NEW MEXICO
ENVIRONMENT DEPARTMENT

Ground Water Quality Bureau

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

Harold Runnels Building
1190 St. Francis Drive
P.O. Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-2918 Fax (505) 827-2965
www.nmenv.state.nm.us

DAVE MARTIN
Secretary

BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

November 23, 2011

Mr. Bryan Romero, Acting Director
City of Santa Fe Wastewater Management Division
73 Paseo Real
Santa Fe, NM 87507

RE: Discharge Permit Renewal, DP-135, City of Santa Fe - Sludge Disposal Facility

Dear Mr. Romero:

The New Mexico Environment Department (NMED) issues the enclosed Discharge Permit Renewal, DP-135, 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 received additional comments from the City of Santa Fe on September 14, 2011 concerning revisions to the draft Discharge Permit issued to the City on August 17, 2011. In summary, for the permittee's edification, NMED's responses to these comments are as follows:

1) NMED is agreeable with the comments and/or timeline modification requests related to Items #10, #11, #17, #18, #25, and #28, and has incorporated changes herein to the final Discharge Permit.
2) With respect to Item #19, the monitoring well survey needs to be conducted within 14 months of the effective date of the Discharge Permit (i.e., by January 23, 2013). The reason for this is the need to incorporate the new monitoring well (MW-6) as part of the monitoring well survey.
3) With respect to Item #37, NMED has reviewed the permittee's comments, agrees with them, and has removed the specific closure conditions for Disposal Area 2 from the final

Discharge Permit. The closure items in Item #38 (i.e., Condition 37 in the final permit) will remain.

4) With respect to Item #38 (Condition 37 in the final Discharge Permit), the need to establish vegetative cover is independent of drought conditions. NMED recognizes that it may take numerous attempts to successfully establish a vegetative cover.
5) With respect to the "General" comments made by the City of Santa Fe, all references to "cell" within the Discharge Permit have been changed to "area". NMED has also resolved the discrepancy related to the DMR submittal date.

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. Such conditions are listed at the beginning of the operational, monitoring and closure plans of this Discharge Permit.

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 November 23, 2016.

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 $2,300.00 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 Brad Reid at (505) 827-2963. Thank you for your cooperation and comments during this Discharge Permit review.

Sincerely,

Jerry Schoeppner, Acting Chief
Ground Water Quality Bureau

JS:BR/br

Encs: Discharge Permit Renewal, DP-135
Ground Water Discharge Permit Conditions for Synthetically Lined Lagoons – Liner Material and Site Preparation, Revision 0.0, May 2007
Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions, Revision 1.1, March 2011
Surface Disposal Data Sheet (SDDS; also available at the following website: http://www.nmenv.state.nm.us/gwb/forms/NewMexicoEnvironmentDepartment-GroundWaterQualityBureau-Forms.htm)

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)
Luis Orozco, Plant Superintendent, (permit – electronic copy to lgorozco@ci.santa-fe.nm.us)

GROUND WATER DISCHARGE PERMIT RENEWAL
City of Santa Fe - Sludge Disposal Facility, DP-135

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal (Discharge Permit), DP-135, 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, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from the City of Santa Fe - Sludge Disposal Facility (facility) into ground and surface water, so as to protect ground and surface water 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 met.

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

Up to 28,000 gpd on an annual average, not to exceed 10,220,000 gallons per year, of liquid, and/or dewatered domestic wastewater treatment facility (WWTF) sludge is discharged in a rotational manner to three authorized disposal areas totaling 42.48 acres (Disposal Area 1 = 6.2 acres; Disposal Area 2 = Closed (Solar Array); Disposal Area 3 = 19.0 acres; Disposal Area 4 = 17.28 acres).

The discharge contains water contaminants or toxic pollutants which may be elevated above the standards of Section 20.6.2.3103 NMAC. The facility is located approximately 0.5 mile west of the intersection of Paseo Real and Highway 599 in Santa Fe in Section 10, T16N, R08E, Santa Fe County. Ground water below the site ranges in depths from approximately 130 to 190 feet and has a total dissolved solids concentration of approximately 125 milligrams per liter.

The original Discharge Permit was issued on June 8, 1984 and subsequently renewed and/or modified on April 10, 1989, October 18, 1993, January 27, 1995, December 2, 1996, and December 30, 2002. The permittee's application consists of the materials submitted by the permittee dated June 18, 2007, December 3, 2010 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 ground water quality, and that more stringent requirements to protect and/or remediate ground water quality may be required by NMED. These requirements may include: lining/relining lagoons/retention ponds; expanding surface disposal

areas; ceasing discharging to surface disposal areas, changing waste management practices; expanding monitoring requirements; and/or implementing abatement of water pollution.

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 abbreviations may be used in this Discharge Permit:

Abbreviation	Explanation		Abbreviation	Explanation
BOD_5	biochemical oxygen demand (5-day)		NO_3-N	nitrate-nitrogen
CFR	Code of Federal Regulations		NTU	nepholometric turbidity units
CFU	colony forming units		SDDS	Surface Disposal Data Sheet
Cl	chloride		TDS	total dissolved solids
EPA	United States Environmental Protection Agency		TKN	total Kjeldahl nitrogen
Mg/kg	Milligrams per kilogram			
mg/L	milligrams per liter		TPH	total petroleum hydrocarbons
mL	milliliters		TSS	total suspended solids
NMAC	New Mexico Administrative Code		total nitrogen	TKN+NO_3-N
NMED	New Mexico Environment Department		WQCC	Water Quality Control Commission
NMSA	New Mexico Statutes Annotated			

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 ground water 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 ground water of the State of New Mexico which has an existing concentration of 10,000 milligrams per liter or less of total dissolved solids 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. CONDITIONS

