



CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 4, 2023

Byron Landfair, Infrastructure Director
City of Artesia
15 E. Compress Road
Artesia, New Mexico 88210

RE: Draft Discharge Permit, DP-1956, City of Artesia Sludge Disposal Facility

Dear Byron Landfair:

The New Mexico Environment Department (NMED) hereby provides notice to the City of Artesia of the proposed approval of Ground Water Discharge Permit, DP-1956, (copy enclosed), pursuant to Subsection H of 20.6.2.3108 NMAC. NMED will publish notice of the availability of the draft Discharge Permit in the near future for public review and comment and will forward a copy of that notice to you.

Prior to making a final ruling on the proposed Discharge Permit, NMED will allow 30 days from the date the public notice is published in the newspaper for any interested party, including the Discharge Permit applicant, i.e., yourself, to submit written comments and/or a request a public hearing. A hearing request shall set forth the reasons why a hearing is requested. NMED will hold a hearing in response to a timely hearing request if the NMED Secretary determines there is substantial public interest in the proposed Discharge Permit.

Please review the enclosed draft Discharge Permit carefully. 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.

Please submit written comments or a request for hearing to my attention at the address below, via email to sara.arthur@env.nm.gov or to pps.general@env.nm.gov, or directly into the NMED Public Comment Portal at <https://nmed.commentinput.com/comment/search>. If NMED does not receive written comments or a request for hearing during the public comment period, the draft Discharge Permit will become final.

Thank you for your cooperation during the review process. Feel free to contact me with any questions at (505) 660-7887.

Sincerely,

Sara Arthur, Geoscientist

Byron Landfair
August 4, 2023
Page 2 of 2

Encl: Draft Discharge Permit, DP-1956

cc: Byron Landfair, blandfair@artesianm.gov
Patsy Hernandez, City of Artesia Wastewater Supervisor, phernandez@artesianm.gov
Nancy E, Peay, P.E., Project Manager, NancyP@smithengineering.pro



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Draft: August 4, 2023

GROUND WATER QUALITY BUREAU
DISCHARGE PERMIT
Issued under 20.6.2 NMAC

Facility Name: City of Artesia Sludge Disposal Facility
Discharge Permit Number: DP-1956
Facility Location: 1702 N. Halderman Road
Artesia, New Mexico
Section 2, Township 17 South, Range 26 East

County: Eddy

Permittee: City of Artesia
Mailing Address: 15 East Compress Road
Artesia, New Mexico 88210

Facility Contact: Byron Landfair, Infrastructure Director
Telephone Number/Email: 575-746-9821/blandfair@artesianm.gov

Permitting Action: New

Permit Issuance Date: DATE
Permit Expiration Date: DATE (7 years from issuance date) or 5 years from commencement of discharge [20.6.2.3109.H(4) NMAC]

NMED Permit Contact: Sara Arthur
Telephone Number/Email: 505-660-7887/sara.arthur@env.nm.gov or pps.general@env.nm.gov

JUSTIN D. BALL
Chief, Ground Water Quality Bureau
New Mexico Environment Department

Date

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ATTACHMENTS

- Discharge Permit Summary
- New Mexico Environment Department Ground Water Quality Bureau Monitoring Well Construction and Abandonment Guidelines, Revision 1.1, March 2011
- Surface Disposal Data Sheet (SDDS- Sludge - <https://www.env.nm.gov/gwb/forms.htm>)

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this groundwater discharge permit (Discharge Permit or DP-1956) to the City of Artesia (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) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

NMED's purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from the City of Artesia Sludge Disposal Facility (Facility) in order to protect groundwater and those segments of surface water gaining from groundwater inflow for present and potential future use as domestic and agricultural water supply and other uses, and to protect public health. It is NMED's determination in issuing this Discharge Permit that the Permittee has met the requirements of Subsection C of 20.6.2.3109 NMAC. The Permittee is responsible for complying with the terms and conditions of this Discharge Permit pursuant to Section 20.6.2.3104 NMAC; failure to do so may result in enforcement action by NMED (20.6.2.1220 NMAC).

Described below are the activities that produce the discharge, the location of the discharge, and the quantity, quality, and flow characteristics.

The Facility dewateres sludge by belt press and/or sludge drying beds operated by the City of Artesia Wastewater Treatment Plant (DP-258) and then discharges up to 5,000 cubic yards (cy) of dewatered sludge from a reclaimed domestic wastewater storage impoundment operated by the City of Artesia Wastewater Treatment Plant to at least 4.7-acres of land surface disposal area at the Facility.

The discharge may contain water contaminants or toxic pollutants elevated above the standards of Section 20.6.2.3103 NMAC and is not subject to the exemption at Subsection 20.6.2.3105.A NMAC.

The Facility is located at 1702 North Halderman Road, Artesia, in Section 2, Township 17 South, Range 26 East, Eddy County. A discharge at the Facility is most likely to affect groundwater at a depth of approximately six feet and having a total dissolved solids (TDS) concentration of approximately 2,300 milligrams per liter.

The application (i.e., discharge plan) associated with this Discharge Permit consists of the materials submitted by Byron Landfair on behalf of the Permittee dated September 15, 2022, and materials contained in the administrative record prior to issuance of this Discharge Permit. The Permittee shall manage this discharge in accordance with all conditions and requirements of this Discharge Permit.

