NEW MEXICO
ENVIRONMENT DEPARTMENT

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BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

April 25, 2016

Shannon Jones, Director
Wastewater Management Division
City of Santa Fe
73 Paseo Real
Santa Fe, NM 87507

RE: Discharge Permit Renewal, DP-289, City of Santa Fe Wastewater Treatment Facility

Dear Mr. Jones:

The New Mexico Environment Department (NMED) issues the enclosed Discharge Permit Renewal, DP-289, to The City of Santa Fe (permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

The discharge permit has incorporated the editorial comments made in your letter of March 15, 2016. The comments included correcting the chronological order of past Discharge Permits issued to the City of Santa Fe; specifying the location of the diversion of the effluent for irrigation and/or discharge; listing the NM Department of Game and Fish and Las Campanas as authorized recipients of effluent in the Discharge Permit Summary; and using the current name of the Santa Fe Grand Prix, LLC. In addition, the six-hour composites are now 24-hour composites and testing for and reporting the results for total suspended solids (TSS), which were required in the previous Discharge Permit, have been reinstated as was originally intended.

The Discharge Permit contains terms and conditions that shall be complied with by the permittee and are enforceable by NMED pursuant to Section 20.6.2.3104 NMAC, WQA, NMSA 1978 §74-6-5 and §74-6-10. Please be aware that this Discharge Permit may contain conditions that

require the permittee to implement operational, monitoring or closure actions by a specified deadline.

Issuance of this Discharge Permit does not relieve the permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

Pursuant to Paragraph (4) of Subsection H of 20.6.2.3109 NMAC, the term of the Discharge Permit shall be five years from the effective date. The term of this Discharge Permit will end on April 24, 2021.

NMED requests that the permittee submit an application for renewal (or renewal and modification) at least 180 days prior to the date the Discharge Permit term ends.

An invoice for the Discharge Permit Fee of $9,200.00 is being sent under separate cover. Payment of the Discharge Permit Fee must be received by NMED within 30 days of the date the Discharge Permit is issued.

If you have any questions, please contact Russell A. Isaac at (505) 827-2978. Thank you for your cooperation during this Discharge Permit review.

Sincerely,

Michelle Hunter, Chief
Ground Water Quality Bureau

MH:RAI/rai

enc: Discharge Permit Renewal, DP-289
Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011

cc: Robert Italiano, District Manager, NMED District II (permit – electronic copy)
NMED Santa Fe Field Office (permit)
John Romero, Office of the State Engineer (permit – electronic copy)
Anne Keller, SWQB, UOCP (electronic copy)
Luis Orozco, Plant Superintendent, 73 Paseo Real, Santa Fe, NM 87507
Carl Dickens, La Cienega Valley Association, 48A Paseo De Baca, La Cienega, NM, 87507 (permit)
Alan Hatch, Pueblo of Santa Ana, Department of Natural Resources, 02 Dove Rd., Santa Ana Pueblo, NM 87004 (permit)
Bart Vanden Plas, Pueblo of Santa Ana, Bart.VandenPlas@santaana-nsn.gov (electronic copy)

GROUND WATER DISCHARGE PERMIT RENEWAL
City of Santa Fe Wastewater Treatment Facility, DP-289

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal (Discharge Permit), DP-289, to the City of Santa Fe (permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit Renewal, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from the City of Santa Fe's Wastewater Treatment Facility (WWTF) (facility) into ground and surface waters, so as to protect ground and surface waters for present and potential future use as domestic and agricultural water supply and other uses and protect public health. In issuing this Discharge Permit, NMED has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been or will be met. Pursuant to Section 20.6.2.3104 NMAC, it is the responsibility of the permittee to comply with the terms and conditions of this Discharge Permit; failure may result in an enforcement action(s) by NMED (20.6.2.1220 NMAC).

The activities that produce the discharge, the location of the discharge, and the quantity, quality and flow characteristics of the discharge are briefly described as follows:

The City of Santa Fe WWTF is authorized to receive, treat and discharge up to 13 million gallons per day (MGD) of domestic wastewater using an activated sludge treatment system with UV disinfection. Treated wastewater is discharged to the Santa Fe River in accordance NPDES Permit NM0022292 and this Discharge Permit. Reclaimed domestic wastewater is authorized for use in accordance with this Discharge Permit as follows: for wash, process and irrigation water at the City of Santa Fe WWTF; for ornamental impoundments and irrigation at the Municipal Recreation Complex (MRC), located west of NM Highway 599 in Sections 21, 22, 26, 27 and 35, T17N, R8E; and for temporary uses in and around the City of Santa Fe including, but not limited to, dust control, wildlife watering, construction purposes, fire suppression and flood irrigation of non-food crops. The authorized delivery point for these discharges is at the WWTF stand-pipe.

The City of Santa Fe WWTF is authorized to transfer reclaimed domestic wastewater for reuse at other facilities that are permitted by NMED to receive and discharge reclaimed wastewater.

The facility is located at 73 Paseo Real, Santa Fe near the intersection of Airport Road and NM Highway 599, in Section 10, Township 16N, Range 8E, Santa Fe County. Groundwater most likely to be affected is at a depth of approximately 116 feet and has a total dissolved solids concentration of approximately 250 milligrams per liter.

The original Discharge Permit was issued on February 13, 1984 and subsequently renewed, modified and/or amended on April 10, 1989, July 29, 1991 October 4, 1991, January 18, 1996, December 10, 1996, August 22, 2000, June 11, 2002, October 8, 2002, September 24, 2004, June 8, 2006, and March 17, 2010. The application (i.e., discharge plan) consists of the materials

submitted by the permittee dated September 12, 2014, and materials contained in the administrative record prior to issuance of this Discharge Permit. The discharge shall be managed in accordance with all conditions and requirements of this Discharge Permit.

Pursuant to Section 20.6.2.3109 NMAC, NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the requirements of 20.6.2 NMAC are being or may be violated or the standards of Section 20.6.2.3103 NMAC are being or may be violated. This may include a determination that structural controls and/or management practices approved under this Discharge Permit are not protective of groundwater quality, and that more stringent requirements to protect groundwater quality may be required by NMED. The permittee may be required to implement abatement of water pollution and remediate groundwater quality.