The following conditions shall be complied with by the permittee and are enforceable by NMED. The permittee is authorized to discharge water contaminants subject to the following conditions:

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. [20.6.2.3106.C NMAC, 20.6.2.3107 NMAC]
2.	The permittee shall operate in a manner such that standards and requirements of Sections 20.6.2.3101 NMAC and 20.6.2.3103 NMAC are not violated. [20.6.2.3103 NMAC]
3.	The permittee is authorized to discharge up to 28,000 gpd on an annual average, not to exceed 10,220,000 gallons per year, of liquid, and/or dewatered domestic WWTF sludge in a rotational manner to three authorized disposal areas totaling 42.48 acres (Disposal Area 1 = 6.2 acres; Disposal Area 2 = Closed (Solar Array); Disposal Area 3 = 19.0 acres; Disposal Area 4 = 17.28 acres). Waste types that are not specifically authorized to be received by this Discharge Permit shall not be received at the facility. [20.6.2.3104 NMAC]
4.	The permittee shall reduce the volume of liquid, and/or dewatered domestic WWTF sludge discharged to the authorized disposal areas according to the following schedule over the five year permit term: End of Year 1 (i.e., by December 31, 2012) = Reduce discharge volume by 30% to 19,600 gpd on an annual average, not to exceed 7,154,000 gallons per year End of Year 2 (i.e., by December 31, 2013) = Reduce discharge volume by 41% to 16,520 gpd on an annual average, not to exceed 6,029,800 gallons per year End of Year 3 (i.e., by December 31, 2014) = Reduce discharge volume by 49% to 14,280 gpd on an annual average, not to exceed 5,212,200 gallons per year End of Year 4 (i.e., by December 31, 2015) = Reduce discharge volume by 57% to 12,040 gpd on an annual average, not to exceed 4,394,600 gallons per year End of Year 5 (i.e., by Permit Term End Date, 2016) = Reduce discharge volume by 65% to 9,800 gpd on an annual average, not to exceed 3,577,000 gallons per year [20.6.2.3109 NMAC]
5.	The permittee shall maintain fences around the entire disposal facility to prevent unrestricted access. A minimum of a three-strand barbed wire fence and locked gate shall surround the facility. [20.6.2.3109 NMAC]
6.	The permittee shall maintain the following signs at the following locations: • Signs in both English and Spanish that state: "Notice: Waste Disposal Area - KEEP OUT" and "Aviso: Área de Disposición - NO ENTAR" posted at the facility entrance and every 500 feet along the facility boundary. • A sign 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 section(s) posted at the entrance gate. • A sign on each tank with the name of the tank contents. Tanks containing contaminated water should be labeled "Not Potable Water" and "el agua no es potable". • A sign to identify each disposal area by number and the waste type authorized to be

	discharged in each disposal area. All signs shall be weatherproof and posted at the boundary of each disposal area to facilitate a rotational disposal schedule as required in conditions below. All signs shall remain legible for the term of this Discharge Permit. [20.6.2.3109 NMAC]
7.	To prevent run-on and run-off from a storm event, the permittee shall maintain a minimum 24-inch earthen berm surrounding the perimeter of the facility. The berm shall be inspected on a regular basis and after any major rainfall event and repaired as necessary. In place of a berm across the facility entrance, the permittee shall construct and maintain shallow (minimum depth of six inches) stormwater diversion bar trenches parallel to and on each side of the facility entrance gate. [20.6.2.3107 NMAC, 20.6.2.3109 NMAC]
8.	The permittee shall inspect the facility weekly and collect any residual solid waste (trash) on the facility site. The collected materials shall be disposed of in a manner consistent with all local, state and federal regulations. [20.6.2.3109 NMAC]
9.	The permittee shall not discharge liquid sludge during periods of precipitation or when surface soils are frozen or saturated. Wastes may be stored during these periods. [20.6.2.3109 NMAC]
10.	Within 17 months of the effective date of this Discharge Permit (by April 23, 2013), the permittee shall install synthetic liners in the two existing stormwater retention impoundments. Construction plans and specifications of the proposed synthetic liner design for the stormwater retention impoundments shall be submitted to NMED for approval within 10 months of the effective date of this Discharge Permit (by September 23, 2012). The impoundment liners shall be constructed in accordance with the attachment titled *Ground Water Discharge Permit Conditions for Synthetically Lined Lagoons – Liner Material and Site Preparation*, Revision 0.0, May 2007. The permittee shall notify NMED at least five working days prior to liner installation to allow NMED personnel to be onsite for inspection. Record drawings of the impoundments, impoundment liners, and final impoundment capacity calculations shall be submitted to NMED within 30 days of liner installation. A licensed New Mexico professional engineer shall certify construction plans and specifications, supporting design calculations, and record drawings of the impoundment and liner. [20.6.2.3109 NMAC]
11.	The impoundment liners shall be maintained in such a manner as to avoid conditions which could affect the structural integrity of the lined stormwater retention impoundments and/or impoundment liners. Such conditions include, but are not limited to: • Erosion damage; • Animal activity/damage; • The presence of vegetation, such as; aquatic plants, weeds, woody shrubs or trees growing within five feet of the impoundment edge or within the impoundment itself; • Evidence of seepage; • Evidence of berm subsidence; and/or • The presence of large pieces or large quantities of debris in the impoundment. The permittee shall visually inspect the stormwater retention impoundments and surrounding berms on a quarterly basis to ensure proper maintenance. Vegetation growing around the stormwater retention impoundments shall be routinely controlled by mechanical removal in a manner that is protective of the lagoon liner. Any evidence of damage to the impoundment berm or liner shall be reported to NMED immediately upon discovery.