NMED reserves the right to require a Discharge Permit Modification in the event NMED determines that the Permittee is or may be violating, or is likely to violate in the future, the requirements of 20.6.2 NMAC or the standards of Section 20.6.2.3103 NMAC. NMED reserves this right pursuant to Section 20.6.2.3109 NMAC. An NMED requirement to modify the Discharge Permit may result from a determination by NMED that proposed disposal methods, structural controls or operations and management practices approved under this Discharge Permit are insufficiently protective of groundwater quality and human health. NMED reserves the right to require the Permittee to implement abatement of water pollution and remediate groundwater quality.

NMED 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.

This Discharge Permit may use the following acronyms and abbreviations.

Abbreviation	Explanation	Abbreviation	Explanation
CFR	Code of Federal Regulations	NMED	New Mexico Environment Department
CFU	colony forming unit	NMSA	New Mexico Statutes Annotated
Cl	chloride	NO ₃ -N	nitrate-nitrogen
EPA	United States Environmental Protection Agency	QA/QC	Quality Assurance/Quality Control
gpd	gallons per day	SDDS	Surface Disposal Data Sheet
LAA	land application area	TDS	total dissolved solids
LADS	Land Application Data Sheet(s)	TKN	total Kjeldahl nitrogen
lbs N/acre	pounds of nitrogen per acre	total nitrogen	= TKN + NO ₃ -N
mg/L	milligrams per liter	TS	total solids
mg/kg	milligram per kilogram	WQA	New Mexico Water Quality Act
mL	milliliters	WQCC	Water Quality Control Commission
NMAC	New Mexico Administrative Code	WWTF	Wastewater Treatment Facility

II. FINDINGS

In issuing this Discharge Permit, NMED finds the following.

1. 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, without exceeding standards of 20.6.2.3103 NMAC for any water contaminant.

2. The Permittee is discharging effluent or leachate from the Facility directly or indirectly into groundwater pursuant to this Discharge Permit and Sections 20.6.2.3000 through 20.6.2.3114 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

The Permittee is responsible for ensuring that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein pursuant to 20.6.2.3104 NMAC.

Wastewater Treatment Facility Sludge – This Discharge Permit authorizes the Permittee to remove, dewater and discharge up to 5,000 cy of semi-solid or solid domestic wastewater treatment facility sludge from the reuse storage pond operated by the City of Artesia Wastewater Treatment Plant (DP-258) to surface disposal cells totaling at least 4.7 acres at the Facility.

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection D 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 2 and 4 NMAC. [Subsection C of 20.6.2.3109 NMAC]
2.	The Permittee shall operate in a manner that does not violate the standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]

Operational Actions with Implementation Deadlines

#	Terms and Conditions
3.	<p>Prior to discharging sludge from the reuse storage pond to the surface disposal cell(s), the Permittee shall submit written notification to NMED stating the date the discharge is to commence.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]</p>
4.	<p>Prior to discharging sludge from the reuse storage pond to the surface disposal cell(s), the Permittee shall submit a scaled map of the surface disposal area to NMED including the number, location, and size in acres of each surface disposal cell within the surface disposal area.</p> <p>[Subsection C of 20.6.2.3106 NMAC, Subsection A of 20.6.2.3107 NMAC]</p>
5.	<p>Prior to discharging sludge from the reuse storage pond to the surface disposal cell(s), the Permittee shall install 24-inch berms around each individual cell to prevent surface water run-on and run-off. Documentation of berm installation shall consist of a narrative statement describing the berm locations and date-stamped photographs. The Permittee shall submit the documentation to NMED in the next required periodic monitoring report.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>

Operational Actions – All Facility Types

#	Terms and Conditions
6.	<p>To prevent surface water run-on and run-off at the Facility, the Permittee shall maintain earthen berms surrounding the perimeter of the Facility and in between disposal cells that are a minimum of 24 inches above natural grade.</p> <p>In place of a berm across the Facility entrance, the Permittee shall construct and maintain shallow (minimum depth of six inches) stormwater diversion trenches parallel to and on each side of the Facility entrance gate. The Permittee shall maintain all berms and trenches until termination of this Discharge Permit and the Permittee has completed all closure actions required by the Closure Plan conditions.</p> <p>The Permittee shall inspect the berms on a regular basis and after any major rainfall event and repair as necessary.</p>

#	Terms and Conditions
	<p>The Permittee shall keep a log of inspection findings and repairs that includes the date of each inspection and the name of the person responsible for the inspection and shall make the log available to NMED upon request.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
7.	<p>The Permittee shall maintain fences around the entire disposal Facility to restrict access by the general public and animals. A minimum of a three-strand barbed wire fence including a locked gate shall surround the Facility. The Permittee shall maintain the fences to serve the stated purpose throughout the term of this Discharge Permit.</p> <p>[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]</p>
8.	<p>The Permittee shall maintain the following signs at the following locations:</p> <ul style="list-style-type: none"> • Signs posted at the Facility entrance and every 500 feet along the Facility boundary that state: "Notice: Waste Disposal Area - KEEP OUT" and "Aviso: Área de Disposición - NO ENTRAR". • A sign posted at the entrance gate with the name of the Facility's contact person, office phone number of the contact person, emergency contact phone number for the Facility, and physical location of the Facility including township, range, and sections. • A sign at the boundary of each cell to identify the cell number and the waste type the Permittee is authorized to discharge in the cell. <p>All signs shall be weatherproof and legible for the term of this Discharge Permit.</p> <p>[NMSA 1978, § 74-6-5.D, Subsections B and C of 20.6.2.3109 NMAC]</p>
9.	<p>This Discharge Permit authorizes the Permittee to accept domestic wastewater treatment facility sludge from the reuse storage pond operated by the City of Artesia Wastewater treatment facility (DP-258). The Permittee may not receive or remediate any other waste types at the Facility.</p> <p>The Permittee shall not combine different waste types. The Permittee shall dispose of waste in separate cells that receive only a single designated waste type.</p> <p>[Subsection C of 20.6.2.3109 NMAC]</p>
10.	<p>The Permittee shall inspect the Facility weekly and collect any residual solid waste (trash) at the Facility. The Permittee shall dispose of the collected materials in a manner consistent with all local, state, and federal regulations.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections B and C of 20.6.2.3109 NMAC]</p>