Issuance of this Discharge Permit does not relieve the permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

The following acronyms and abbreviations may be used in this Discharge Permit:

Abbreviation	Explanation	Abbreviation	Explanation
BOD_5	biochemical oxygen demand (5-day)	NMED	New Mexico Environment Department
CFR	Code of Federal Regulations	NMSA	New Mexico Statutes Annotated
CFU	Colony Forming Unit	NO_3-N	nitrate-nitrogen
Cl	chloride	NTU	nephelometric turbidity units
EPA	United States Environmental Protection Agency	TDS	total dissolved solids
gpd	gallons per day	TKN	total Kjeldahl nitrogen
LAA	land application area	total nitrogen	= TKN + NO_3-N
LADS	land application data sheet(s)	TRC	Total Residual Chlorine
mg/L	milligrams per liter	TSS	total suspended solids
mL	milliliters	WQA	New Mexico Water Quality Act
MPN	Most Probable Number	WQCC	Water Quality Control Commission
NMAC	New Mexico Administrative Code	WWTF	Wastewater Treatment Facility

II. FINDINGS

In issuing this Discharge Permit, NMED finds:

1. The permittee is discharging effluent or leachate from the facility so that such effluent or leachate may move directly or indirectly into groundwater within the meaning of Section 20.6.2.3104 NMAC.

2. The permittee is discharging effluent or leachate from the facility so that such effluent or

leachate may move into groundwater of the State of New Mexico that has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.

3. The discharge from the facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC.

III. AUTHORIZATION TO DISCHARGE

Pursuant to 20.6.2.3104 NMAC, it is the responsibility of the permittee to ensure that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein.

The permittee is authorized to receive, treat and discharge up to 13 MGD of domestic wastewater using an activated sludge treatment system with UV disinfection. Treated wastewater is discharged to the Santa Fe River in accordance with NPDES Permit NM0022292 and this Discharge Permit. Reclaimed domestic wastewater (Class 1B) is authorized for use in accordance with this Discharge Permit as follows:

- For wash, process and irrigation water at the City of Santa Fe WWTF;
- For temporary uses in and around the City of Santa Fe including, but not limited to, dust control, wildlife watering, construction purposes, fire suppression and flood irrigation of non-food crops;
- For ornamental impoundments and irrigation at the Municipal Recreation Complex (MRC), located west of NM Highway 599 in Sections 21, 22, 26, 27 and 35, T17N, R8E and
- For transfer for reuse to other facilities operating under separate Discharge Permits.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

IV. CONDITIONS

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions:

A. OPERATIONAL PLAN

#	**Terms and Conditions**
1.	The permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 1 and 2 NMAC. [Subsection C of 20.6.2.3109 NMAC]
2.	The permittee shall operate in a manner such that standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC are not violated.

#	**Terms and Conditions**
	[20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]
3.	The permittee shall utilize operators, certified by the State of New Mexico at the appropriate level, to operate the wastewater collection, treatment and disposal systems. The operations and maintenance of all or any part of the wastewater system shall be performed by, or under the direct supervision of, a certified operator. [Subsection C of 20.6.2.3109 NMAC, 20.7.4 NMAC]
4.	The permittee shall maintain fences around the WWTF to control public access. The fences shall be constructed in a manner which prevents access by the general public and animals such as dogs (e.g., chain link, field fencing or locking lids) and shall be maintained throughout the term of this Discharge Permit. [20.6.2.3109 NMAC]
5.	The permittee shall remove solids from the treatment facility as needed, depending on process control testing such as: the 30-minute settleometer test, the Mixed Liquor Suspended Solids concentration or the Mean Cell Residence Time. The solids shall be contained, transported, and disposed of in accordance with all local, state, and federal (40 CFR Part 503) regulations. [20.6.2.3109 NMAC]
6.	The permittee shall meet the following general requirements for above-ground use of reclaimed domestic wastewater. a) The permittee shall maintain signs in English and Spanish at all re-use areas such that they are visible and legible for the term of this Discharge Permit. The signs shall be posted at the entrance to re-use areas and at other locations where public exposure to reclaimed wastewater may occur. The signs shall state: **NOTICE: THIS AREA IS IRRIGATED WITH RECLAIMED WASTEWATER - DO NOT DRINK. AVISO: ESTA ÁREA ESTÁ REGADA CON AGUAS NEGRAS RECOBRADAS - NO TOMAR.** Alternate wording and/or graphics may be submitted to NMED for approval. b) The reclaimed wastewater systems shall have no direct or indirect cross connections with public water systems or irrigation wells pursuant to the latest revision of the New Mexico Plumbing Code (14.8.2 NMAC) and New Mexico Mechanical Code (14.9.2 NAMC). c) Above-ground use of reclaimed wastewater shall not result in excessive ponding of wastewater, and shall not exceed the water consumptive needs of the crop. Re-use shall not be conducted at times when the re-use area is saturated or frozen. d) The discharge of reclaimed wastewater shall be confined to the re-use area. e) The discharge of reclaimed domestic wastewater to crops for human consumption is prohibited.

#	**Terms and Conditions**
	f) Water supply wells within 200 feet of a re-use area shall have adequate wellhead construction pursuant to 19.27.4 NMAC. Re-use shall be managed to ensure protection of groundwater quality. g) Existing and accessible portions of the reclaimed wastewater distribution system (with the exception of application equipment such as sprinklers or pivots) shall be colored purple or clearly labeled as being part of a reclaimed wastewater distribution system. Piping, valves and outlets that are installed during the term of this Discharge Permit shall be colored purple pursuant to the latest revision of the New Mexico Plumbing Code (14.8.2 NMAC) and New Mexico Mechanical Code (14.9.2 NAMC) to differentiate piping or fixtures used to convey reclaimed wastewater from those intended for potable or other uses. Valves, outlets, and sprinkler heads used in reclaimed wastewater systems shall be accessible only to authorized personnel. [Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]
7.	Prior to transferring reclaimed wastewater to a newly authorized location for the first time, the permittee shall give written notification to NMED stating the date the transfer is to commence, the discharge permit number of the recipient, and to what location. [20.6.2.3109.H NMAC]

Operating Conditions

#	**Terms and Conditions**
8.	Treated wastewater discharged from WWTF outfall to the Santa Fe River shall not exceed the following discharge limit: • **Total Nitrogen: 10 mg/L** All samples shall be collected following UV disinfection. [20.6.2.3109 NMAC]
9.	Reclaimed wastewater discharged from the WWTF for use at the facility and the MRC, to other facilities with separate NMED Ground Water Discharge Permits authorizing receipt of Class 1B reclaimed wastewater and for temporary purposes that do not require a Discharge Permit (stand-pipe delivery) shall not exceed the following discharge limits.

