GROUND WATER DISCHARGE PERMIT RENEWAL AND MODIFICATION
SMU-IN-TAOS/FORT BURGWIN, DP-1473

I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal and Modification (Discharge Permit), DP-1473, to Southern Methodist University (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 SMU-in-Taos/Fort Burgwin (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 17,325 gallons per day of domestic wastewater is discharged into 24 septic tank/leachfield systems and one holding tank. Gray water from the new bathhouse is discharged to subsurface irrigation in the connected greenhouse. Overflow from the subsurface irrigation is discharged to the leachfield that also serves the art barn. The modification consists of adding the new septic tank/leachfield system for the new dormitory building, two septic tank/leachfield systems across the road from the main portion of the campus, and the subsurface irrigation gray-water system for the greenhouse. 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 8 miles south from Ranchos de Taos in Section 32, T24N, R13E, Taos County. Ground water most likely to be affected is at a depth of approximately 15 feet and has a total dissolved solids concentration of approximately 200 milligrams per liter.

The original Discharge Permit was issued on December 14, 2004. The permittee's application consists of the materials submitted by the permittee dated June 13, 2009 and additional information received on February 12, 2009 and April 7, 2010. 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: expanding disposal areas; changing waste management practices; expanding monitoring requirements; installing an advanced treatment system; and/or implementing abatement of water pollution.

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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)		NTU	nephelometric turbidity units
CFR	Code of Federal Regulations		Org	organisms
Cl	chloride		TDS	total dissolved solids
LADS	land application data sheet(s)		TKN	total Kjeldahl nitrogen
mg/L	milligrams per liter		total nitrogen	$TKN+NO_3$-N
mL	milliliters		TRC	Total Residual Chlorine
NMAC	New Mexico Administrative Code		TSS	total suspended solids
NMED	New Mexico Environment Department		WQA	New Mexico Water Quality Act
NMSA	New Mexico Statutes Annotated		WQCC	Water Quality Control Commission
NO_3-N	nitrate-nitrogen			

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:

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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 and 20.6.2.3103 NMAC are not violated. [20.6.2.3101 NMAC, 20.6.2.3103 NMAC]
3.	The permittee is authorized to discharge up to 17,325 gallons per day of domestic wastewater to 24 septic tank/leachfield systems and one holding tank. [20.6.2.3104 NMAC, 20.6.2.3106 NMAC]

MONITORING, REPORTING, AND OTHER REQUIREMENTS

#	Terms and Conditions
4.	The permittee shall conduct the following monitoring, reporting, and other requirements listed below. [20.6.2.3107 NMAC]
5.	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) U.S. Geological Survey, et al., National Handbook of Recommended Methods for Water Data Acquisition; or f) Methods of Soil Analysis: Part 1. Physical and Mineralogical Methods and Part 2. Chemical and Microbiological Properties, American Society of Agronomy. [20.6.2.3107.B NMAC]
6.	The permittee shall submit semi-annual monitoring reports to NMED by the 1st of March and September each year. Semi-annual monitoring shall be performed during the following periods: • February 1st through July 31st (first half) – **report due by September 1st**; and • August 1st through January 31st (second half) – **report due by March 1st**. Monitoring requirements detailed in this Discharge Permit are summarized on the sheet titled *Cover Page for Discharge Permit Monitoring Reports*. The permittee shall complete and attach a copy of the enclosed *Cover Page for Discharge Permit Monitoring Reports* to each monitoring report submitted. NMED recommends that the permittee use the