	[20.6.2.3107 NMAC]
12.	The permittee shall apply liquid, and/or dewatered domestic WWTF sludge in a rotational manner to three disposal areas totaling 42.48 acres. The sludge shall be evenly distributed throughout the individual disposal areas in use. Ponding of liquid sludge shall be minimized. Treatment, storage and disposal of sludge shall be in accordance with requirements set forth in 40 CFR Part 503. [20.6.2.3104 NMAC]
13.	The permittee shall monitor the facility's stormwater retention impoundments for the presence of standing liquid after every precipitation event. Should standing liquid be noted in the facility's stormwater retention impoundments, it shall be removed as soon as practicable to minimize the potential for movement to ground water and disposed of in accordance with all local, state and federal regulations. [20.6.2.3109 NMAC]

MONITORING, REPORTING, AND OTHER REQUIREMENTS

#	**Terms and Conditions**
14.	The permittee shall conduct the monitoring, reporting, and other requirements listed below. [20.6.2.3107 NMAC]
15.	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 (18th, 19th 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) Federal Register, latest methods published for monitoring pursuant to Resources Conservation Recovery Act regulations f) U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition g) Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods; Part 2. Microbiological and Biochemical Properties; and Part 3. Chemical Methods, American Society of Agronomy. [20.6.2.3107.B NMAC]
16.	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: • 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**.

	Monitoring requirements detailed in this Discharge Permit are summarized on the sheet titled *Summary of Required Actions, Monitoring and Reporting*. [20.6.2.3107 NMAC]
17.	Within one year of the effective date of this Discharge Permit (by November 23, 2012), the permittee shall install the following new monitoring well: • One monitoring well (MW-6) located 20 to 50 feet hydrologically downgradient of Disposal Area 4 and in an alternative location from MW-1. All monitoring well locations shall be approved by NMED prior to installation. The well shall be completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. Construction and lithologic logs shall be submitted to NMED within 14 months of the effective date of this Discharge Permit (by January 23, 2013). [20.6.2.3107 NMAC]
18.	Following installation of the new monitoring well (MW-6) required by this Discharge Permit and within 60 days of completion of the well, the permittee shall sample ground water in the new well for the following dissolved (except where noted) constituents: • aluminum • arsenic • barium • boron • cadmium • chromium • cobalt • copper • cyanide • fluoride • iron • lead • manganese • molybdenum • mercury (total unfiltered) • pH • nickel • selenium • silver • sulfate • zinc • Polychlorinated biphenyls • (PCBs) (total unfiltered) Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure: a) Measure the depth-to-ground water from the top of 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-water measurements, analytical results, including laboratory QA/QC summary report, and a facility layout map showing the location and number of each well shall be submitted to NMED within 90 days of the installation of the monitoring well. [20.6.2.3107 NMAC]

19.	Within 14 months of the effective date of this Discharge Permit (by January 23, 2013), the permittee shall survey all wells approved by NMED for Discharge Permit monitoring purposes to a U.S. Geological Survey (USGS) or other permanent benchmark. Survey data shall include northing, easting and elevation to the nearest hundredth of a foot or in accordance with the "Minimum Standards for Surveying in New Mexico" (12.8.2 NMAC). A survey elevation shall be established at the top-of-casing, with a permanent marking indicating the point of survey. The survey shall be completed and certified by a licensed New Mexico professional surveyor. Depth-to-water shall be measured to the nearest hundredth of a foot in all surveyed wells, and the data shall be used to develop a map showing the location of all monitoring wells and the direction and gradient of ground water flow at the facility. The data and map of ground water flow direction at the facility shall be submitted to NMED within 14 months for the effective date of this Discharge Permit (by January 23, 2013). [20.6.2.3107 NMAC]
20.	The permittee shall measure and record the volume and dry weight of domestic wastewater treatment facility sludge discharged to each surface disposal area each month by tracking the volume of the loads received and the percent total solids as determined by sampling each type of sludge (i.e., liquid or dewatered). Records of the volume and dry weight of the sludge discharged shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]
21.	The permittee shall sample each sludge type (liquid or dewatered) transported to the surface disposal facility on a monthly basis and analyze the sample(s) for percent total solids (%TS). Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results, reported as %TS for each sludge type, shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]
22.	The permittee shall sample each sludge type (liquid or dewatered) transported to the surface disposal facility on a monthly basis and analyze the samples for TKN and NO_3-N. Samples shall be properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. Analytical results, reported as mg/kg for TKN and NO_3-N (dry weight basis), shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]
23.	The permittee shall submit copies of the completed Discharge Monitoring Reports (DMR) required by 40 CFR Part 503 to NMED in the quarterly monitoring report due by May 1st. [40.503(17) CFR, 74-6-5(E)(1) WQA, 74-6-5(K) WQA]
24.	The permittee shall complete a SDDS to document the amount of nitrogen applied to each surface disposal area, each month. A SDDS shall be completed for each sludge type (liquid or dewatered) associated with each disposal area, and shall reflect the nitrogen concentration from the monthly sludge analysis and the total number of dry tons discharged each month. Nitrogen content shall not be adjusted to account for volatilization or mineralization processes. The SDDS, or a statement that no surface disposal occurred within the specific disposal area, shall be submitted to NMED in the quarterly monitoring reports. [20.6.2.3107 NMAC]
25.	The permittee shall perform two ground water sampling events, one in 2013 and one in 2015, in five monitoring wells and analyze the samples for the following dissolved (except where noted) constituents:

	• aluminum • arsenic • barium • boron • cadmium • chromium • cobalt • copper • cyanide • fluoride • iron • lead • manganese • molybdenum • mercury (total unfiltered) • pH • nickel • selenium • silver • sulfate • zinc • Polychlorinated biphenyls (PCBs) (total unfiltered) The permittee shall sample the following wells: • MW-1, intended to be located hydrologically downgradient of Disposal Area 4 and just west of Huey Road. • MW-2, intended to be located hydrologically downgradient of Disposal Area 1 and Disposal Area 3 and located in the middle of the entire disposal area. • MW-3, intended to be located hydrologically upgradient of the facility and along Paseo Real. • MW-5, intended to be located hydrologically downgradient of Disposal Area 3. • MW-6, intended to be located hydrologically downgradient of Disposal Area 4. Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure: a) Measure the depth to ground water from the top of 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-water 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 report due by November 1st in 2013 and 2015. [20.6.2.3107 NMAC]
26.	The permittee shall perform quarterly ground water sampling in five monitoring wells and analyze the samples for dissolved TKN, NO_3-N, TDS and Cl. The permittee shall sample the following wells: • MW-1, intended to be located hydrologically downgradient of Disposal Area 4 and just west of Huey Road. • MW-2, intended to be located hydrologically downgradient of Disposal Area 1 and

	Disposal Area 3 and located in the middle of the entire disposal area. • MW-3, intended to be located hydrologically upgradient of the facility and along Paseo Real. • MW-5, intended to be located hydrologically downgradient of Disposal Area 3. • MW-6, intended to be located hydrologically downgradient of Disposal Area 4. Ground water sample collection, preservation, transport and analysis shall be performed according to the following procedure: f) Measure the depth to ground water from the top of well casing to the nearest hundredth of a foot. g) Purge three well volumes of water from the well prior to sample collection. h) Obtain samples from the well for analysis. i) Properly prepare, preserve and transport samples. j) Analyze samples in accordance with the methods authorized in this Discharge Permit. Depth-to-water 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. [20.6.2.3107 NMAC]
27.	The permittee shall perform annual soil testing at the sludge disposal facility. The permittee shall collect three aliquots at depths of 2 ft and 5 ft from each active disposal area (Disposal Area 1, Disposal Area 3, and Disposal Area 4). The three aliquots from each disposal area shall be combined into composite samples (i.e., 2 ft and 5 ft composite samples from each disposal area). The total concentration of aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, and zinc shall be determined for each composite sample. The analytical results and a map showing the sampling locations within each disposal area shall be submitted to NMED in the quarterly monitoring report due by November 1st. [20.6.2.3107(A)3 NMAC, 20.6.2.3103 NMAC]
28.	Within 150 days of the effective date of this Discharge Permit (by April 21, 2012), the permittee shall perform a one-time background soil testing event in an area that is located hydrologically upgradient of the sludge disposal facility and which has never received sludge applications. The sampling location area shall be approved by NMED prior to sample collection. The permittee shall collect three aliquots at depths of 2 ft and 5 ft from the background testing area. The three aliquots from each depth in the background testing area shall be combined into composite samples (i.e., 2 ft and 5 ft composite samples from the background testing area). The total concentration of aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, and zinc shall be determined for each composite sample. The analytical results and a map showing the sampling locations shall be submitted to NMED within 180 days of the date of this Discharge Permit (by May 21, 2012). [20.6.2.3107(A)3 NMAC, 20.6.2.3103 NMAC]

CONTINGENCY PLAN

#	Terms and Conditions
29.	In the event that ground water monitoring indicates that a ground water quality standard identified in Section 20.6.2.3103 NMAC is exceeded; the total nitrogen concentration in ground water is greater than 10 mg/L; or a toxic pollutant (defined in Subsection WW of 20.6.2.7 NMAC) is present in a ground water sample and in any subsequent ground water 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 ground water monitoring confirms for a minimum of two years of consecutive ground water sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded and toxic pollutants are not present in ground water. The permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 though 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 ground water contamination. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC, Subsection A of 20.6.2.3107 NMAC]
30.	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 ground water quality; or is not completed in a manner that is protective of ground water quality, 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, and survey data and a ground water elevation contour map 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. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC]
31.	In the event that ground water 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, and survey data and a ground water elevation contour map within 30 days following well completion. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC]
32.	In the event that three years past the effective date of this Discharge Permit (by November 23, 2014), the permittee is not consistently meeting the reductions to the volume of liquid and/or dewatered domestic WWTF sludge discharged to the authorized disposal areas in accordance with the conditions of this Discharge Permit, the permittee shall submit a corrective action plan (CAP) that outlines how the reduction in volume will be achieved to NMED for approval. The CAP shall include: a) The method (or methods) to be employed to ultimately reduce the volume of liquid and/or dewatered domestic WWTF sludge discharged to the authorized disposal areas to 9,800 gpd on an annual average, not to exceed 3,577,000 gallons per year. b) An implementation schedule, including a deadline by which time the reduced discharge volume will be consistently met. NMED reserves the right to alter and/or deny the proposed CAP and require that the permittee achieve the reduction of discharge volumes as required by this Discharge Permit or in a shorter period of time than proposed by the permittee in the CAP. Upon NMED approval, the permittee shall commence implementation of the CAP. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC, Subsection A of 20.6.2.3107 NMAC]
33.	In the event that inspection findings reveal significant damage likely to affect the structural integrity of the lined stormwater retention impoundments or its ability to contain

	contaminants, the permittee shall propose the repair or replacement of the impoundment liner(s) by submitting a corrective action plan to NMED for approval. The plan shall be submitted to NMED within 30 days after discovery by the permittee or following notification from NMED that significant liner damage is evident. The corrective action plan shall include a schedule for completion of corrective actions and the permittee shall initiate implementation of the plan following approval by NMED. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC, Subsection A of 20.6.2.3107 NMAC]
34.	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 plan to NMED describing any corrective actions taken and/or to be taken relative to the unauthorized discharge that includes the following: 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 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 though 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. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC, 20.6.2.1203 NMAC]
35.	In the event that the sludge storage capacity of the wastewater treatment facility has been exceeded and the permittee cannot discharge liquid sludge to the sludge disposal area because it is saturated, frozen or covered with snow, the permittee shall obtain NMED approval for a temporary alternative. [Subsection A(10) of 20.6.2.3107 NMAC]
36.	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. [NMSA 1978, § 74-6-5.D, Subsections B and E of 20.6.2.3109 NMAC, Subsection A of 20.6.2.3107 NMAC]