Test	30-Day Geometric Mean	30-Day Average	Maximum
Total Nitrogen			**10 mg/L**
Fecal coliform bacteria:	**100 Org/100 mL**	**N/A**	**200 Org/100 mL**
BOD_5:	**N/A**	**30 mg/L**	**45 mg/L**
TSS:	**N/A**	**30 mg/L**	**45 mg/L**
Turbidity	**N/A**	**Monitor Only**	**Monitor Only**

	UV Transmissivity:	**N/A**	**Monitor Only**	**Monitor Only**
	All samples shall be collected following UV disinfection except for turbidity which is measured prior to UV disinfection. [20.6.2.3109 NMAC]			
10.	The permittee shall meet the following setbacks, access restrictions and equipment requirements for spray irrigation using reclaimed wastewater for all areas authorized for use at the facility and the MRC. a) A minimum 100-foot set-back shall be maintained between any dwellings or occupied establishments and the edge of any area receiving reclaimed wastewater. b) Irrigation shall be postponed at times when windy conditions may result in drift of reclaimed wastewater outside the designated area of application. c) Whenever reclaimed wastewater is used in areas with public access it shall be applied at times and in a manner that minimizes public contact. d) The spray irrigation system shall utilize only low trajectory spray nozzles. [20.6.2.3109 NMAC]			

B. MONITORING AND REPORTING

#	**Terms and Conditions**
11.	The permittee shall conduct the following monitoring, reporting, and other requirements listed below in accordance with the monitoring requirements of this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
12.	METHODOLOGY – Unless otherwise approved in writing by NMED, the permittee shall conduct sampling and analysis in accordance with the most recent edition of the following documents. a) American Public Health Association, Standard Methods for the Examination of Water and Wastewater (18^{th}, 19^{th} or current) b) U.S. Environmental Protection Agency, Methods for Chemical Analysis of Water and Waste c) U.S. Geological Survey, Techniques for Water Resources Investigations of the U.S. Geological Survey d) American Society for Testing and Materials, Annual Book of ASTM Standards, Part 31. Water e) U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition f) Federal Register, latest methods published for monitoring pursuant to Resource Conservation and Recovery Act regulations g) Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods; Part 2. Microbiological and Biochemical Properties; Part 3. Chemical Methods, American Society of Agronomy

#	**Terms and Conditions**
	[Subsection B of 20.6.2.3107 NMAC]
13.	The permittee shall submit quarterly monitoring reports to NMED for the most recently completed quarterly period by the 1st of February, May, August and November each year. Quarterly monitoring shall be performed during the following periods and submitted as follows: • January 1st through March 31st (first quarter) – **due by May 1st;** • April 1st through June 30th (second quarter) – **due by August 1st;** • July 1st through September 30th (third quarter) – **due by November 1st; and** • October 1st through December 31st (fourth quarter) – **due by February 1st.** [Subsection A of 20.6.2.3107 NMAC]
14.	Once prior to the date that the term of this Discharge Permit ends, NMED shall have the option to perform downhole inspections of all monitoring wells identified in this Discharge Permit. For monitoring wells with dedicated pumps, NMED shall establish the inspection date and provide at least 60-days-notice to the permittee by certified mail. The permittee shall have any existing dedicated pumps removed at least 48 hours prior to NMED inspection to allow adequate settling time of sediment agitated from pump removal. Should a facility not have existing dedicated pumps, but decide to install pumps in any of the monitoring wells, NMED shall be notified at least 90 days prior to pump installation so that a downhole well inspection(s) can be scheduled prior to pump placement. [Subsections A and D of 20.6.2.3107 NMAC]
15.	The permittee shall submit copies of the completed Discharge Monitoring Reports (DMRs) required by NPDES Permit NM0022292 in the quarterly monitoring reports. [40.503(17) CFR, 74-6-5(E)(1) WQA, 74-6-5(K) WQA]

Groundwater Monitoring Conditions

#	**Terms and Conditions**
16.	The permittee shall perform quarterly groundwater sampling in the following monitoring well and analyze the samples for dissolved TKN, NO_3-N, TDS and Cl. • MW-4A, located approximately 240 ft. west of the WWTF outfall and along the discharge channel to the Santa Fe River and intended to be located hydrologically

#	Terms and Conditions
	downgradient of the outfall Groundwater sample collection, preservation, transport and analysis shall be performed according to the following procedure. a) Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest hundredth of a foot. b) Purge three well volumes of water from the well prior to sample collection. c) Obtain samples from the well for analysis. d) Properly prepare, preserve and transport samples. e) Analyze samples in accordance with the methods authorized in this Discharge Permit. Depth-to-most-shallow groundwater measurements, analytical results, including the laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED in the quarterly monitoring reports. [Subsection A of 20.6.2.3107 NMAC]

Facility Monitoring Conditions

#	Terms and Conditions
17.	The permittee shall measure the total daily volume and peak flow of wastewater discharged to the treatment facility each month using a Parshall flume equipped with head sensing, totalizing and data logging mechanism located after the influent bar screen. The average daily and peak daily discharge volumes for each month shall be submitted to NMED in the quarterly monitoring reports. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
18.	The permittee shall measure the monthly volume discharged to *each* recipient of reclaimed wastewater using a totalizing flow meter. The meter shall be located on the transfer line between the diversion point and the recipient of reclaimed wastewater. The permittee shall maintain a log that records the date that discharges occur to *each* recipient of reclaimed wastewater, monthly totalizing meter readings and units of measurement. The log shall be used to calculate the total monthly volume of reclaimed wastewater discharged to *each* recipient of reclaimed wastewater. A copy of the log shall be submitted to NMED in the quarterly monitoring reports. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
19.	All flow meters shall be capable of having their accuracy ascertained under actual working (field) conditions. A field calibration method shall be developed for each flow