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	monitoring report form provided to compile and submit the monitoring data. The permittee shall provide copies of all laboratory reports with the monitoring reports. [20.6.2.3107 NMAC]
7.	The permittee shall estimate the volume of wastewater discharged monthly to the septic tank/leachfield system(s) by recording the monthly meter readings for the facility's water supply and calculating the monthly water usage. The permittee shall make note of any significant uses of the water during each month, such as irrigation or evaporative cooling, that do not contribute to the wastewater system. The monthly meter readings, calculated water usage, notes and estimated volume of wastewater discharged shall be submitted to NMED in the semi-annual monitoring reports. The water supply meter shall be kept operational at all times. [20.6.2.3107.A(1) NMAC, 20.6.2.3109.H(1) NMAC]
8.	The permittee shall perform semi-annual ground water sampling in three monitoring wells and analyze the samples for NO_3-N, TKN, Cl, and TDS. The permittee shall sample: • MW-1, intended to be located hydrologically downgradient of the classroom and office facilities; • MW-2, intended to be located hydrologically downgradient of room and board facilities; and • MW-3, intended to be located hydrologically upgradient of the facility (300 feet southeast of all facilities). . 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; and 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 in the semi-annual monitoring reports. [20.6.2.3107 NMAC]
9.	The permittee shall sample wastewater from the final chamber for one of the ten septic tanks that service the student casitas, the final chamber for the septic tank that services the main offices and class rooms, and the final chamber for the septic tank that services the dining hall kitchen on an annual basis for TKN, TDS, and Cl. Analytical results shall be submitted to NMED in the monitoring report due by September 1 of each year. [20.6.2.3107 NMAC]
10.	The permittee shall inspect the grease interceptor(s) on an annual basis and pump as needed. Inspection records shall be kept on-site. The inspection records and pumping invoices shall be submitted to NMED in the monitoring report due by March 1 each year. [20.6.2.3109 NMAC]
11.	The permittee shall inspect the holding tank's liquids/solids level annually to ensure that the tank does not overflow. The contents of the tank shall be pumped as needed by a

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	licensed hauler. The inspection records and pumping invoices shall be submitted to NMED annually in the monitoring report due by March 1 each year. [20.6.2.3107]
12.	The permittee shall inspect all septic tanks annually for the accumulation of scum and solids. In the event that the scum layer exceeds three inches or the settled solids occupy 50% of the tank or more, the contents of the tanks shall be pumped by a licensed hauler. The inspection records and pumping invoices shall be submitted to NMED annually in the monitoring report due by March 1 each year. [20.6.2.3107 NMAC]
13.	The permittee shall visually inspect the areas above the leachfields and subsurface irrigation system semi-annually to ensure proper maintenance. Any conditions that indicate damage to the leachfield or subsurface irrigation system shall be corrected. Such conditions include, but are not limited to erosion damage, animal activity/damage, or evidence of seepage. The inspection records shall be submitted to NMED in the semi-annual monitoring reports. [20.6.2.3107 NMAC]

CONTINGENCY PLAN

#	Terms and Conditions
14.	In the event that monitoring indicates ground water standards are violated during the term of this Discharge Permit, upon closure of the facility or during post-closure monitoring, the permittee shall collect a confirmatory sample from the monitoring well within 15 days to confirm the initial sampling results. Within 15 days of confirmation of ground water contamination, the permittee shall submit to NMED a corrective action plan that proposes measures to mitigate damage from the discharge including, at a minimum, source control measures and an implementation schedule. The permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 though 20.6.2.4115 NMAC, if the corrective action plan will not result in compliance with the standards and requirements set forth in Section 20.6.2.4103 NMAC within 180 days of confirmation of ground water contamination. [20.6.2.1203 NMAC, 20.6.2.4105.A(8) NMAC]
15.	In the event of a spill or release that is not authorized under this Discharge Permit, the permittee shall initiate the notifications and corrective actions as required in Section 20.6.2.1203 NMAC. The permittee shall take immediate corrective action to contain and remove or mitigate the damage caused by the discharge. Within 24 hours after discovery of the discharge, the permittee shall verbally notify NMED and provide the information required by Paragraph (1) of Subsection A of 20.6.2.1203 NMAC. Within 7 days of discovering the discharge, the permittee shall submit a written report to NMED verifying the oral notification and providing any additional information or changes. The permittee shall submit a corrective action report within 15 days after discovery of the discharge. [20.6.2.1203 NMAC]
16.	In the event NMED or the permittee identifies any other failures of the Discharge Permit or system not specifically noted herein, NMED may require the permittee to develop for NMED approval contingency plans and schedules to cope with the failures. [20.6.2.3107.A(10) NMAC]
17.	In the event that information available to NMED indicates that a well(s) is not appropriately constructed to effectively monitor ground water quality, contains insufficient water to allow the collection of representative ground water samples, or is not completed