#	Terms and Conditions
11.	<p>The Permittee shall not discharge sludge during periods of precipitation or when surface soil is frozen or saturated.</p> <p>[Subsection C of 20.6.2.3109 NMAC]</p>

Operational Actions – Domestic Wastewater Treatment Facility Sludge

#	Terms and Conditions
12.	<p>The Permittee shall apply semi-solid and solid domestic wastewater treatment facility sludge removed from the reuse storage pond operated by the City of Artesia Wastewater Treatment Plant (DP-258) to surface disposal cells totaling at least 4.7 acres at the Facility. The Permittee shall minimize ponding of liquid sludge. The Permittee shall achieve a manner of pathogen reduction requirements and vector attraction reduction (VAR) pursuant to 40 CFR Part 503. The Permittee shall select a VAR option from 40 CFR Part 503.33(b).</p> <p>The Permittee shall record on the manifest the date and time surface disposal occurred and the date, time, and VAR method used to achieve pathogen reduction.</p> <p>[Subsection C of 20.6.2.3109 NMAC]</p>
13.	<p>The Permittee shall discharge domestic wastewater treatment facility sludge to the disposal cell(s) such that the amount of total nitrogen discharged does not exceed 200 pounds per acre in any 12-month period. The Permittee shall distribute domestic wastewater treatment facility sludge evenly throughout the entire disposal area.</p> <p>[Subsection C of 20.6.2.3109 NMAC]</p>

B. MONITORING AND REPORTING

#	Terms and Conditions
14.	<p>The Permittee shall conduct the monitoring, reporting, and other requirements listed below in accordance with the monitoring requirements of this Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
15.	<p>METHODOLOGY – Unless otherwise specified by this Discharge Permit, or approved in writing by NMED, the Permittee shall use sampling and analytical techniques that conform with the references listed in Subsection B of 20.6.2.3107 NMAC.</p>

#	Terms and Conditions
	[Subsection B of 20.6.2.3107 NMAC]
16.	<p>Quarterly monitoring - The Permittee shall perform monitoring and other Permit required actions during the following periods and shall submit quarterly reports to NMED by the following due dates:</p> <ul style="list-style-type: none"> • January 1st through March 31st – due by May 1st; • April 1st through June 30th – due by August 1st; • July 1st through September 30th – due by November 1st; and • October 1st through December 31st – due by February 1st. <p>[Subsection A of 20.6.2.3107 NMAC]</p>
17.	<p>The Permittee shall retain on-site a manifest for each load of waste received. The manifest shall record the following information:</p> <ul style="list-style-type: none"> • date of receipt; • name of the hauling company; • name and address of the waste origin; • type of waste or description of contamination (differentiate between solids and liquids); • volume of waste; • confirmation of inspection for acceptable waste type; • signature of person conducting the inspection; and • cell identification and location within the cell where the Permittee discharged the waste. <p>The Permittee shall make the manifests available for inspection by NMED upon request. The Permittee shall submit a summary listing the information from each manifest for wastes received during the reporting period to NMED in the quarterly monitoring reports.</p> <p>[NMSA 1978, § 74-6-5.D, Subsection A 20.6.2.3107 NMAC]</p>

Monitoring Actions with Implementation Deadlines

#	Terms and Conditions
18.	<p>Prior to discharging dewatered sludge from the reuse storage pond to the surface disposal cell(s), the Permittee shall submit a written groundwater monitoring well location proposal for NMED review and approval. The proposal shall designate the installation locations of the monitoring wells required by Condition 19 of this Discharge Permit. The proposal shall include, at a minimum, the following information.</p>