#	**Terms and Conditions**
	meter and that method shall be used to check the accuracy of each respective meter. Field calibrations shall be performed upon repair or replacement of a flow measurement device and, at a minimum, within 90 days of the effective date of this Discharge Permit **(by July 24, 2016)**, and then on an annual basis. Flow meters shall be calibrated to within plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation/operation of the particular device in use. A flow meter calibration report shall be prepared for each flow measurement device at the frequency calibration is required. The flow meter calibration report shall include the following information. a) The location and meter identification. b) The method of flow meter field calibration employed. c) The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check. d) The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter. e) Any flow meter repairs made during the previous year or during field calibration. The permittee shall maintain records of flow meter calibration(s) at a location accessible for review by NMED during facility inspections. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
20.	The permittee shall visually inspect flow meters on a monthly basis for evidence of malfunction. If a visual inspection indicates a flow meter is not functioning as required by this Discharge Permit, the permittee shall repair or replace the meter within 30 days of discovery. For *repaired* meters, the permittee shall submit a report to NMED with the next monitoring report following the repair that includes a description of the malfunction; a statement verifying the repair; and a flow meter field calibration report completed in accordance with the requirements of this Discharge Permit. For *replacement* meters, the permittee shall submit a report to NMED with the next monitoring report following the replacement that includes a design schematic for the device and a flow meter field calibration report completed in accordance with the requirements of this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
21.	The permittee shall collect samples of treated wastewater after the UV disinfection unit on a quarterly basis and analyze the samples for TKN, NO_3-N, TDS and Cl. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the quarterly monitoring reports.

#	**Terms and Conditions**
	[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
22.	During any week that the discharge of reclaimed wastewater occurs, the permittee shall perform the following analyses on reclaimed wastewater samples collected after the UV disinfection unit (with the exception of turbidity) using the following sampling method and frequency: • Fecal coliform bacteria: grab sample at peak daily flow three times per week; • BOD_5: 24-hour composite sample three times per week; • TSS: 24-hour composite sample three times per week; • Turbidity: continuously monitor reclaimed wastewater for turbidity after the final treatment process but prior to UV disinfection and while discharging; record the average and maximum turbidity values for each calendar month; and • UV transmissivity values record whenever fecal coliform samples are collected. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results, monthly average and maximum turbidity values, and a copy of the log of UV transmissivity values shall be submitted to NMED in the quarterly monitoring reports. [Subsection A of 20.6.2.3107 NMAC, Subsections B, C and H of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]
23.	On an annual basis, the permittee shall collect a 24-hour flow weighted composite sample (except where noted) of reclaimed wastewater after the UV disinfection unit and analyze the sample for the following inorganic constituents: • aluminum • arsenic • barium • boron • cadmium • chromium • cobalt • copper • cyanide • fluoride • iron • lead • manganese • molybdenum • mercury • pH (instantaneous) • nickel • radioactivity: combined radium-226 & radium-228 • selenium • silver • sulfate • uranium • zinc Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the monitoring reports due by August 1st each year.

#	Terms and Conditions
	[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
24.	On an annual basis, the permittee shall collect a grab sample of reclaimed wastewater after the UV disinfection unit and analyze the sample for the following organic constituents: • benzene • benzo-a-pyrene • carbon tetrachloride • chloroform • 1,1-dichloroethane • 1,2-dichloroethane (DCE) • 1,1-dichloroethylene (1,1-DCE) • ethylbenzene • ethylene dibromide (EDB) • methylene chloride • PAHs: total naphthalene plus monomethylnaphthalenes • Phenols • Polychlorinated biphenyls (PCBs) • toluene • 1,1,2,2-tetrachloroethane • 1,1,2,2-tetrachloroethylene (PCE) • 1,1,1-trichloroethane • 1,1,2-trichloroethane • 1,1,2-trichloroethylene (TCE) • vinyl chloride • xylenes (total) Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results shall be submitted to NMED in the monitoring reports due by August 1st each year. [Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]
25.	Records of solids disposal, including a copy of all Discharge Monitoring Reports (i.e., DMRs) required to be submitted to the EPA pursuant to 40 CFR 503 for the previous calendar year, shall be submitted to NMED annually in the monitoring report due by August 1st each year. [Subsection A of 20.6.2.3107 NMAC]

C. CONTINGENCY PLAN

#	Terms and Conditions
26.	In the event that groundwater monitoring indicates that a groundwater quality standard identified in Section 20.6.2.3103 NMAC is exceeded; the total nitrogen concentration in groundwater is greater than 10 mg/L; or a toxic pollutant (defined in Subsection WW of 20.6.2.7 NMAC) is present in a groundwater sample and in any subsequent groundwater

#	Terms and Conditions
	sample collected from a monitoring well required by this Discharge Permit, the permittee shall enact the following contingency plan. Within 60 days of the subsequent sample analysis date, the permittee shall propose measures to ensure that the exceedance of the standard or the presence of a toxic pollutant will be mitigated by submitting a corrective action plan to NMED for approval. The corrective action plan shall include a description of the proposed actions to control the source and an associated completion schedule. The plan shall be enacted as approved by NMED. Once invoked (whether during the term of this Discharge Permit, or after the term of this Discharge Permit and prior to the completion of the Discharge Permit closure plan requirements), this condition shall apply until the permittee has fulfilled the requirements of this condition and groundwater monitoring confirms for a minimum of two years of consecutive groundwater sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in groundwater. The permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC, should the corrective action plan not result in compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC within 180 days of confirmed groundwater contamination. [Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]
27.	In the event that information available to NMED indicates that a well(s) is not constructed in a manner consistent with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011; contains insufficient water to effectively monitor groundwater quality; or is not completed in a manner that is protective of groundwater quality, the permittee shall install a replacement well(s) within 120 days following notification from NMED. Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs to NMED within 60 days following well completion. Upon completion of the replacement monitoring well(s), the monitoring well(s) requiring replacement shall be properly plugged and abandoned. Well plugging, abandonment and documentation of the abandonment procedures shall be completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011, and all applicable local, state, and federal regulations. The well abandonment documentation shall be submitted to NMED within 60 days of completion of well plugging activities.