CLOSURE PLAN

37.	Upon closure of the facility, the permittee shall perform the following closure measures: a) Complete the installation of all monitoring wells as required by this Discharge Permit. b) Remove all stormwater collected in the lined stormwater retention impoundments and then perforate or remove the lagoon liners and re-grade the ponds with clean fill to blend with surface topography and prevent ponding. c) Backfill each of the disposal areas with clean fill (as necessary) and contour to provide for positive stormwater drainage. d) Re-vegetate the disposal areas 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. e) Following final grading and re-seeding of the facility, the permittee shall maintain the perimeter fencing and security gate for a minimum of three years to prevent unauthorized access. f) Submit proof to NMED that all closure activities set forth for the facility under 40 CFR 503 have been completed. g) Following completion of the closure activities above, continue ground water monitoring as required by this Discharge Permit for two years to confirm the absence of ground water contamination. If monitoring results show that the ground water standards in Section 20.6.2.3103 NMAC are being violated, the permittee shall implement the contingency plan required by this Discharge Permit. h) 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 request to terminate the Discharge Permit. [20.6.2.3107.A(11) NMAC]

GENERAL TERMS AND CONDITIONS

#	Terms and Conditions
38.	RECORD KEEPING - The permittee shall maintain a written record of the following information: a) Information and data used to complete the application for this Discharge Permit. b) Records of any releases (commonly known as "spills") not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC. c) Records of the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater. d) 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. e) Copies of monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit. f) The volume of wastewater or other wastes discharged pursuant to this Discharge Permit. g) Ground water quality and wastewater quality data collected pursuant to this Discharge Permit. h) Copies of construction records (well log) for all ground water monitoring wells required to be sampled pursuant to this Discharge Permit. i) Records of the maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit. j) Data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit. The following information shall be recorded and shall be made available to NMED upon request: i) The dates, location and times of sampling or field measurements; ii) The name and job title of the individuals who performed each sample collection or field measurement; iii) The sample analysis date of each sample; iv) The name and address of the laboratory, and the name of the signatory authority for the laboratory analysis; v) The analytical technique or method used to analyze each sample or collect each field measurement; vi) The results of each analysis or field measurement, including raw data; vii) The results of any split, spiked, duplicate or repeat sample; and viii) 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. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC, Subsection A of 20.6.2.3107 NMAC]
39.	INSPECTION and ENTRY – The permittee shall allow inspection by NMED of the facility and its operations which 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. [Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]
40.	DUTY to PROVIDE INFORMATION - The permittee shall, upon NMED's request, allow NMED's inspection/duplication of records required by this Discharge Permit and/or furnish to NMED copies of such records. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC 20.6.2.3107.D NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]
41.	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. [NMSA 1978, § 74-6-5.D, Subsection E of 20.6.2.3109 NMAC, Subsection C of 20.6.2.3107 NMAC]
42.	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.

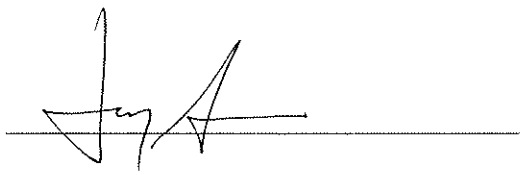
	In the event the permittee implements changes to the wastewater system authorized by this Discharge Permit which result in only a minor effect on the character of the discharge, the permittee shall report such changes (including the submission of record drawings, where applicable) as of January 1 and June 30 of each year to NMED. [NMSA 1978, § 74-6-5.D, Subsection B of 20.6.2.3109 NMAC, 20.6.2.1202 NMAC]
43.	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 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. [NMSA 1978, §§ 74-6-10 and 74-6-10.1,]
44.	CRIMINAL PENALTIES – No person shall: 1) 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; 2) falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or 3) 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 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 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 this condition or knowingly causes another person to violate the requirements 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 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.

	[NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]
45.	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. [20.6.2 NMAC]
46.	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. [NMSA 1978, § 74-6-5.O]
47.	TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this facility or any portion thereof, the permittee shall: 1) notify the proposed transferee in writing of the existence of this Discharge Permit; 2) include a copy of this Discharge Permit with the notice; and 3) 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]
48.	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 issuance 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]

PERMIT TERM & SIGNATURE

EFFECTIVE DATE: November 23, 2011
TERM ENDS: November 23, 2016

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



JERRY SCHOEPPNER
Acting 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 – Sludge Disposal Facility
Discharge Permit Number DP-135

Legally Responsible Party
Mr. Bryan Romero, Acting 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-Sludge Disposal Facility

Treatment Methods

Treatment Type	Designation	Description & Comments
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
Dissolved Air Floatation Units	DAF	Reinforced concrete – 99,698 gallons capacity
Sludge Composting Facility	SCF	Reinforced concrete floor, metal sides and roof - 90,257.22 square feet
Sludge/Septage High Lime Treatment Unit	SSHLTU	Reinforced concrete - 43,088 gallons capacity
Sludge Storage Tanks	SST	Reinforced concrete – 2,277,923 gallons capacity

Discharge Locations

Discharge Type	Designation	Description & Comments
Land Disposal	Sludge Disposal	42.48 Total Acres: Disposal Area 1 = 6.2 acres; Disposal Area 2 = Closed (Solar Array); Disposal Area 3 = 19.0 acres; Disposal Area 4 = 17.28 acres.