#	Terms and Conditions
	<p>a) A map showing the proposed location of each monitoring well in relation to the boundary of the source it is intended to monitor.</p> <p>b) A written description of the specific location proposed for each monitoring well including the distance (in feet) and direction of the monitoring well from the edge of the source it is intended to monitor. Examples include: 35 feet north-northwest of the northern berm of the synthetically lined impoundment; 45 feet due south of the surface disposal area; and 30 feet southeast of grease separator.</p> <p>c) A statement describing the groundwater flow direction beneath the Facility, and documentation and/or data supporting the determination.</p> <p>The Permittee must have NMED’s approval of all monitoring well locations prior to their installation.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
19.	<p>Prior to discharging to the Facility, the Permittee shall install the following new monitoring wells.</p> <p>a) One monitoring well (MW-1) located hydrologically upgradient of the Facility.</p> <p>b) One monitoring well (MW-2) located 20 to 50 feet hydrologically downgradient of the surface disposal area.</p> <p>c) One monitoring well (MW-3) located at an alternate location from MW-2 and 20 to 50 feet hydrologically downgradient of the surface disposal area.</p> <p>The Permittee shall complete the wells in accordance with the attachment titled (Monitoring Well Guidance).</p> <p>Unless otherwise noted in this Discharge Permit, the requirement to install a monitoring well downgradient of a source is <u>not</u> contingent upon construction of the Facility, or discharge of wastewater from the Facility.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
20.	<p>Prior to discharging to the Facility and following the installation of the monitoring wells required by this Discharge Permit, the Permittee shall sample groundwater in the wells and analyze the samples for TKN, NO₃-N, TDS, Cl, barium (Ba), cadmium (Cd), chromium (Cr), copper (Cu), mercury (Hg), molybdenum (Mo), nickel (Ni), lead (Pb), phenols, selenium (Se), sulfate (SO₄), and zinc (Zn).</p> <p>Groundwater sample collection, preservation, transport, and analysis shall be performed according to the following procedure.</p> <p>a) Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest one-hundredth of a foot.</p>

#	Terms and Conditions
	<p>b) Purge three well volumes of water from the well prior to sample collection.</p> <p>c) Obtain samples from the well for analysis.</p> <p>d) Properly prepare, preserve, and transport samples.</p> <p>e) Analyze samples in accordance with the methods authorized in this Discharge Permit.</p> <p>Within 45 days of the installation of the monitoring wells, the Permittee shall submit a well completion report to NMED. A well completion report shall at a minimum include, the Office of the State Engineer permit, well construction and lithologic logs, depth-to-most-shallow groundwater measurements, laboratory analytical data results, including the QA/QC summary report and Chain of Custody, and a Facility layout map showing the location and number of each well. The Permittee shall ensure the well completion report addresses each numbered item in the General Drilling and Well Specifications in the attached <i>Monitoring Well Guidelines</i>.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
21.	<p>Prior to discharging to the Facility, the Permittee shall perform a professional survey of all groundwater monitoring wells approved by NMED for Discharge Permit monitoring purposes. The survey shall be tied or referenced to a U.S. Geological Survey (USGS) or other permanent benchmark. Survey data shall include northing, easting, and elevation to the nearest one-hundredth of a foot or shall be in accordance with the “Minimum Standards for Surveying in New Mexico” (12.8.2 NMAC). The survey shall bear the seal and signature of a licensed New Mexico professional surveyor (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority).</p> <p>The Permittee shall utilize the survey to establish an elevation at the top-of-casing, with a permanent marking indicating the point of elevation.</p> <p>Depth-to-most-shallow groundwater shall be measured to the nearest one-hundredth of a foot in all surveyed wells and referenced to mean sea level, and the data shall be used to develop a groundwater elevation contour, i.e., potentiometric surface, map showing the location of all monitoring wells and the direction and gradient of groundwater flow in the uppermost aquifer below the Facility. The Permittee shall submit the data and groundwater elevation contour map to NMED within 30 days of survey completion.</p> <p>[Subsection A of 20.6.2.3107 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>

Groundwater Monitoring Conditions

#	Terms and Conditions
22.	<p>The Permittee shall perform quarterly groundwater sampling in the following groundwater monitoring wells and analyze the samples for TKN, NO₃-N, TDS, Cl, Ba, Cd, Cr, Cu, Hg, Mo, Ni, Pb, phenols, Se, SO₄, and Zn.</p> <ul style="list-style-type: none"> a) MW-1, located hydrologically upgradient of the Facility. b) MW-2, located hydrologically downgradient of the surface disposal area. c) MW-3, located at an alternate location from MW-2 and hydrologically downgradient of the surface disposal area. <p>The Permittee shall perform groundwater sample collection, preservation, transport, and analysis according to the following procedures.</p> <ul style="list-style-type: none"> a) Measure the depth-to-most-shallow groundwater from the top of the well casing to the nearest one-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. <p>The Permittee shall submit the depth-to-most-shallow groundwater measurements and the laboratory analytical data results including the QA/QC summary report and Chain of Custody for each well, and a Facility layout map showing the location and number of each well to NMED in the quarterly monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
23.	<p>The Permittee shall develop a groundwater elevation contour map, i.e., potentiometric surface map, on a quarterly basis using the top of casing elevation data from the monitoring well survey and the quarterly depth-to-most-shallow groundwater measurements, referenced to mean sea level, obtained during the groundwater sampling required by this Discharge Permit.</p> <p>The groundwater elevation contour map shall depict the groundwater flow direction based on the groundwater elevation contours. The Permittee shall estimate groundwater elevations between monitoring well locations using common interpolation methods. The Permittee shall use a contour interval appropriate to the data but shall not be greater than two feet. Groundwater elevation contour maps shall use arrows to depict the groundwater flow direction based on the orientation of the groundwater elevation contours and shall locate and identify each monitoring well and contaminant source.</p>