#	**Terms and Conditions**
	[Subsection A of 20.6.2.3107 NMAC]
28.	In the event that groundwater flow information obtained pursuant to this Discharge Permit indicates that a monitoring well(s) is not located hydrologically downgradient of the discharge location(s) it is intended to monitor, the permittee shall install a replacement well(s) within 120 days following notification from NMED. The permittee shall survey the replacement monitoring well(s) within 150 days following notification from NMED. Replacement well location(s) shall be approved by NMED prior to installation and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map within 30 days following well completion. [Subsection A of 20.6.2.3107 NMAC]
29.	In the event that analytical results of a quarterly treated wastewater sample indicate an exceedance of the total nitrogen discharge limit set in this Discharge Permit, the permittee shall collect and analyze a second sample within 30 days of the first sample analysis date. In the event the second sample results indicate that the discharge limit is continuing to be exceeded, the following contingency plan shall be enacted. a) Within 15 days of the second sample analysis date indicating that the discharge limit is continuing to be exceeded, the permittee shall: i) notify NMED that the contingency plan is being enacted; and ii) submit a copy of the first and second analytical results indicating an exceedance to NMED. b) The permittee shall increase the frequency of total nitrogen wastewater sampling and analysis of treated wastewater to once per month. c) The permittee shall examine the operation and maintenance log, required by the Record Keeping conditions of this Discharge Permit, for improper operational procedures. d) The permittee shall conduct a physical inspection of the treatment system to detect abnormalities. Any abnormalities discovered shall be corrected. A report detailing the corrections made shall be submitted to NMED within 30 days of correction. e) In the event that any analytical results from monthly wastewater sampling indicate an exceedance of the total nitrogen discharge limit, the permittee shall propose to modify operational procedures and/or upgrade the treatment process to achieve the total nitrogen limit by submitting a corrective action plan to NMED for approval. The plan shall include a schedule for completion of corrective actions and shall be submitted within 90 days of the second sample analysis date indicating that the discharge limit is continuing to be exceeded. The permittee shall initiate implementation of the plan following approval by NMED.

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	When analytical results from three consecutive months of wastewater sampling do not exceed the discharge limits, the permittee is authorized to return to a quarterly monitoring frequency. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
30.	In the event that analytical results of a reclaimed domestic wastewater sample indicates an exceedance of any of the maximum discharge limits for BOD_5, TSS or turbidity, or fecal coliform bacteria set by this Discharge Permit, the permittee shall collect and analyze a second sample within 24 hours after becoming aware of the exceedance. In the event the second sample results indicate that any maximum discharge limit is continuing to be exceeded (i.e., confirmed exceedance), the contingency plan below shall be enacted. **AND / OR** In the event that analytical results of a reclaimed domestic wastewater sample indicates an exceedance of any of the 30-day average discharge limits for BOD_5, TSS or turbidity, or fecal coliform bacteria set by this Discharge Permit (i.e., confirmed exceedance), the contingency plan below shall be enacted. <u>Contingency Plan</u> a) Within 24 hours of becoming aware of a confirmed exceedance (as identified above), the permittee shall: i) notify NMED that the contingency plan is being enacted; and ii) submit copies of the recent analytical results indicating an exceedance to NMED. b) The permittee shall immediately cease discharging reclaimed domestic wastewater to the re-use users authorized under this Discharge Permit c) The permittee shall examine the operation and maintenance log, required by the Record Keeping conditions of this Discharge Permit, for improper operational procedures. d) The permittee shall conduct a physical inspection of the treatment system to detect abnormalities. Any abnormalities discovered shall be corrected. A report detailing the corrections made shall be submitted to NMED within 30 days following correction. When the analytical results from samples of reclaimed domestic wastewater, sampled as required by this Discharge Permit, no longer indicate an exceedance of any of the maximum discharge limits, the permittee may resume discharging reclaimed wastewater to the re-use area. If a facility is required to enact the contingency plan more than two times in a 12-month period, the permittee shall propose to modify operational procedures and/or upgrade the

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	treatment process to achieve consistent compliance with the maximum and 30-day average discharge limits by submitting a corrective action plan for NMED approval. The plan shall include a schedule for completion of corrective actions and shall be submitted within 60 days following the second sample analysis date. The permittee shall initiate implementation of the plan following approval by NMED. Prior to recommencing discharge to the re-use area, additional sampling of any stored reclaimed wastewater may be required by NMED in response to the submitted corrective action plan. [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
31.	In the event that a release (commonly known as a "spill") occurs that is not authorized under this Discharge Permit, the permittee shall take measures to mitigate damage from the unauthorized discharge and initiate the notifications and corrective actions required in Section 20.6.2.1203 NMAC and summarized below. Within 24 hours following discovery of the unauthorized discharge, the permittee shall verbally notify NMED and provide the following information. a) 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. b) The name and address of the facility. c) The date, time, location, and duration of the unauthorized discharge. d) The source and cause of unauthorized discharge. e) A description of the unauthorized discharge, including its estimated chemical composition. f) The estimated volume of the unauthorized discharge. g) Any actions taken to mitigate immediate damage from the unauthorized discharge. Within one week following discovery of the unauthorized discharge, the permittee shall submit written notification to NMED with the information listed above and any pertinent updates. Within 15 days following discovery of the unauthorized discharge, the permittee shall submit a corrective action report/plan to NMED describing any corrective actions taken and/or to be taken relative to the unauthorized discharge that includes the following information. a) A description of proposed actions to mitigate damage from the unauthorized discharge. b) A description of proposed actions to prevent future unauthorized discharges of this nature. c) A schedule for completion of proposed actions. In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is

