

**GROUND WATER DISCHARGE PERMIT RENEWAL**  
**General Electric Aviation Deep Zone Ground Water Remediation Facility, DP-1065**

**I. INTRODUCTION**

The New Mexico Environment Department (NMED) issues this Discharge Permit Renewal (Discharge Permit), DP-1065, to General Electric Company (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 General Electric Aviation Deep Zone Ground Water Remediation 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 or will be met. Pursuant to Section 20.6.2.3104 NMAC, it is the responsibility of the permittee to comply with the terms and conditions of this Discharge Permit; failure may result in an enforcement action(s) by NMED (20.6.2.1220 NMAC).

The activities 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 1,800,000 gallons per day (gpd) of contaminated ground water is pumped from four deep-zone extraction wells, treated by a remediation system, and is discharged to eleven deep-zone injection wells. Sodium ortho/polyphosphate (Aqua Mag®) is used as a sequestering agent to inhibit scale formation throughout the deep-zone ground water remediation system. Ground water is treated to below applicable or relevant and appropriate requirements (ARARs) under the Record of Decision issued by the United States Environmental Protection Agency (US EPA), following notice, comment, and consultation with NMED. The ARARs include New Mexico Water Quality Control Commission (WQCC) standards (20.6.2.3103 NMAC). EPA, with NMED concurrence, subsequently refined the governing cleanup standards in its approval of the 60% design submission for the deep ground water treatment system. The influent to the deep ground water treatment system contains toxic pollutants consisting of chlorinated solvents which may be elevated above the WQCC standards. The influent to the deep ground water treatment system may also contain inorganic water contaminants that are not subject to the human health standards of 20.6.2.3103 NMAC and provisions of Subsection D of 20.6.2.3109 NMAC.

The deep zone ground water remediation facility is located on the north side of Woodward Road, east of Broadway and west of the AMAFCA channel. The facility lies within the confines of the South Valley Superfund Site in Albuquerque, in Sections 32 and 33, T10N, R03E, Bernalillo County. The depth to ground water in the deep zone aquifer below the site ranges from approximately 50 feet to 150 feet, and has a total dissolved solids concentration of approximately 500 milligrams per liter.

The original Discharge Permit was issued on December 21, 1995 and subsequently renewed on April 1, 2001, modified on December 9, 2002, and renewed on May 11, 2007. The application

(i.e., discharge plan) consists of the materials submitted by Axis Group on behalf of the permittee dated December 14, 2011, 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 ground water quality may be required by NMED. The permittee may be required to implement abatement of water pollution and remediate ground water quality.

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

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

Abbreviation	Explanation	Abbreviation	Explanation
BOD <sub>5</sub>	biochemical oxygen demand (5-day)	NTU	nephelometric turbidity units
CFR	Code of Federal Regulations	Org	organisms
Cl	chloride	TDS	total dissolved solids
EPA	United States Environmental Protection Agency	TKN	total Kjeldahl nitrogen
gpd	gallons per day	total nitrogen	= TKN + NO <sub>3</sub> -N
LADS	land application data sheet(s)	TRC	Total Residual Chlorine
mg/L	milligrams per liter	TSS	total suspended solids
mL	milliliters	UPC	Uniform Plumbing Code
NMAC	New Mexico Administrative Code	WQA	New Mexico Water Quality Act
NMED	New Mexico Environment Department	WQCC	Water Quality Control Commission
NMSA	New Mexico Statutes Annotated	WWTF	Wastewater Treatment Facility
NO <sub>3</sub> -N	nitrate-nitrogen		

## II. FINDINGS

In issuing this Discharge Permit, NMED finds:

1. The permittee is discharging effluent from the facility so that such effluent may move directly or indirectly into ground water within the meaning of 20.6.2.3104 NMAC.
2. The permittee is discharging effluent from the facility so that such effluent 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 20.6.2.3101.A NMAC.

3. The discharge from the facility is not subject to any of the exemptions of 20.6.2.3105 NMAC.
4. The permittee is conducting the ground water remediation as response actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 US.C §§9601-9675m, and pursuant to a Unilateral Administrative Order issued by US EPA under Section 106 of CERCLA.