Ground Water Monitoring Locations

Type	Designation	Description & Comments
Monitoring Well	MW-1	Intended to be hydrologically downgradient of Disposal Area 4 and just west of Huey Road
Monitoring Well	MW-2	Intended to be hydrologically downgradient of Disposal Area 1 and Disposal Area 3 and located in the middle of the entire disposal area
Monitoring Well	MW-3	Intended to be hydrologically upgradient of the facility and along Paseo Real
Monitoring Well	MW-5	Intended to be hydrologically downgradient of Disposal Area 3
Monitoring Well	MW-6	Intended to be hydrologically downgradient of Disposal Area 4 (To be installed)

Depth-to-Ground Water 130 - 190 feet
Total Dissolved Solids (TDS) 125 mg/L

Permit Information

Application Received	June 18, 2007 and December 3, 2010
Public Notice Published	August 19, 2011
Discharge Permit Issued	November 23, 2011
Discharge Permit Expires	November 23, 2016
Permitted Discharge Volume	28,000 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	Brad Reid
Lead Staff Telephone Number	(505) 827-2963
Lead Staff Email	brad.reid@state.nm.us

City of Santa Fe – Sludge Disposal Facility, DP-135
Effective Date: November 23, 2011

REQUIRED ACTIONS

#	Description of Required Actions	Due Date
1.	**Synthetic Lining of Stormwater Retention Impoundments**	
	Submit plans and specifications of the synthetically lined storm water impoundment design.	within 10 months of effective date (by September 23, 2012)
	Notify NMED prior to impoundment liner installation.	at least 5 days prior to installation
	Complete installation of synthetic liners in two stormwater retention impoundments.	within 17 months of effective date (by April 23, 2013)
	Submit record drawings for impoundment liners, certified by licensed New Mexico P.E.	within 30 days of impoundment completion
2.	**Installation of Monitoring Well:**	
	Obtain NMED approval of well location.	prior to installation
	Install the following monitoring well: • MW-6, intended to be hydrologically downgradient of Disposal Area 4	within 1 year of effective date (by November 23, 2012)
	Submit monitoring well construction and lithologic logs.	within 14 months of effective date (by January 23, 2013)
3.	**Initial Ground Water Sampling:**	
	Measure depth to water and analyze initial ground water samples from one monitoring well (MW-6) for all constituents listed under Condition 18 of the Discharge Permit.	Within 60 days of well completion
	Submit depth-to-water measurements, analytical results, and facility map with MW locations.	within 90 days of well installation
4.	**Monitoring Well Survey and Ground Water Flow Determination:**	
	Survey all monitoring wells to a U.S. Geological Survey (USGS) or other permanent benchmark.	within 14 months of effective date (by January 23, 2013)
	Submit survey data and map of ground water flow direction and gradient.	within 14 months of effective date (by January 23, 2013)
5.	**One-time background soil sampling event:**	
	Obtain NMED approval of sampling location.	prior to sampling event

#	Description of Required Actions	Due Date
	Sample soil at depths of 2 and 5 feet for aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, and zinc. Submit analytical results.	within 150 days of effective date (by April 21, 2012) within 180 days of effective date (by May 21, 2012)

MONITORING AND REPORTING REQUIREMENTS

Quarterly monitoring shall be performed during the following calendar quarters:

- January 1st through March 31st (first quarter) – **report due by May 1st**
- April 1st through June 30th (second quarter) – **report due by August 1st**
- July 1st through September 30th (third quarter) – **report due by November 1st**
- October 1st through December 31st (fourth quarter) – **report due by February 1st**

Submit **quarterly** reports by the 1st of February, May, August and November of each year containing items specified in the table below.

#	Description of Monitoring and Reporting Requirements	Monitoring Frequency	Reporting Schedule
1.	Inspect stormwater retention ponds and berms and dewater as needed. Notify NMED immediately upon discovery of pond berm or liner damage.	Quarterly and after every precipitation event	As needed
2.	Record the volume and dry weight of domestic wastewater treatment facility sludge discharged to the surface disposal cells each month. Submit records.	monthly	quarterly
3.	Analyze each sludge type for percent total solids (%TS). Submit analytical results. [20.6.2.3107 NMAC]	monthly	quarterly
4.	Analyze each sludge type for TKN & NO_3-N. Submit analytical results. [20.6.2.3107 NMAC]	monthly	quarterly
5.	Submit SDDS	monthly	quarterly
6.	Submit copy of DMR	NA	By May 1st
7.	Measure depth-to-water and analyze ground water samples from 5 monitoring wells (MW-1, MW-2, MW-3, MW-5, and MW-6) for all contaminants listed under Condition 25 of the Discharge Permit. Submit measurements and analytical results.	2013 and 2015	By Nov 1st 2013 and 2015
8.	Measure depth-to-water and analyze ground water samples from 5 monitoring wells (MW-1, MW-2, MW-3, MW-5, and MW-6) for TKN, NO_3-N, TDS, and Cl. Submit measurements and analytical results.	quarterly	quarterly

#	Description of Monitoring and Reporting Requirements	Monitoring Frequency	Reporting Schedule
9.	Sample soil from each surface disposal area at depths of 2 and 5 feet for aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, and zinc. Submit analytical results.	annually	By November 1st
10.	Inspect berms around the surface disposal area and repair as necessary.	regularly and after every precipitation event	NA
11.	Inspect facility and collect residual solid waste.	weekly	NA

NOTE: See Discharge Permit for full requirement details.