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	required to be given pursuant to Paragraph (1) of Subsection A of 20.6.2.1203 NMAC, the permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC. Nothing in this condition shall be construed as relieving the permittee of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC. [20.6.2.1203 NMAC]
32.	In the event that NMED or the permittee identifies any failures of the discharge plan or this Discharge Permit not specifically noted herein, NMED may require the permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure(s). Additionally, NMED may require a Discharge Permit modification to achieve compliance with 20.6.2 NMAC. [Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]

D. CLOSURE PLAN

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33.	In the event the facility, or a component of the facility, is proposed to be permanently closed, upon ceasing discharging, the permittee shall perform the following closure measures. Within 90 days of ceasing discharging to the treatment system, the permittee shall complete the following closure measures. a) The line leading to the system shall be plugged so that a discharge can no longer occur. b) Wastewater shall be drained or evaporated from the system components and it shall be disposed of in accordance with all local, state, and federal regulations or discharged from the system to the re-use users, as authorized by this Discharge Permit. c) Solids removed from the treatment system shall be contained, transported, and disposed of in accordance with all local, state, and federal regulations, including 40 CFR Part 503. The permittee shall maintain a record of all solids transported for off-site disposal. Within 180 days of ceasing discharging to the treatment system (or unit), the permittee shall complete the following closure measures. a) Remove all lines leading to and from the treatment system, or permanently plug them and abandon them in place. b) Remove or demolish all treatment system components, and re-grade area with

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	suitable fill to blend with surface topography, promote positive drainage and prevent ponding. The permittee shall continue groundwater monitoring until the requirements of this condition have been met and groundwater monitoring confirms for a minimum of two years of consecutive groundwater sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in groundwater. If monitoring results show that a groundwater quality standard in Section 20.6.2.3103 NMAC is exceeded; the total nitrogen concentration in groundwater is greater than 10 mg/L; or a toxic pollutant (defined in Subsection WW of 20.6.2.7 NMAC) is present in groundwater, the permittee shall implement the contingency plan required by this Discharge Permit. Following notification from NMED that post-closure monitoring may cease, the permittee shall plug and abandon the monitoring well(s) in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. When all closure and post-closure requirements have been met, the permittee may submit a written request for termination of the Discharge Permit to NMED. [Subsection A of 20.6.2.3107 NMAC, 40 CFR Part 503]

E. GENERAL TERMS AND CONDITIONS

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34.	RECORD KEEPING - The permittee shall maintain a written record of: • information and data used to complete the application for this Discharge Permit; • any releases (commonly known as "spills") not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC; • the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater; • facility record drawings (plans and specifications) showing the actual construction of the facility and bear the seal and signature of a licensed New Mexico professional engineer; • copies of monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit; • the volume of wastewater or other wastes discharged pursuant to this Discharge Permit;

#	**Terms and Conditions**
	• groundwater quality and wastewater quality data collected pursuant to this Discharge Permit; • copies of construction records (well log) for all groundwater monitoring wells required to be sampled pursuant to this Discharge Permit; • the maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit; and • data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit including: o the dates, location and times of sampling or field measurements; o the name and job title of the individuals who performed each sample collection or field measurement; o the sample analysis date of each sample o the name and address of the laboratory, and the name of the signatory authority for the laboratory analysis; o the analytical technique or method used to analyze each sample or collect each field measurement; o the results of each analysis or field measurement, including raw data; o the results of any split, spiked, duplicate or repeat sample; and o a copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used. The written record shall be maintained by the permittee at a location accessible during a facility inspection by NMED for a period of at least five years from the date of application, report, collection or measurement and shall be made available to the department upon request. [Subsections A and D of 20.6.2.3107 NMAC]
35.	INSPECTION and ENTRY – The permittee shall allow inspection by NMED of the facility and its operations that are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC. The permittee shall allow NMED to have access to and reproduce for their use any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations. Nothing in this Discharge Permit shall be construed as limiting in any way the inspection and entry authority of NMED under the WQA, the WQCC Regulations, or any other local, state or federal regulations.

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	[Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]
36.	DUTY to PROVIDE INFORMATION - The permittee shall, upon NMED's request, allow for NMED's inspection/duplication of records required by this Discharge Permit and/or furnish to NMED copies of such records. [Subsection D of 20.6.2.3107 NMAC]
37.	MODIFICATIONS and/or AMENDMENTS – In the event the permittee proposes a change to the facility or the facility's discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the facility, the permittee shall notify NMED prior to implementing such changes. The permittee shall obtain approval (which may require modification of this Discharge Permit) by NMED prior to implementing such changes. [Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC]
38.	PLANS and SPECIFICATIONS – In the event the permittee is proposing to construct a wastewater system or change a process unit of an existing system such that the quantity or quality of the discharge will change substantially from that authorized by this Discharge Permit, the permittee shall submit construction plans and specifications to NMED for the proposed system or process unit prior to the commencement of construction. In the event the permittee implements changes to the wastewater system authorized by this Discharge Permit that result in only a minor effect on the character of the discharge, the permittee shall report such changes (including the submission of record drawings, where applicable) as of January 1 and June 30 of each year to NMED. [Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]
39.	CIVIL PENALTIES - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject the permittee to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10(C) and 74-6-10.1, civil penalties of up to $15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to $10,000 per day of noncompliance may be assessed for each

#	**Terms and Conditions**
	violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit. [20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1]
40.	CRIMINAL PENALTIES – No person shall: • make 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 WQA; • falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or • fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation. Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. [20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]
41.	COMPLIANCE with OTHER LAWS - Nothing in this Discharge Permit shall be construed in any way as relieving the permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders. [NMSA 1978, § 74-6-5.L]
42.	RIGHT to APPEAL - The permittee may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC within thirty days of the receipt of postal notice of this Discharge Permit and shall include a statement of the issues to be raised and the relief sought. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review.