#	Terms and Conditions
	<p>The Permittee shall submit to NMED a groundwater elevation contour map in the quarterly monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
24.	<p>NMED shall have the option to perform downhole inspections of all groundwater monitoring wells identified in this Discharge Permit. NMED shall establish the inspection date and provide at least a 60-day notice to the Permittee by certified mail. The Permittee shall remove any existing dedicated pumps at least 48 hours prior to NMED inspection to allow adequate settling time of sediment agitated from pump removal.</p> <p>Should the Permittee decide to install a pump in a monitoring well without a dedicated pump, the Permittee shall notify NMED at least 90 days prior to pump installation so that NMED can schedule a downhole well inspection(s) prior to pump placement.</p> <p>[Subsections A and D of 20.6.2.3107 NMAC]</p>

Monitoring and Reporting - Domestic Wastewater Treatment Facility Sludge

#	Terms and Conditions
25.	<p>The Permittee shall analyze domestic wastewater treatment facility sludge transferred to the Facility in the following manner:</p> <ul style="list-style-type: none"> • Record the volume in either gallons or metric tons of domestic wastewater treatment facility sludge discharged to each surface disposal cell during the reporting period. • Sample each domestic wastewater sludge type (solid, semi-solid, and liquid) transported to the surface disposal facility on a semi-annual basis and analyze the sample(s) for percent total solids (%TS). • Sample each domestic wastewater sludge type (solid, semi-solid, and liquid) transported to the surface disposal Facility on a semi-annual basis and analyze the samples for TKN and NO₃-N. The Permittee shall report the analytical results as mg/kg for TKN and NO₃-N (dry weight basis) for solid sludge and as mg/L for TKN and NO₃-N for liquid and semi-solid sludge. <p>The Permittee shall ensure the samples are properly prepared, preserved, transported, and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit records of the volume of the sludge discharged, percent total solids, and analytical results, including the laboratory QA/QC summary, to NMED in the</p>

#	Terms and Conditions
	<p>quarterly monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC and Subsection H of 20.6.2.3109]</p>
26.	<p>The Permittee shall complete a Surface Disposal Data Sheet for Sludge (SDDS-Sludge, attached) on a monthly basis to document the amount of nitrogen in domestic wastewater treatment facility sludge discharged to the surface disposal cell(s). The Permittee shall complete a SDDS for each cell designation and for each sludge type (solid, semi-solid, and liquid) disposed of in each cell. The SDDS shall reflect the most recent nitrogen analysis results and the average percent total solids for each sludge type for each cell. The Permittee shall not adjust the nitrogen content to account for volatilization or mineralization processes.</p> <p>The Permittee shall submit the SDDSs, or a statement that no surface disposal occurred within the cell(s), to NMED in the quarterly monitoring reports.</p> <p>[Subsection A of 20.6.2.3107 NMAC and Subsection H of 20.6.2.3109]</p>

C. CONTINGENCY PLAN

#	Terms and Conditions
27.	<p>In the event that groundwater monitoring indicates that groundwater exceeds a standard identified in Section 20.6.2.3103 NMAC, the Permittee shall collect a confirmatory sample from the monitoring well within 15 days of receipt of the initial sampling results to confirm the exceedance in the initial sample.</p> <p>Within 60 days of confirmation of groundwater contamination, the Permittee shall submit to NMED a Corrective Action Plan (CAP) that proposes, at a minimum, contaminant source control measures and an implementation schedule. The Permittee shall complete the CAP as approved by NMED.</p> <p>This condition shall apply until the Permittee completes groundwater monitoring for a minimum of eight (8) consecutive quarterly samples demonstrating groundwater does not exceed the standards of Section 20.6.2.3103 NMAC.</p> <p>Violation of the groundwater standard beyond 180 days after the confirmation of groundwater contamination, may cause NMED to require the Permittee to abate water pollution consistent with the requirements and provisions of Section 20.6.2.4101, Section 20.6.2.4103, Subsections C and E of 20.6.2.4106, Section 20.6.2.4107, Section 20.6.2.4108 and Section 20.6.2.4112 NMAC.</p>

#	Terms and Conditions
	[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]
28.	<p>In the event that information available to NMED indicates that a well is not constructed in a manner consistent with the attachment titled (Monitoring Well Guidance); contains insufficient water to effectively monitor groundwater quality; or is otherwise 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.</p> <p>The Permittee shall survey the replacement monitoring well(s) within 30 days following well completion.</p> <p>The Permittee shall install replacement wells at locations approved by NMED prior to installation and shall complete replacement wells in accordance with the attached Monitoring Well Guidance. The Permittee shall submit well construction and lithologic logs, survey data and a groundwater elevation contour map to NMED within 60 days following well completion.</p> <p>The Permittee shall properly plug and abandon a monitoring well requiring replacement upon completion of the replacement monitoring well. The Permittee shall complete the well plugging and abandonment, and shall document the abandonment procedures, in accordance with the attachment Monitoring Well Guidance and all applicable local, state, and federal regulations. The Permittee shall submit a copy of the well abandonment documentation to NMED within 60 days following the replacement well completion.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
29.	<p>In the event that groundwater flow information obtained pursuant to this Discharge Permit indicates that a monitoring well is not appropriately located, e.g., hydrologically downgradient of the discharge location it is intended to monitor, the Permittee shall install a replacement well within 120 days following notification from NMED. The Permittee shall survey the replacement monitoring well within 30 days following well completion.</p> <p>The Permittee shall install replacement wells at locations approved by NMED prior to installation and shall complete replacement wells in accordance with the attachment Monitoring Well Guidance. The Permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map within 60 days following well completion.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>