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	in a manner that is protective of ground water quality, the permittee shall install a replacement well(s) within 90 days of 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 1.0, July 2008. Construction and lithologic logs shall be submitted to NMED within 30 days of well completion. Upon completion of the replacement monitoring well(s), the monitoring well(s) requiring replacement shall be properly plugged and abandoned. The well(s) shall be plugged and abandoned in accordance with the abandonment details in the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.0, July 2008, and any applicable local, state, and federal regulations. Documentation describing the plugging and abandonment procedures, including photographic documentation, shall be submitted to NMED within 30 days of completed well abandonment. [20.6.2.3107 NMAC]
18.	In the event that an inspection of the leachfields and subsurface irrigation system reveals failure, the permittee shall enact the following contingency plan: a) Within 24 hours of the discovered failure, the permittee shall: • restrict public access to the area; • take immediate actions to stop/reduce the system failure or impacts from it; • disinfect contaminated soil and other materials; and • notify NMED of the failure including information on which system failed, the size/volume of the discharge resulting from the failure, and the immediate actions taken b) The permittee shall conduct a physical inspection of the treatment and disposal system(s) to identify additional failures. c) Within 1 week of the discovered failure, the permittee shall submit written notification to NMED of the information obtained for a) and b) above in addition to the following: • The names, addresses, and phone numbers of the person in charge of the facility and the owner/operator; • The name and address of the facility; • The date, time, specific location, and duration of the discharge • The source and the cause of the discharge; • The estimated volume of the discharge; and • All actions taken to mitigate the immediate damage from the discharge since the failure began. d) The permittee shall submit a corrective action plan for NMED approval to address the failure and propose methods of correction. The corrective action plan shall be submitted within 15 days of the discovered failure and shall be implemented immediately upon NMED approval. [20.6.2.1203 NMAC, 20.6.2.3107 NMAC, 20.6.2.3109 NMAC]

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CLOSURE PLAN

#	Terms and Conditions
19.	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 or plug all lines conveying wastewater to the septic tank/leachfield system(s) so that a discharge can no longer occur. c) Pump the grease interceptor(s) and septic tank(s) and dispose of pumpings in accordance with all local, state, and federal regulations. d) Backfill the tank(s) with clean fill or sand, or remove from the site. e) Continue ground water monitoring as required by this Discharge Permit for two years after closure 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. f) 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 1.0, July 2008. When all 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
20.	RECORD KEEPING - The permittee shall maintain at its facility a written record of all 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: a) The dates, exact place 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 date of the analysis of each sample; d) The name and address of the laboratory and the name and job title of the person that performed the analysis of each sample; e) The analytical technique or method used to analyze each sample or take each field measurement; f) The results of each analysis or field measurement, including raw data; g) The results of any split sampling, spikes or repeat sampling; and h) A description of the quality assurance and quality control procedures used. [20.6.2.3107.A NMAC]
21.	RECORD KEEPING - The permittee shall maintain a written record of any spills, seeps, and/or leaks of effluent, and of leachate and/or process fluids not authorized by this Discharge Permit. [20.6.2.3107.A NMAC]