#	**Terms and Conditions**
	[20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]
43.	TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this facility or any portion thereof, the permittee shall: • notify the proposed transferee in writing of the existence of this Discharge Permit; • include a copy of this Discharge Permit with the notice; and • deliver or send by certified mail to NMED a copy of the notification and proof that such notification has been received by the proposed transferee. Until both ownership and possession of the facility have been transferred to the transferee, the permittee shall continue to be responsible for any discharge from the facility. [20.6.2.3111 NMAC]
44.	PERMIT FEES - Payment of permit fees is due at the time of Discharge Permit approval. Permit fees shall be paid in a single payment or shall be paid in equal installments on a yearly basis over the term of the Discharge Permit. Single payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date. Initial installment payments shall be remitted to NMED no later than 30 days after the Discharge Permit effective date; subsequent installment payments shall be remitted to NMED no later than the anniversary of the Discharge Permit effective date. Permit fees are associated with <u>issuance</u> of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving the permittee of the obligation to pay all permit fees assessed by NMED. A permittee that ceases discharging or does not commence discharging from the facility during the term of the Discharge Permit shall pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date. [Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]

V. PERMIT TERM & SIGNATURE

EFFECTIVE DATE: April 25, 2016
TERM ENDS: April 24, 2021

[Subsection H of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.I]

MICHELLE HUNTER
Chief, Ground Water Quality Bureau
New Mexico Environment Department

New Mexico Environment Department Ground Water Quality Bureau
Discharge Permit Summary

Facility Information

Facility Name	City of Santa Fe Wastewater Treatment Facility
Discharge Permit Number	DP-289
Legally Responsible Party	Shannon Jones, Director City of Santa Fe Wastewater Management Division 73 Paseo Real Santa Fe, NM 87507 (505) 955-4650

Treatment, Disposal and Site Information

Primary Waste Type	Domestic
Facility Type	MUNI-Wastewater

Treatment Methods

Treatment Type	Designation	Description & Comments
Headworks	HW	Reinforced concrete – 61,200 gallons
Primary Clarification	PC	Reinforced concrete – 1,161,200 gallons
Bio Selectors	BioS	Reinforced concrete – 1,240,000 gallons
Aeration Basin	AB	Reinforced concrete – 5,600,000 gallons
Final Clarification (old and new)	FC	Reinforced concrete – 3,000,000 gallons
Sand Filters and 3 disc filters	SF	Reinforced concrete – 6272 square feet
UV Disinfection Building	UV	Reinforced concrete – 23,427 gallons
Anaerobic Digesters (old and new)	E.-Dig., W.-Dig.	Reinforced Concrete, metal covers, 1 fixed, 1 floating - E.-Dig. 417,601 gallons, W.-Dig. 435,169 gallons
Outfall re-aeration Unit	Outfall	Reinforced concrete - 102,046 gallons capacity
Dissolved Air Floatation Units (old and new)	DAF New, DAF Existing	Reinforced concrete – New = 28,723 gallons capacity; Existing = 68,936 gallons capacity.
Sludge Composting Facility	SCF	Reinforced concrete floor, metal sides and roof - 90,257.22 square feet
Sludge High Lime Treatment Unit	SHLTU	Reinforced concrete - 43,088 gallons capacity

Discharge Locations

Discharge Type	Designation	Description & Comments
Watercourse	Santa Fe River Outfall	NPDES Permit No. NM0022292
Land Application	Treatment plant	Wash, process, and irrigation uses
Land Application	Temporary use – Stand-pipe delivery	Temporary and/or as needed uses in and around Santa Fe for construction, dust control, wildlife watering, and flood irrigation of non-food crops
Land Application	MRC	SF Municipal Recreation Complex – Aesthetics, ponds, and 130 acres of irrigation.
Transfer	Transfers-other Discharge Permits	Transfers of reclaimed wastewater to the following facilities permitted by NMED: • up to 1,500,000 gpd to Las Campanas Limited

		Partnership, DP-944; • Up to 10,000 gpd for ornamental impoundments and irrigation at the New Mexico Game and Fish Headquarters, DP-1254; • up to 700,000 gpd to Santa Fe Country Club, DP-1407; • up to 500,000 gpd to Caja del Rio Landfill, DP-1120; • up to 416,200 gpd to Santa Fe Downs, DP-265; • up to 400,000 gpd to Grand Prix Santa Fe, LLC, DP-78; • up to 16,000 gpd to Cerrito Pelado Scoria Mine, DP-1576; • up to 210,000 gpd to SWAN Park Santa Fe DP-1824; and • to other entities that are permitted by NMED to discharge reclaimed wastewater.

Ground Water Monitoring Locations

Type	Designation	Description & Comments
Monitoring Well	MW-4A	Located approximately 240 ft. west of the WWTF outfall and along the discharge channel to the Santa Fe River and intended to be located hydrologically downgradient of the outfall

Depth-to-Ground Water 120 - 300 feet
Total Dissolved Solids (TDS) 250 mg/L

Permit Information

Application Received September 12, 2014
Public Notice Published March 4, 2016
Discharge Permit Issued April 25, 2016
Discharge Permit Expires April 24, 2021
Permitted Discharge Volume 13,000,000 gallons per day

NMED Contact Information

Mailing Address
Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, New Mexico 87502-5469

GWQB Telephone Number (505) 827-2900

NMED Lead Staff Russell A. Isaac
Lead Staff Telephone Number (505) 827-2978
Lead Staff Email russell.isaac@state.nm.us

NEW MEXICO ENVIRONMENT DEPARTMENT
GROUND WATER QUALITY BUREAU
MONITORING WELL CONSTRUCTION AND ABANDONMENT GUIDELINES

Purpose: These guidelines identify minimum construction and abandonment details for installation of water table monitoring wells under ground water Discharge Permits issued by the NMED's Ground Water Quality Bureau (GWQB) and Abatement Plans approved by the GWQB. Proposed locations of monitoring wells required under Discharge Permits and Abatement Plans and requests to use alternate installation and/or construction methods for water table monitoring wells or other types of monitoring wells (e.g., deep monitoring wells for delineation of vertical extent of contaminants) must be submitted to the GWQB for approval prior to drilling and construction.