#	Terms and Conditions
30.	<p>In the event that a SDDS for any cell shows that the amount of nitrogen applied in any 12-month period exceeds 200 pounds per acre, the Permittee shall propose the reduction of nitrogen loading to the affected cell by submitting a CAP to NMED for approval. The Permittee shall submit the CAP, including a schedule for completion of corrective actions, within 90 days following the end of the monitoring period in which the exceedance occurred. The Permittee shall initiate implementation of the CAP following approval by NMED.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
31.	<p>In the event that a release occurs that is not authorized under this Discharge Permit (commonly known as a “spill”), 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.</p> <p>Within <u>24 hours</u> following discovery of the unauthorized discharge, the Permittee shall verbally notify NMED and provide the following information.</p> <ul style="list-style-type: none"> 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. <p>Within <u>one week</u> following discovery of the unauthorized discharge, the Permittee shall submit written notification to NMED providing the information listed above and any pertinent updates.</p> <p>Within <u>15 days</u> following discovery of the unauthorized discharge, the Permittee shall submit a CAP to NMED describing any corrective actions previously taken and corrective actions to be taken relative to the unauthorized discharge. The CAP shall include the following information.</p> <ul style="list-style-type: none"> 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.

#	Terms and Conditions
	<p>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 required to be given pursuant to Paragraph (1) of Subsection A of 20.6.2.1203 NMAC, NMED may require the Permittee to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC.</p> <p>The Permittee shall not construe anything in this condition as relieving them of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC.</p> <p>[20.6.2.1203 NMAC]</p>
32.	<p>In the event that NMED or the Permittee identifies any failures of the discharge plan, i.e., the application, or this Discharge Permit not specifically noted herein, NMED may require the Permittee to submit a CAP 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.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]</p>

D. CLOSURE PLAN

Permanent Facility Closure Conditions

#	Terms and Conditions
33.	<p>The Permittee shall complete the following closure measures in the event they are proposing to permanently close the sludge disposal portion of the Facility or a surface disposal cell:</p> <ul style="list-style-type: none"> a) Notify NMED of the closure of a surface disposal cell. b) Within 60 days of ceasing to discharge to a disposal cell, backfill the disposal cell(s) with clean fill (as necessary) and re-grade to allow for positive storm water drainage. c) Re-vegetate the cells and disturbed areas at the Facility by establishing a vegetative cover equal to 70% of the native perennial vegetative cover consisting of at least three native plant species including at least one grass, but not including noxious weeds. The Permittee shall maintain the vegetative cover through two consecutive growing seasons. <p>The Permittee shall continue groundwater monitoring until the Permittee meets the requirements of this condition and groundwater monitoring confirms for a minimum of eight consecutive quarterly groundwater sampling events that groundwater does</p>

#	Terms and Conditions
	<p>not exceed the standards of Section 20.6.2.3103 NMAC. This period is referred to as “post-closure.”</p> <p>If at any time monitoring results show an exceedance of a groundwater quality standard in Section 20.6.2.3103 NMAC, the Permittee shall implement the Contingency Plan required by this Discharge Permit.</p> <p>Following notification from NMED that the Permittee may cease post-closure monitoring, the Permittee shall plug and abandon the monitoring well(s) in accordance with the attached Monitoring Well Guidance.</p> <p>When the Permittee has met all closure and post-closure requirements and verified appropriate actions with date stamped photographic evidence or an associated NMED inspection, the Permittee may submit to NMED a written request, including photographic evidence, for termination of the Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>

E. GENERAL TERMS AND CONDITIONS

#	Terms and Conditions
34.	<p>RECORD KEEPING - The Permittee shall maintain a written record of the following:</p> <ul style="list-style-type: none"> • Information and data used to complete the application for this Discharge Permit; • Information, data, and documents demonstrating completion of closure activities; • 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 logs, inspection reports, and 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; • Groundwater quality and wastewater quality data collected pursuant to this Discharge Permit; • Copies of construction records (well log) for all sampled groundwater monitoring wells pursuant to this Discharge Permit;

#	Terms and Conditions
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> a. the dates, location and times of sampling or field measurements; b. the name and job title of the individuals who performed each sample collection or field measurement; c. the sample analysis date of each sample; d. the name and address of the laboratory, and the name of the signatory authority for the laboratory analysis; e. the analytical technique or method used to analyze each sample or collect each field measurement; f. the results of each analysis or field measurement, including raw data; g. the results of any split, spiked, duplicate or repeat sample; and h. a copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used. <p>The Permittee shall maintain the written record at a location accessible to NMED during a Facility inspection for a lifetime of the Discharge Permit. The Permittee shall make the record available to the department upon request.</p> <p>[Subsections A and D of 20.6.2.3107 NMAC]</p>
35.	<p>SUBMITTALS – The Permittee shall submit both a paper copy and an electronic copy of all notification and reporting documents required by this Discharge Permit, e.g., monitoring reports. The paper and electronic documents shall be submitted to the NMED Permit Contact identified on the Permit cover page.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>
36.	<p>INSPECTION and ENTRY – The Permittee shall allow NMED to inspect 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 any maintained records required by this Discharge Permit, the regulations of the federal government, or the WQCC are located.</p> <p>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.</p>