### III. AUTHORIZATION TO DISCHARGE

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

The permittee is authorized to pump up to 1,800,000 gpd of contaminated ground water from four deep-zone extraction wells, treat it by a remediation system, and discharge treated water to eleven deep-zone injection wells. Sodium ortho/polyphosphate (Aqua Mag®) is used as a sequestering agent to inhibit scale formation throughout the deep-zone remediation system.

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

### IV. CONDITIONS

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

#### A. OPERATIONAL PLAN

#	Terms and Conditions
1.	<p>The permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 1 and 2 NMAC except to the extent that the operational plan conflicts with the permittee's obligations under CERCLA. If the permittee believes that any aspect of the operational plan poses such a potential conflict, the permittee shall give prompt notice to the NMED Ground Water Quality Bureau Pollution Prevention Section as well as the designated EPA Superfund Remedial Project Manager and the NMED Superfund Oversight Section Project Manager for the South Valley Superfund Site.</p> <p>[Subsection C of 20.6.2.3109 NMAC]</p>
2.	<p>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.</p> <p>[20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>

**Operating Conditions**

#	Terms and Conditions
3.	<p>Treated ground water discharged from the facility shall not exceed the following applicable or relevant and appropriate requirements (ARARs) under the Plant 83 Operable Unit Record of Decision (ROD) issued by US EPA following notice, comment and consultation with NMED:</p> <ul style="list-style-type: none"> <li>• 1,1,1-Trichlorethane: 60 ug/L</li> <li>• 1,1,2,2-Tetrachloroethane: 10 ug/L</li> <li>• 1,1,2-Trichloroethane: 5 ug/L</li> <li>• 1,1-Dichloroethane: 25 ug/L</li> <li>• 1,1-Dichloroethene (1,1 DCE): 5 ug/L</li> <li>• 1,2-Dichloroethane (EDC): 5 ug/L</li> <li>• 1,2-Dichloropropane: 5 ug/L</li> <li>• Benzene: 5 ug/L</li> <li>• Bromoform: 80 ug/L</li> <li>• Carbon tetrachloride: 5 ug/L</li> <li>• Chlorobenzene: 80 ug/L</li> <li>• Chloroform: 80 ug/L</li> <li>• Chloromethane: 2,300,000 ug/L</li> <li>• Dibromochloromethane: 80 ug/L</li> <li>• Dichlorobromomethane: 80 ug/L</li> <li>• Ethylbenzene: 700 ug/L</li> <li>• Ethylene dibromide (EDB) : 0.05 ug/L</li> <li>• Methyl tertiary butyl ether (MTBE): 100 ug/L</li> <li>• Methylene chloride: 5 ug/L</li> <li>• Tetrachloroethene: 5 ug/L</li> <li>• Toluene: 750 ug/L</li> <li>• Trans-1,2-Dichloroethene: 100 ug/L</li> <li>• Trans-1,3-Dichloropropene: 100 ug/L</li> <li>• Trichloroethene: 5 ug/L</li> <li>• Vinyl Chloride: 1 ug/L</li> <li>• Total xylenes: 620 ug/L</li> </ul> <p>[20.6.2.3109 NMAC]</p>
4.	<p>The permittee shall maintain fences around the facility to control access by the general public and animals. The fences shall consist of a minimum of six-foot chain link or field fencing and locking gates. Fences shall be maintained throughout the term of this Discharge Permit.</p> <p>[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]</p>

**B. MONITORING AND REPORTING**

#	Terms and Conditions
5.	<p>The permittee shall conduct the following monitoring, reporting, and other requirements listed below in accordance with the monitoring requirements of this Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
6.	<p>The permittee shall submit annual monitoring reports to NMED by the 15<sup>th</sup> of August each year. Annual monitoring shall be performed during July 1<sup>st</sup> through June 30<sup>th</sup>.</p> <p>[Subsection A of 20.6.2.3107 NMAC]</p>