General Drilling Specifications:

1. All well drilling activities must be performed by an individual with a current and valid well driller license issued by the State of New Mexico in accordance with 19.27.4 NMAC. Use of drillers with environmental well drilling experience and expertise is highly recommended.
2. Drilling methods that allow for accurate determinations of water table locations must be employed. All drill bits, drill rods, and down-hole tools must be thoroughly cleaned immediately prior to the start of drilling. The borehole diameter must be drilled a minimum of 4 inches larger than the casing diameter to allow for the emplacement of sand and sealant.
3. After completion, the well should be allowed to stabilize for a minimum of 12 hours before development is initiated.
4. The well must be developed so that formation water flows freely through the screen and is not turbid, and all sediment and drilling disturbances are removed from the well.

Well Specifications (see attached monitoring well schematic):

5. Schedule 40 (or heavier) polyvinyl chloride (PVC) pipe, stainless steel pipe, carbon steel pipe, or pipe of an alternate appropriate material that has been approved for use by NMED must be used as casing. The casing must have an inside diameter not less than 2 inches. The casing material selected for use must be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the facility. The casing material and thickness selected for use must have sufficient collapse strength to withstand the pressure exerted by grouts used as annular seals and thermal properties sufficient to withstand the heat generated by the hydration of cement-based grouts. Casing sections may be joined using welded, threaded, or mechanically locking joints; the method selected must provide sufficient joint strength for the specific well installation. The casing must extend from the top of the screen to at least one foot above ground surface. The top of the casing must be fitted with a removable cap, and the exposed casing must be protected by a locking steel well shroud. The shroud must be large enough in diameter to allow easy access for removal of the cap. Alternatively, monitoring wells may be completed below grade. In this case, the casing must extend from the top of the screen to 6 to 12 inches below the ground surface; the monitoring wells must be sealed with locking, expandable well plugs; a flush-mount, watertight well vault that is rated to withstand traffic loads must be emplaced around the wellhead; and the cover must be secured with at least one bolt. The vault cover must indicate that the wellhead of a monitoring well is contained within the vault.
6. A 20-foot section (maximum) of continuous-slot, machine slotted, or other manufactured PVC or stainless steel well screen or well screen of an alternate appropriate material that has been approved for use by NMED must be installed across the water table. Screens created by cutting slots into solid casing with saws or other tools must not be used. The screen material selected for use must be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the facility. Screen sections may be joined using welded, threaded, or mechanically

locking joints; the method selected must provide sufficient joint strength for the specific well installation and must not introduce constituents that may reasonably be considered contaminants of interest at the facility. A cap must be attached to the bottom of the well screen; sumps (i.e., casing attached to the bottom of a well screen) should not be installed. The bottom of the screen must be installed no more than 15 feet below the water table; the top of the well screen must be positioned not less than 5 feet above the water table. The well screen slots must be appropriately sized for the formation materials and should be selected to retain 90 percent of the filter pack. A slot size of 0.010 inches is generally adequate for most installations.

7. Casing and well screen must be centered in the borehole by placing centralizers near the top and bottom of the well screen.
8. A filter pack must be installed around the screen by filling the annular space from the bottom of the screen to 2 feet above the top of the screen with clean silica sand. The filter pack must be properly sized to prevent fine particles in the formation from entering the well; clean medium to coarse silica sand is generally adequate as filter pack material for 0.010-inch slotted well screen. For wells deeper than 30 feet, the sand must be emplaced by a tremmie pipe. The well should be surged or bailed to settle the filter pack and additional sand added, if necessary, before the bentonite seal is emplaced.
9. A bentonite seal must be constructed immediately above the filter pack by emplacing bentonite chips or pellets (3/8-inch in size or smaller) in a manner that prevents bridging of the chips/pellets in the annular space. The bentonite seal must be 3 feet in thickness and hydrated with clean water. Adequate time should be allowed for expansion of the bentonite seal before installation of the annular space seal.
10. The annular space above the bentonite seal must be sealed with cement grout or a bentonite-based sealing material acceptable to the State Engineer pursuant to 19.27.4 NMAC. A tremmie pipe must be used when placing sealing materials at depths greater than 20 feet below the ground surface. Annular space seals must extend from the top of the bentonite seal to the ground surface (for wells completed above grade) or to a level 3 to 6 inches below the top of casing (for wells completed below grade).
11. For monitoring wells finished above grade, a concrete pad (2-foot minimum radius, 4-inch minimum thickness) must be poured around the shroud and wellhead. The concrete and surrounding soil must be sloped to direct rainfall and runoff away from the wellhead. The installation of steel posts around the well shroud and wellhead is recommended for monitoring wells finished above grade to protect the wellhead from damage by vehicles or equipment. For monitoring wells finished below grade, a concrete pad (2-foot minimum radius, 4-inch minimum thickness) must be poured around the well vault and wellhead. The concrete and surrounding soil must be sloped to direct rainfall and runoff away from the well vault.

Abandonment:

12. Approval for abandonment of monitoring wells used for ground water monitoring in accordance with Discharge Permit and Abatement Plan requirements must be obtained from NMED prior to abandonment.
13. Well abandonment must be accomplished by removing the well casing and placing neat cement grout, bentonite-based plugging material, or other sealing material approved by the State Engineer for wells that encounter water pursuant to 19.27.4 NMAC from the bottom of the borehole to the ground surface using a tremmie pipe. If the casing cannot be removed, neat cement grout, bentonite-based plugging material, or other sealing material approved by the State Engineer must be placed in the well using a tremmie pipe from the bottom of the well to the ground surface.
14. After abandonment, written notification describing the well abandonment must be submitted to the NMED. Written notification of well abandonment must consist of a copy of the well plugging record submitted to the State Engineer in accordance with 19.27.4 NMAC, or alternate documentation containing the information to be provided in a well plugging record required by the State Engineer as specified in 19.27.4 NMAC.

Deviation from Monitoring Well Construction and Abandonment Requirements: Requests to construct water table monitoring wells or other types of monitoring wells for ground water monitoring under ground water Discharge Permits or Abatement Plans in a manner that deviates from the specified requirements must be submitted in writing to the GWQB. Each request must state the rationale for the proposed deviation from these requirements and provide detailed evidence supporting the request. The GWQB will approve or deny requests to deviate from these requirements in writing.