#	Terms and Conditions
	<p>No person shall construe anything in this Discharge Permit 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.</p> <p>[Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]</p>
37.	<p>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.</p> <p>[Subsection D of 20.6.2.3107 NMAC]</p>
38.	<p>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 NMED’s approval (which may require modification of this Discharge Permit) prior to implementing such changes.</p> <p>[Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC]</p>
39.	<p>PLANS and SPECIFICATIONS – In the event the Permittee proposes 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 of the proposed system or process unit to NMED for approval prior to the commencement of construction.</p> <p>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) to NMED prior to implementation.</p> <p>[Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>
40.	<p>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</p>

#	Terms and Conditions
	<p>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 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.</p> <p>[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1]</p>
41.	<p>CRIMINAL PENALTIES – No person shall:</p> <ul style="list-style-type: none"> • Make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or maintained under the WQA; or • Falsify, tamper with, or render inaccurate any monitoring device, method or record 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. <p>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.</p> <p>[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]</p>
42.	<p>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 any other applicable federal, state, and/or local laws, regulations, zoning requirements, nuisance ordinances, permits or orders.</p> <p>[NMSA 1978, § 74-6-5.L]</p>

#	Terms and Conditions
43.	<p>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 raised and the relief sought. Unless the Permittee files a timely petition for review, the decision of NMED shall be final and not subject to judicial review.</p> <p>[20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]</p>
44.	<p>TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this Facility or any portion thereof, the Permittee shall:</p> <ul style="list-style-type: none"> • 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 the proposed transferee has received such notification. <p>The Permittee shall continue to be responsible for any discharge from the Facility, until both ownership and possession of the Facility have been transferred to the transferee.</p> <p>[20.6.2.3111 NMAC]</p>
45.	<p>PERMIT FEES – The Permittee shall be aware that the payment of permit fees is due at the time of Discharge Permit approval. The Permittee may pay the permit fees in a single payment, or they may pay the fee in equal installments on a yearly basis over the term of the Discharge Permit. The Permittee shall remit single payments to NMED no later than 30 days after the Discharge Permit issuance date. The Permittee shall remit initial installment payments to NMED no later than 30 days after the Discharge Permit issuance date; with subsequent installment payments remitted to NMED no later than the anniversary of the Discharge Permit issuance date.</p> <p>Permit fees are associated with <u>issuance</u> of this Discharge Permit. No person shall construe anything in this Discharge Permit 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. NMED shall suspend or terminate an approved Discharge Permit if the Permittee fails to remit an installment payment by its due date.</p> <p>[Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]</p>



New Mexico Environment Department Ground Water Quality Bureau Discharge Permit Summary

Facility Information

Facility Name City of Artesia Sludge Disposal Facility
Discharge Permit Number DP-1956

Legally Responsible Party Byron Landfair, Infrastructure Director
City of Artesia
15 E. Compress Road
Artesia, New Mexico 88210
(575) 746-9821

Treatment, Disposal and Site Information

Primary Waste Type Wastewater Treatment Facility Sewage Sludge
Facility Type Surface Disposal Area

Treatment Methods

Type	Designation	Description & Comments
Sludge Belt Press	Sludge Belt Press	Sludge Belt Press operated by the City of Artesia Wastewater Treatment Facility for reuse pond sludge dewatering
Sludge Drying Beds	Sludge Drying Beds	Sludge Drying Beds operated by the City of Artesia Wastewater Treatment Facility for reuse pond sludge drying

Discharge Locations

Type	Designation	Description & Comments
Surface Disposal Area	Surface Disposal Area	Approximately 4.7-acre field used for disposal of dewatered/dried sludge from reuse pond

Ground Water Monitoring Locations

Type	Designation	Description & Comments
Monitoring Well 1	MW-1	Required to be installed hydrologically upgradient of the reuse pond sludge surface disposal area by this DP
Monitoring Well	MW-2	Required to be installed 20 -50 feet hydrologically downgradient of the reuse pond sludge surface disposal area by this DP
Monitoring Well	MW-3	Required to be installed 20 -50 feet hydrologically downgradient of the reuse pond sludge surface disposal area and in a different location than MW-2 by this DP

Depth-to-Ground Water six feet
Total Dissolved Solids (TDS) 2,000 mg/L



New Mexico Environment Department Ground Water Quality Bureau Discharge Permit Summary

Permit Information

Current Action

Application Received
Public Notice Published
Permit Issued (Issuance Date)
Permitted Discharge Volume

New Permit

September 13, 2022
August 2023
[issuance date]
5,000 Cubic Yards Total

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

Sara Arthur

Lead Staff Telephone Number

(505) 660-7887

Lead Staff Email

sara.arthur@env.nm.gov or pps.general@env.nm.gov

**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 groundwater 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 groundwater 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.