Submit all reports to:

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

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 SOURCE:[1] _____ DISCHARGE CELL DESIGNATION:[1] _____ # ACRES IN CELL: _____

MONTH & YEAR OF DISCHARGE[2]	A WEIGHT OF SLUDGE DISCHARGED metric tons dry weight[3]	B SLUDGE SAMPLE: TOTAL NITROGEN CONCENTRATION[4] (TKN + NO3-N) mg/kg	C SLUDGE DISCHARGED: TOTAL NITROGEN ((A x B) ÷ 1,000) kg N	D SLUDGE DISCHARGED: TOTAL NITROGEN (C x 2.2) lbs N	E NITROGEN LOADING (D ÷ # acres) lbs N/acre	NOTES[5]
example assuming a 50-acre cell: *MM - YY*	*125 metric tons*	*2063 mg/kg TKN + 687 mg/kg NO3-N = 2750 mg/kg N*	*(125 metric tons x 2750 mg/kg) ÷ 1,000 = 343.8 kg N*	*(343.8 kg N/metric ton) x 2.2 = 756 lbs N*	*756 lbs N ÷ 50 acres = 15.1 lbs N/ac*	
			TOTALS			

[1]One SDDS form should be used for *each* cell designation and *each* sludge source. Examples of "Sludge Source" include: thickened solids, non-thickened solids, multiple treatment facilities, liquid sludge, dry sludge, etc.

[2]Each form must reflect the *most recent* 12 months of sludge discharge.

[3]One metric ton = 2,200 lbs

[4]This information should be obtained from the *most recent* laboratory analysis. Note: If quarterly sampling is required, record the same data for the three months of that monitoring quarter.

[5]In the event discharge did not occur, please report "no discharge" in the NOTES column.

Last Updated: September 22, 2011

Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions

These conditions identify construction and abandonment requirements for installation of water table monitoring wells under ground water Discharge Permits issued by the NMED's Ground Water Quality Bureau (GWQB). Proposed locations of monitoring wells required under Discharge Permits and requests to use alternate installation and/or construction methods for water table monitoring wells shall be submitted to the GWQB for approval prior to drilling and construction.

General Drilling Specifications:

1. All well drilling activities shall 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.
2. Drilling methods that allow for accurate determinations of water table locations shall be employed. All drill bits, drill rods, and down-hole tools shall be thoroughly cleaned immediately prior to the start of drilling. The borehole diameter shall 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 shall be allowed to stabilize for a minimum of 12 hours before development is initiated.
4. The well shall 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 shall be used as casing. The casing shall have an inside diameter not less than 2 inches. The casing material selected for use shall 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 shall 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 shall be joined using welded, threaded, or mechanically locking joints; the method selected shall provide sufficient joint strength for the specific well installation. The casing shall extend from the top of the screen to at least one foot above ground surface. The top of the casing shall be fitted with a removable cap, and the exposed casing shall be protected by a locking steel well shroud. The shroud shall 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 shall extend from the top of the screen to 6 to 12 inches below the ground surface; the monitoring wells shall be sealed with locking, expandable well plugs; a flush-mount, watertight well vault that is rated to withstand traffic loads shall be emplaced around the wellhead; and the cover shall be secured with at least one bolt. The vault cover shall 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 shall be installed across the water table. Screens created by cutting slots into solid casing with saws or other tools shall not be used. The screen material selected for use shall be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the facility. Screen sections shall be joined using welded, threaded, or mechanically locking joints; the method selected shall provide sufficient joint strength for the specific well installation and shall not introduce constituents that may reasonably be considered contaminants of interest at the facility. A cap shall be attached to the bottom of the well screen; sumps (i.e., casing attached to the bottom of a well screen) shall not be installed. The bottom of the screen shall be installed no more than 15 feet below the water table; the top of the well screen shall be positioned not

less than 5 feet above the water table. The well screen slots shall be appropriately sized for the formation materials and shall be selected to retain 90 percent of the filter pack.

7. Casing and well screen shall be centered in the borehole by placing centralizers near the top and bottom of the well screen.
8. A filter pack shall 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 shall be properly sized to prevent fine particles in the formation from entering the well. For wells deeper than 30 feet, the sand shall be emplaced by a tremmie pipe. The well shall 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 shall 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 shall be 3 feet in thickness and hydrated with clean water. Adequate time shall be allowed for expansion of the bentonite seal before installation of the annular space seal.
10. The annular space above the bentonite seal shall 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 shall be used when placing sealing materials at depths greater than 20 feet below the ground surface. Annular space seals shall 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. A concrete pad (2-foot minimum radius, 4-inch minimum thickness) shall be poured around the shroud or well vault and wellhead. The concrete and surrounding soil shall be sloped to direct rainfall and runoff away from the wellhead.