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22.	RECORD KEEPING - The permittee shall maintain a written record of the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater; to measure flow rates, to monitor water quality, or to collect other data required by this Discharge Permit. This record shall include repair, replacement or calibration of any monitoring equipment and repair or replacement of any equipment used in the permittee's waste or wastewater treatment and disposal system. [20.6.2.3107.A NMAC]
23.	RECORD KEEPING - The permittee shall maintain a written record of the amount of wastewater, effluent, leachate or other wastes discharged pursuant to this Discharge Permit. [20.6.2.3107.A NMAC]
24.	RECORD KEEPING - The permittee shall retain records of all monitoring information, including all calibration and maintenance records, copies of all reports required by this Discharge Permit, and records of all data used to complete the application for this Discharge Permit for a period of at least five years from the date of the sample collection, measurement, report or application. This period may be extended by request of the Secretary at any time. [20.6.2.3107.A NMAC]
25.	INSPECTION and ENTRY - The permittee shall allow the Secretary or an authorized representative, upon the presentation of credentials, to: a) Enter at regular business hours or at other reasonable times upon the permittee's premises or other location where records must be kept under the conditions of this Discharge Permit, or under any federal or WQCC regulation. b) Inspect and copy, during regular business hours or at other reasonable times, any records required to be kept under the conditions of this Discharge Permit, or under any federal or WQCC regulation. c) Inspect, at regular business hours or at other reasonable times, any facility, equipment (including monitoring and control equipment or treatment works), practices or operations regulated or required under this Discharge Permit, or under any federal or WQCC regulation. d) Sample or monitor, at reasonable times for the purpose of assuring compliance with this Discharge Permit or as otherwise authorized by the New Mexico Water Quality Act, any effluent, water contaminant, or receiving water at any location before or after discharge. [20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]
26.	INSPECTION and ENTRY - 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 applicable law or regulation. [20.6.2.3107 NMAC, 74-6-9(B) & (E) WQA]
27.	DUTY to PROVIDE INFORMATION - The permittee shall furnish to NMED, within a reasonable time, any documents or other information which it may request to determine whether cause exists for modifying, terminating and/or renewing this Discharge Permit or to determine compliance with this Discharge Permit. The permittee shall also furnish to NMED, upon request, copies of documents required to be kept by this Discharge Permit. [20.6.2.3107.D NMAC, 74-6-9(B) & (E) WQA]
28.	SPILLS, LEAKS, and OTHER UNAUTHORIZED DISCHARGES - This Discharge Permit authorizes only those discharges specified herein. Any unauthorized discharges

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	violate Section 20.6.2.3104 NMAC and must be reported to NMED and remediated as required by Section 20.6.2.1203 NMAC. [20.6.2.1203 NMAC]
29.	MODIFICATIONS and/or AMENDMENTS - The permittee shall notify NMED of any changes to the permittee's wastewater treatment and disposal system, including any changes in the wastewater flow rate or the volume of wastewater storage, or of any other changes to operations or processes that would result in any significant change in the discharge of water contaminants. The permittee shall obtain NMED's approval, as a modification to this Discharge Permit pursuant to Subsections E, F, or G of 20.6.2.3109 NMAC, prior to any increase in the quantity discharged, or any increase in the concentration of water contaminants discharged, above those levels approved in this Discharge Permit. [20.6.2.3107.C NMAC]
30.	PLANS and SPECIFICATIONS - The permittee shall file plans and specifications with NMED for the construction of a wastewater system and for proposed changes that will change substantially the quantity or quality of the discharge from the system. The permittee shall file plans and specifications prior to the commencement of construction. Changes to the wastewater system having a minor effect on the character of the discharge shall be reported as of January 1 and June 30 of each year to NMED. [20.6.2.1202 NMAC]
31.	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. [74-6-10 WQA, 74-6-10.1 WQA]
32.	CRIMINAL PENALTIES – Any person who knowingly violates or knowingly causes or allows another person to: 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, is subject to felony charges and shall be sentenced in accordance with the provisions of Section 31-18-15 NMSA 1978. [74-6-10.2(A-F) WQA]

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33.	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]
34.	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 (30) days of the receipt of this Discharge Permit. Unless a timely petition for review is made, the decision of NMED shall be final and not subject to judicial review. [74-6-5(O) WQA]
35.	TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this permitted facility or any portion thereof, the permittee shall notify the proposed transferee in writing of the existence of this Discharge Permit and include a copy of this Discharge Permit with the notice. The permittee shall 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. [20.6.2.3111 NMAC]
36.	TERM - Pursuant to WQA 74-6-5(I) and Subsection H of 20.6.2.3109 NMAC, the term of this Discharge Permit is [five years from its effective date] or [seven years from its effective date or five years from the date the discharge commences, whichever occurs first.] To renew this Discharge Permit, the permittee must submit an application for renewal at least 180 days before the termination date. [20.6.2.3109.H NMAC, 74-6-5(I) WQA]
37.	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. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date. [20.6.2.3114.F NMAC, 74-6-5(K) WQA]

EFFECTIVE DATE: effective date
EXPIRATION DATE: expiration date

WILLIAM C. OLSON
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