***Facility Monitoring Conditions***

#	Terms and Conditions
7.	<p>The permittee shall measure the total monthly volume of treated ground water discharged to the injection wells using 11 totalizing flow meters. The permittee shall obtain readings from a totalizing flow meter located prior to each injection well on a monthly basis and calculate the monthly and average daily discharge volume. The monthly meter readings, and calculated monthly and average daily discharge volumes shall be submitted to NMED-GWQB in the annual monitoring report. The flow meters shall be kept operational at all times except during maintenance, repairs or shutdown due to circumstances beyond the permittee's control, such as electrical outages due to weather. In such circumstances, the permittee shall document the conditions in the monthly monitoring report submitted to EPA and NMED, as well as in the annual monitoring report required by this Discharge Permit.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
8.	<p>The permittee shall sample the effluent prior to reinjection on a monthly basis for the volatile organic compounds (VOCs) listed in Condition 3 of this Discharge Permit, except for ethylene dibromide (EDB). Analytical results shall be submitted to NMED in the annual monitoring report.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>
9.	<p>The permittee shall sample the effluent prior to reinjection on an annual basis for ethylene dibromide (EDB). The samples shall be analyzed using EPA Method 504.1 or an equivalent. Analytical results shall be submitted to NMED in the annual monitoring report.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]</p>

**C. CONTINGENCY PLAN**

#	Terms and Conditions
10.	<p>In the event that ground water standards are violated during the term of this Discharge Permit as a result of the discharge authorized by this Discharge Permit, 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 corrective action plan shall address abatement in conjunction with the facility’s abatement plan pursuant to Sections 20.6.2.4101 through 20.6.2.4116 NMAC.</p> <p>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</p>
11.	<p>In the event that analytical results of a monthly effluent sample from the remediation system exceed any of the limitations set by this Discharge Permit, the permittee shall enact the following contingency plan:</p> <ul style="list-style-type: none"> <li>a) Notify NMED within 24 hours of receipt of validated analytical results indicating that the treated effluent quality exceeds a limitation listed in Condition 3 of this Discharge Permit.</li> <li>b) Complete corrective actions as directed by US EPA and as required under CERCLA and the Unilateral Administrative Order.</li> </ul> <p>[Paragraph (10) of Subsection A of 20.6.2.3107, 20.6.2.3109 NMAC]</p>
12.	<p>In the event of a spill or release from the ground water treatment facilities or systems that is not authorized under this Discharge Permit and subject to the requirements of Subsection A of 20.6.2.1203 NMAC, the permittee shall initiate the notifications required in Paragraphs (1) through (3) of Subsection A of 20.6.2.1203 NMAC and take corrective actions as required by CERCLA and the Unilateral Administrative Order.</p> <p>[20.6.2.1203 NMAC]</p>

**D. CLOSURE PLAN**

*Permanent Facility Closure Conditions*

#	Terms and Conditions
13.	<p>In the event a facility, or a component of a facility, is proposed to be permanently closed, upon ceasing discharging, the permittee shall perform the following closure measures:</p> <ul style="list-style-type: none"> <li>a) Remove or plug all lines leading to and from the extraction wells, the remediation system, and the injection wells so that a discharge can no longer occur.</li> <li>b) Remove ground water treatment system equipment from the site.</li> <li>c) Plug, abandon, or take such other action regarding ground water monitoring wells, injection wells, and extraction wells related to the permittee’s Response</li> </ul>

#	Terms and Conditions
	<p>Action, as US EPA directs.</p> <p>When all closure and post-closure requirements have been met, the permittee may submit a written request for termination of the Discharge Permit to NMED.</p> <p>[Subsection A of 20.6.2.3107 NMAC, 40 CFR Part 503]</p>