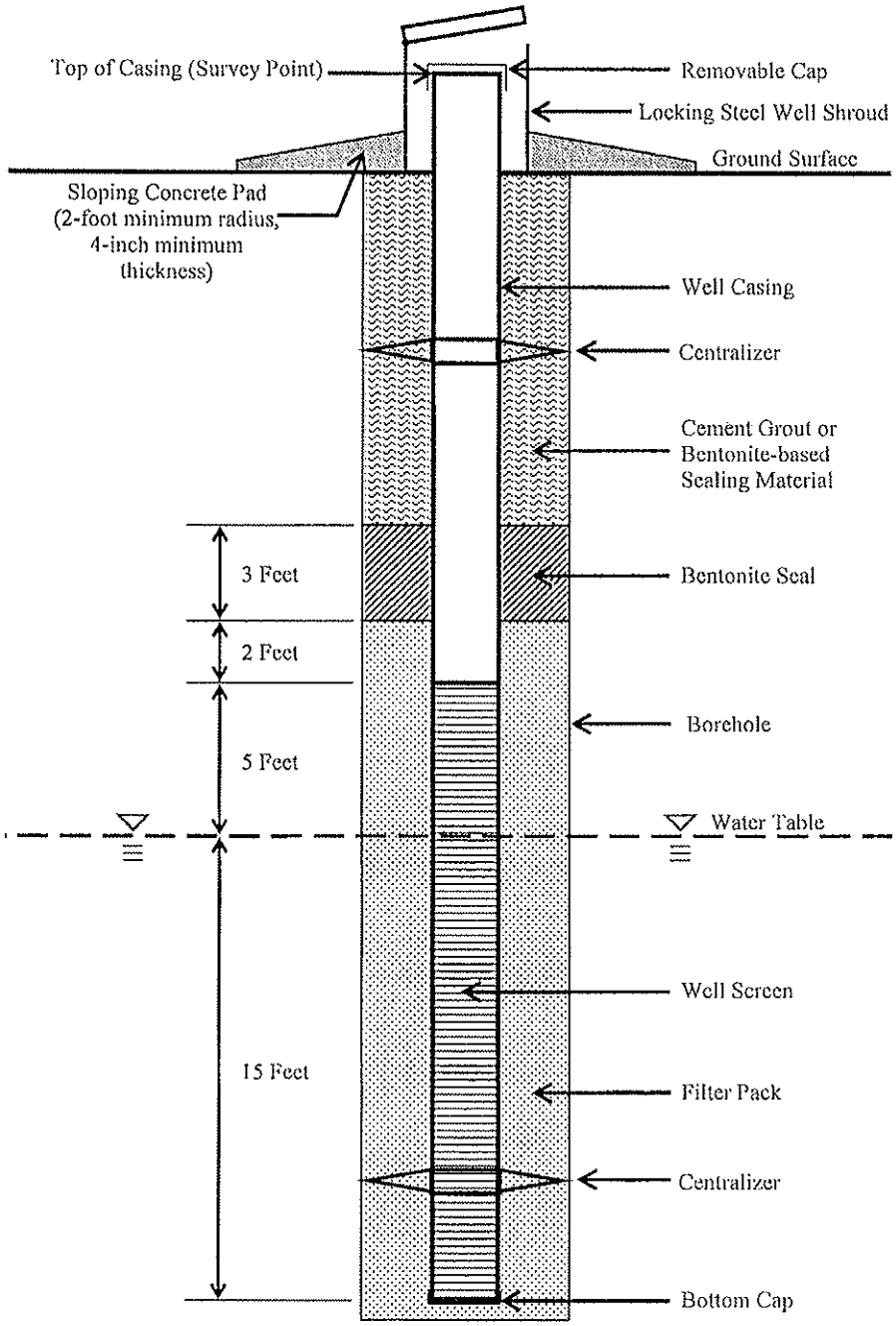
Abandonment:

12. Approval for abandonment of monitoring wells used for ground water monitoring in accordance with Discharge Permit requirements shall be obtained from NMED prior to abandonment.
13. Well abandonment shall 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 shall 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 shall be submitted to the NMED. Written notification of well abandonment shall 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 in a manner that deviates from these requirements shall be submitted in writing to the GWQB. Each request shall 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)



Ground Water Discharge Permit Conditions for Synthetically Lined Lagoons – Liner Material and Site Preparation

These Conditions represent minimum liner material and site preparation requirements for wastewater treatment, storage and evaporation lagoons. These requirements do not apply to lagoons storing hazardous wastes or high strength waste. The Ground Water Quality Bureau may impose additional requirements (e.g., double-lined lagoons with leak detection) for facilities discharging hazardous or high strength waste to lagoons through the development of specific Discharge Permit conditions for such facilities.

Liner Material Requirements:

1. The liner shall be chemically compatible with any material that will contact the liner.
2. The liner material shall be resistant to deterioration by sunlight if any portion of the liner will be exposed.
3. Synthetic liner material shall be of sufficient thickness to have adequate tensile strength and tear and puncture resistance. Under no circumstances shall a synthetic liner material less than 40 mils in thickness be accepted. Any liner material shall be certified by a licensed New Mexico professional engineer and approved by the New Mexico Environment Department (NMED) prior to its installation.

Lagoon Design and Site Preparation Requirements:

1. The system shall be certified by a licensed New Mexico professional engineer and approved by NMED prior to installation.
2. Inside slopes shall be a maximum of 3 (horizontal): 1 (vertical), and a minimum of 4 (horizontal); 1 (vertical).
3. Lagoon volume shall be designed to allow for a minimum of 24 inches of freeboard.
4. The liner shall be installed with sufficient liner material to accommodate shrinkage due to temperature changes. Folds in the liner are not acceptable.
5. To a depth of at least six inches below the liner, the sub-grade shall be free of sharp rocks, vegetation and stubble. In addition, liners shall be placed on a sub-grade of sand or fine soil. The surface in contact with the liner shall be smooth to allow for good contact between liner and sub-grade. The surface shall be dry during liner installation.
6. Sub-grade shall be compacted to a minimum of 90% of standard proctor density.
7. The minimum dike width shall be eight feet to allow vehicle traffic for maintenance.
8. The base of the pond shall be as uniform as possible and shall not vary more than three inches from the average finished elevation.
9. Synthetic liners shall be anchored in an anchor trench in the top of the berm. The trench shall be a minimum of 12 inches wide, 12 inches deep and shall be set back at least 24 inches from the inside edge of the berm.
10. If the lagoon is installed over areas of decomposing organic materials or shallow ground water, a liner vent system shall be installed.
11. Any opening in the liner through which a pipe or other fixture protrudes shall be properly sealed. Liner penetrations shall be detailed in the construction plans and record drawings.
12. A synthetic liner shall not be installed in temperatures below freezing.
13. The liner shall be installed or supervised by an individual that has the necessary training and experience as required by the liner manufacturer.
14. All manufacturer's installation and field seaming guidelines shall be followed.
15. All synthetic liner seams shall be field tested by the installer and verification of the adequacy of the seams shall be submitted to NMED along with the record drawings.
16. Concrete slabs installed on top of the synthetic liner for operational purposes shall be completed in accordance with manufacturer and installer recommendations to ensure liner integrity.