards specified in

20.6.2.3103 NMAC, then it shall report a release to OCD's Engineering Bureau. The Permittee shall report releases on OCD's C-141 Form (Release Notification and Corrective Action).

1. Oral Notification: As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, the Permittee shall notify OCD's Engineering Bureau. The Permittee shall provide the following:

- The name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility;
- The name and location of the facility;
- The date, time, location, and duration of the discharge;
- The source and cause of discharge;
- A description of the discharge, including its chemical composition;
- The estimated volume of the discharge; and
- Any corrective or abatement actions taken to mitigate immediate damage from the discharge.

2. Written Notification: Within one week after the Permittee has discovered a discharge, the Permittee shall send written notification (completed C-141 Form with attachments) to OCD's Engineering Bureau verifying the prior oral notification as to each of the foregoing items and providing any appropriate additions or corrections to the information contained in the prior oral notification.

The Permittee shall provide subsequent written reports as required by OCD's Engineering Bureau.

2.G. OTHER REQUIREMENTS:

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

- Upon the presentation of proper credentials, enter the premises at reasonable times;
- Inspect and copy records required by this Discharge Permit;
- Inspect any treatment works, monitoring, and analytical equipment;
- Sample any effluent before or after discharge; and
- Use the Permittee's monitoring systems and wells in order to collect samples.

2. Advance Notice: The Permittee shall provide OCD's Engineering Bureau and Aztec District 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 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 20.6.2.3107B 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 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 methods and data reporting requirements in New Mexico.

2.H. BONDING OR FINANCIAL ASSURANCE: Pursuant to 20.6.2.5210B(17) NMAC, the Permittee shall maintain at a minimum, a single well plugging bond in the amount that it shall determine, in accordance with Permit Condition 5.B, to cover potential costs associated with plugging and abandonment of WDW-2, surface restoration, and post-operational monitoring, as may be needed. OCD may require additional financial assurance to ensure adequate funding is available to plug and abandon the well and/or for any required corrective action(s).

Methods by which the Permittee shall demonstrate the ability to undertake these measures shall include submission of a surety bond or other adequate assurances, such as financial statements or other materials acceptable to the OCD Director, such as: (1) a surety bond; (2) a 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 posted 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 20.6.2.5399 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 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. Physical, chemical and other relevant characteristics of injection fluids;
- b. Monthly average, maximum and minimum values for injection pressure, flow rate and volume, and annular pressure with any exceedances identified; and
- c. Results of monitoring prescribed under Section 20.6.2.5207B NMAC with any exceedances 2.A.
- d. Piezometer and monitor well information from Permit Condition 2.A.1.

- e. Continuous monitoring chart(s) and information from Permit Condition 3.C.

2. Annual Report: The Permittee shall submit its annual report pursuant to 20.6.2.3107 NMAC to OCD's Engineering Bureau by **June 1st** of the following year. The annual report shall include the following:

- Cover sheet marked as "Annual Class I Non-Hazardous Waste Disposal 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 disposal well (WDW-2) operations for the year including a description and reason for any remedial or major work on the well with a copy of 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 should be carried over to each year;
- Maximum and average 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, etc. unless OCD has approved Monthly Continuous Monitoring Charts for MITs in lieu of individual MITs;
- Copy of Fall-Off Test charts;
- Summary tables listing environmental analytical laboratory data for quarterly waste fluid samples. 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 describing deviations from the normal injection operations;
- Results of any leaks and spill reports (include any C-141 reports);
- Area of Review (AOR) annual update summary with any new wells penetrating the injection zone within a 1-mile radius from WDW-2;
- Summary with interpretation of MITs, Fall-Off Tests, *etc.*, with conclusion(s) and recommendation(s);
- Records of chart recorder monitoring of injection pressure, annulus pressure under dynamic conditions, and injection rate indicating the well MIT condition. Depending on the quality of continuous monitoring results over time, the Permittee may request OCD approval to forego standard MITs;
- Summary of all major Facility activities or events, which occurred during the year with any conclusions and recommendations;
- Summary of any new discoveries of ground water contamination with all leaks, spills and releases and corrective actions taken; and,
- Permittee shall file its Annual Report in an electronic format with a hard copy submittal to OCD's Engineering Bureau.

3. CLASS I NON-HAZARDOUS WASTE DISPOSAL WELL (WDW-2) 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 ground water having 10,000 mg/l or less TDS except for fluid movement approved pursuant to 20.6.2.5103 NMAC and during well stimulation.

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 its Class I non-hazardous waste disposal well (WDW-2) is discharging or suspects that it is discharging fluids into a zone or 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 Aztec District office within 24 hours, and shall not resume injection until the Permittee has received approval from the OCD.

3. 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 in order to continuously monitor injection well mechanical integrity in accordance with Permit Condition 3.C.