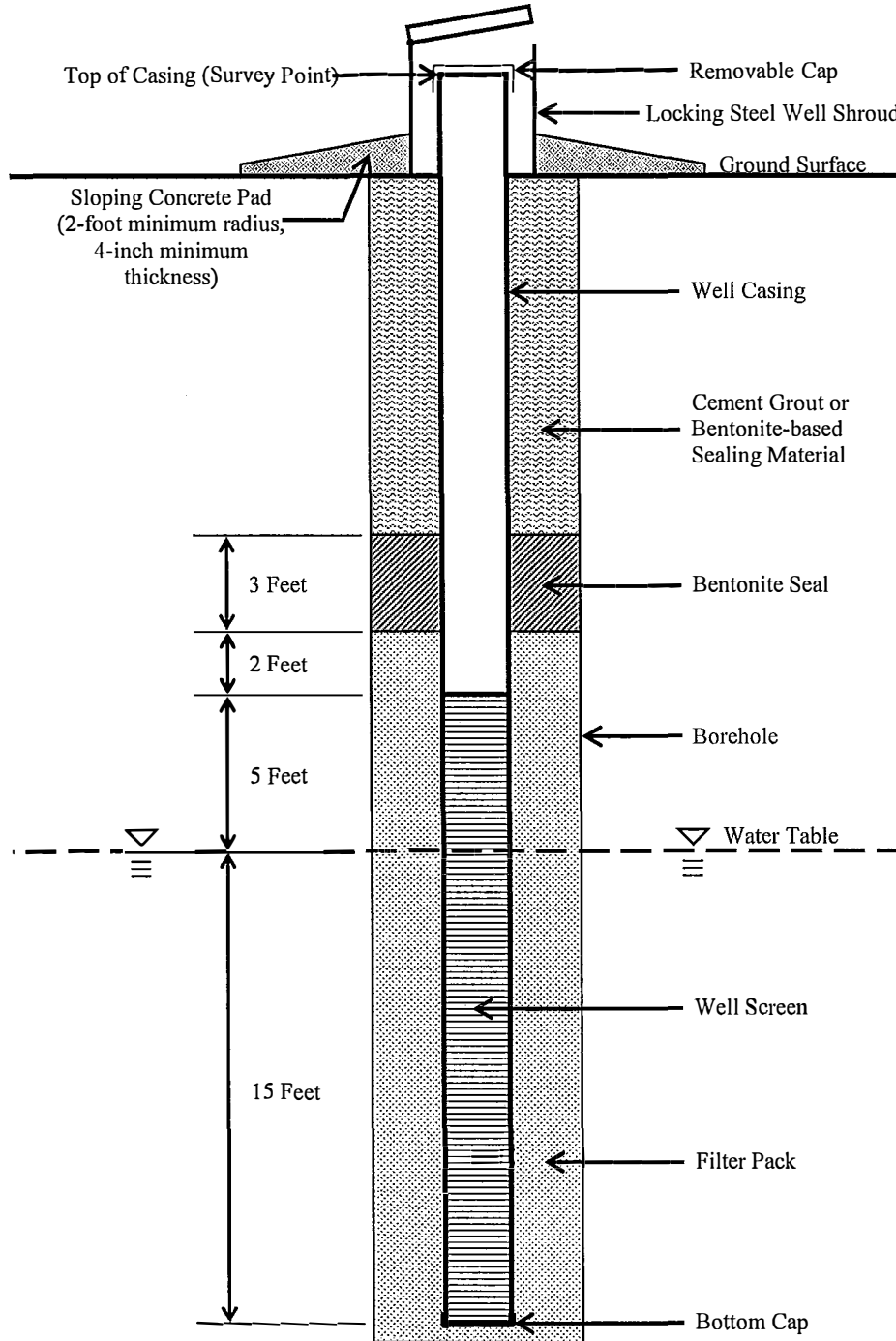
Abandonment:

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 groundwater monitoring under groundwater 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.

MONITORING WELL SCHEMATIC

(Not to Scale)



**Surface Disposal Data Sheet (SDDS)
Sludge**

New Mexico Environment Department
Ground Water Quality Bureau



DATE: DP#: MONITORING REPORT DUE DATE:

FACILITY NAME: REPORTING PERIOD (i.e., from ___ to ___):

SLUDGE TYPE (i): DISCHARGE CELL DESIGNATION (i): # ACRES IN CELL:

A	B	C	D	E	F	G	H
MONTH & YEAR OF DISCHARGE (ii)	PERCENT SOLIDS	VOLUME OF SLUDGE DISCHARGED	DRY WEIGHT OF SLUDGE DISCHARGED	SLUDGE SAMPLE: TOTAL NITROGEN CONCENTRATION (iii)	TOTAL NITROGEN (KG)	TOTAL NITROGEN (Pounds)	NITROGEN LOADING
	%	GALLONS	(B X 10,000 X C / 1,000,000 X 8.34 / 2,200) metric tons dry weight	(TKN + NO3-N) mg/kg	((D x E) ÷ 1,000) kg N	(F x 2.2) lbs N	(G ÷ # acres) lbs N/acre
<i>example assuming a 3-acre cell: MM - YY</i>	5.8	120,000 gallons	26.4 metric tons	2063 mg/kg TKN + 687 mg/kg NO3-N = 2750 mg/kg N	(26.4 metric tons x 2750 mg/kg) ÷ 1,000 = 72.6 kg N	(72.6 kg N/metric ton) x 2.2 = 160 lbs N	160 lbs N ÷ 3 acres = 53 lbs N/ac
			0.0		0.0	0	
			0.0		0.0	0	
			0.0		0.0	0	
			0.0		0.0	0	
			0.0		0.0	0	
			0.0		0.0	0	
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			0.0		0.0	0	
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			0.0		0.0	0	
			0.0		0.0	0	
TOTALS						0	

(i) One SDDS form should be submitted for each cell designation and for each sludge type (liquid, semi-solid, or solid) disposed of in each cell.
(ii) Each form must reflect the most recent 12 months of sludge discharge. In the event discharge did not occur, please report MM-YY and "no discharge" in Column C.
(iii) This information should be obtained from the most recent laboratory analysis. If quarterly sampling is required, record the same data for the three months of that monitoring quarter.