**E. GENERAL TERMS AND CONDITIONS**

#	Terms and Conditions
14.	<p>RECORD KEEPING - The permittee shall maintain a written record of the following information:</p> <ul style="list-style-type: none"> <li>a) Information and data used to complete the application for this Discharge Permit.</li> <li>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.</li> <li>c) Records of the operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater.</li> <li>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.</li> <li>e) Copies of monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit.</li> <li>f) The volume of wastewater or other wastes discharged pursuant to this Discharge Permit.</li> <li>g) Ground water quality and wastewater quality data collected pursuant to this Discharge Permit.</li> <li>h) Copies of construction records (well log) for all ground water monitoring wells required to be sampled pursuant to this Discharge Permit.</li> <li>i) Records of the maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit.</li> <li>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: <ul style="list-style-type: none"> <li>i) The dates, location and times of sampling or field measurements;</li> <li>ii) The name and job title of the individuals who performed each sample collection or field measurement;</li> <li>iii) The sample analysis date of each sample;</li> <li>iv) The name and address of the laboratory, and the name of the signatory authority for the laboratory analysis;</li> <li>v) The analytical technique or method used to analyze each sample or collect each field measurement;</li> <li>vi) The results of each analysis or field measurement, including raw data;</li> </ul> </li> </ul>

#	Terms and Conditions
	<p>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.</p> <p>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.</p> <p>[Subsections A and D of 20.6.2.3107 NMAC]</p>
15.	<p><b>INSPECTION and ENTRY</b> – 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.</p> <p>The permittee shall allow NMED to have access to and reproduce for their use any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations.</p> <p>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.</p> <p>[Subsection D of 20.6.2.3107 NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]</p>
16.	<p><b>DUTY to PROVIDE INFORMATION</b> - 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.</p> <p>[Subsection D of 20.6.2.3107 NMAC]</p>
17.	<p><b>MODIFICATIONS and/or AMENDMENTS</b> – 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.</p> <p>[Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC]</p>

#	Terms and Conditions
18.	<p>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.</p> <p>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.</p> <p>[Subsections A and C of 20.6.2.1202 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</p>
19.	<p>CIVIL PENALTIES - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject the permittee to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10(C) and 74-6-10.1, civil penalties of up to \$15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to \$10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit.</p> <p>[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1]</p>
20.	<p>CRIMINAL PENALTIES – No person shall:</p> <ol style="list-style-type: none"> <li>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;</li> <li>2) falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or</li> <li>3) fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation.</li> </ol> <p>Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth degree felony and shall be</p>

#	Terms and Conditions
	<p>sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this condition and thereby causes a substantial adverse environmental impact is guilty of a third degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15.</p> <p>[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]</p>
21.	<p>COMPLIANCE with OTHER LAWS - Nothing in this Discharge Permit shall be construed in any way as relieving the permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.</p> <p>[NMSA 1978, § 74-6-5.L]</p>
22.	<p>RIGHT to APPEAL - The permittee may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC within thirty days of the receipt of postal notice of this Discharge Permit and shall include a statement of the issues 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.</p> <p>[20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]</p>
23.	<p>TRANSFER of DISCHARGE PERMIT - Prior to the transfer of any ownership, control, or possession of this facility or any portion thereof, the permittee shall:</p> <ol style="list-style-type: none"> <li>1) notify the proposed transferee in writing of the existence of this Discharge Permit;</li> <li>2) include a copy of this Discharge Permit with the notice; and</li> <li>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.</li> </ol> <p>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.</p> <p>[20.6.2.3111 NMAC]</p>
24.	<p>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</p>

#	Terms and Conditions
	<p>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.</p> <p>Permit fees are associated with <u>issuance</u> of this Discharge Permit. Nothing in this Discharge Permit shall be construed as relieving the permittee of the obligation to pay all permit fees assessed by NMED. A permittee that ceases discharging or does not commence discharging from the facility during the term of the Discharge Permit shall pay all permit fees assessed by NMED. An approved Discharge Permit shall be suspended or terminated if the facility fails to remit an installment payment by its due date.</p> <p>[Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]</p>

**V. PERMIT TERM & SIGNATURE**

EFFECTIVE DATE: [effective date]

TERM ENDS: [expiration date]

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

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JERRY SCHOEPPNER  
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New Mexico Environment Department