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 Bluff and Entrada Sandstone Formations (undifferentiated) estimated to exist from ~ 7,316 feet to 7,482 feet below ground level (bgl) at WDW-2. The conductor casing is set at 300 feet. The surface casing is set at 3,600 feet. The intermediate protection or injection casing is set at 7,500 feet. The injection tubing is set in the injection packer at approximately 7,265 feet, which isolates WDW-2 into the perforated injection intervals estimated to be between 7,316 and 7,482 feet bgl. The Permittee shall ensure that the injected non-hazardous waste fluids enter perforations only within the specified injection interval and are not permitted to escape into other formations or onto the land surface.

2. **Well Injection Pressure Limits and Injection Flow Rate:** The Permittee shall ensure that the maximum allowable surface injection pressure on WDW-2 shall not exceed 1,465 psig. A Step-Rate Test (SRT) shall be performed and submitted to OCD under Sundry for approval of any increase in the injection pressure. 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 Aztec District Office.

3. **Pressure-Limiting Device:** The Permittee shall equip and operate its Class I non-hazardous waste disposal well (WDW-2) 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 for its Class I non-hazardous waste disposal well (WDW-2).

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 Aztec District 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 or onto the ground 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 has occurred.

OCD may authorize an increase in maximum surface injection pressure 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).

3.C. CONTINUOUS MONITORING DEVICE: The Permittee shall install 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. The Permittee shall implement a chart changing 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 the MIT failure. The Permittee shall not resume injection operations until approved by OCD.

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

1. Pursuant to 20.6.2.5204 NMAC, the Permittee shall conduct a mechanical integrity test (MIT) for its Class I non-hazardous waste disposal well (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. The Permittee shall request MIT approval using form C-103 (Sundry Notices and Reports on Wells) with copies sent to OCD's Engineering Bureau and Aztec District Office. The Permittee shall notify OCD's Engineering Bureau 5 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 a MIT. The Permittee shall submit the results of its MIT to OCD's Engineering Bureau and Aztec District Office within 30 days of 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 disposal 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 disposal well (WDW-2) has passed the MIT:

- a.** The MIT passes if there is zero bleed-off during the test;
- b.** The MIT passes if there is a less than a $\pm 10\%$ change in the final test pressure compared to the starting pressure, if approved by OCD;
- c.** The 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 the 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. 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 20.6.2.5204D NMAC, when conducting and evaluating the MIT(s), the Permittee shall apply methods and standards generally accepted in the oil and gas industry. When the Permittee reports the results of all MIT(s) to the OCD Director, it shall include a description of the test(s), the method(s) used, and the test results.

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

3.E. FALL-OFF TEST: The Permittee shall submit an initial C-103 (Sundry Notices and Reports on Wells) form to conduct a Fall-Off Test (FOT) within 90 days of well completion to evaluate the injection zone for a feasibility determination of planned injection, i.e., hydrogeologic characteristics, areal extensiveness, etc. The minimum FOT frequency shall be at least annually from the initial FOT. Thereafter, historical FOTs shall be compared for pressure buildup in the injection zone. The Permittee shall follow OCD's 2007 *New Mexico Oil*

Conservation Division UIC Class I Well Fall-Off Test Guidance when conducting a FOT and for reporting results. The Permittee shall submit the FOT results using the C-103 form sent to OCD's Engineering Bureau and Aztec District Office within 60 days of completion of the FOT.

3.F. WELL WORKOVER OPERATIONS: The Permittee shall pursuant to 20.6.2.5205A(5) NMAC, provide notice to and shall obtain approval from the OCD District 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 form C-103 (Sundry Notices and Reports on Wells) sent to the OCD District Office with copies sent to the OCD's Engineering Bureau. After completing remedial work, pressure 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 any problems.

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 disposal volumes (including total volumes) and annular pressures of the injected waste fluids on a monthly basis and shall submit the data to OCD 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 renewal application, in order to detect leakage in the casing, tubing, or packer.

3.H. AREA OF REVIEW (AOR): The Permittee shall orally 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 the injection zone within a 1-mile radius from its Class I non-hazardous waste disposal well (WDW-2). Any un-cemented wells within the injection interval shall be identified by the Permittee and reported to OCD.

4. CLASS V WELLS: Pursuant to 20.6.2.5002B NMAC, leach fields and other waste fluids disposal systems that inject non-hazardous fluid into or above an underground source of drinking water 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 disposal 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 ground water 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.

5.B. BONDING OR FINANCIAL ASSURANCE: The Permittee shall submit a cost estimate of the actual cost to properly close, restore land surface, plug and abandon its Class I non-hazardous waste disposal well (WDW-2), conduct ground water restoration if applicable, and any post-operational monitoring as may be needed (see 20.6.2.5210B(17) NMAC). A bond or materials shall be approved and executed prior to discharge permit issuance and shall become effective upon commencement of construction. The Permittee's Bond shall be based on third person estimates. After review, OCD will require the Permittee to submit a single well plugging bond based on approved third person cost estimate.

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