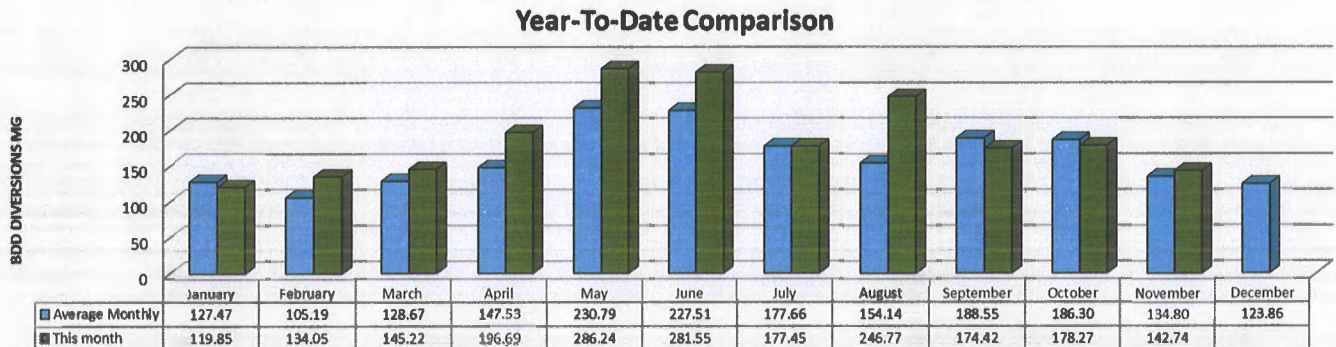




Date: December 2, 2021
To: Buckman Direct Diversion Board
From: Randy Sugrue, BDD Operations Superintendent
Subject: Update on BDD Operations for the Month of November 2021

ITEM:

1. This memorandum is to update the Buckman Direct Diversion Board (BDDDB) on BDD operations during the month of November 2021. The BDD diversions and deliveries have averaged, in Million Gallons Per Day (MGD) as follows:
 - a. Raw water diversions: 4.76 MGD.
 - b. Drinking water deliveries through Booster Station 4A/5A: 4.69 MGD.
 - c. Raw water delivery to Las Campanas at BS2A: 0.18 MG on 11/1/21.
 - d. Onsite treated and non-treated water storage: 0.07 MGD Average.
2. The BDD is providing approximately 75% percent of the water supply to the City and County for the month.
3. The BDD year-to-date diversions are depicted below:



4. Regional Demand/Drought Summary and Storage-see page 2.



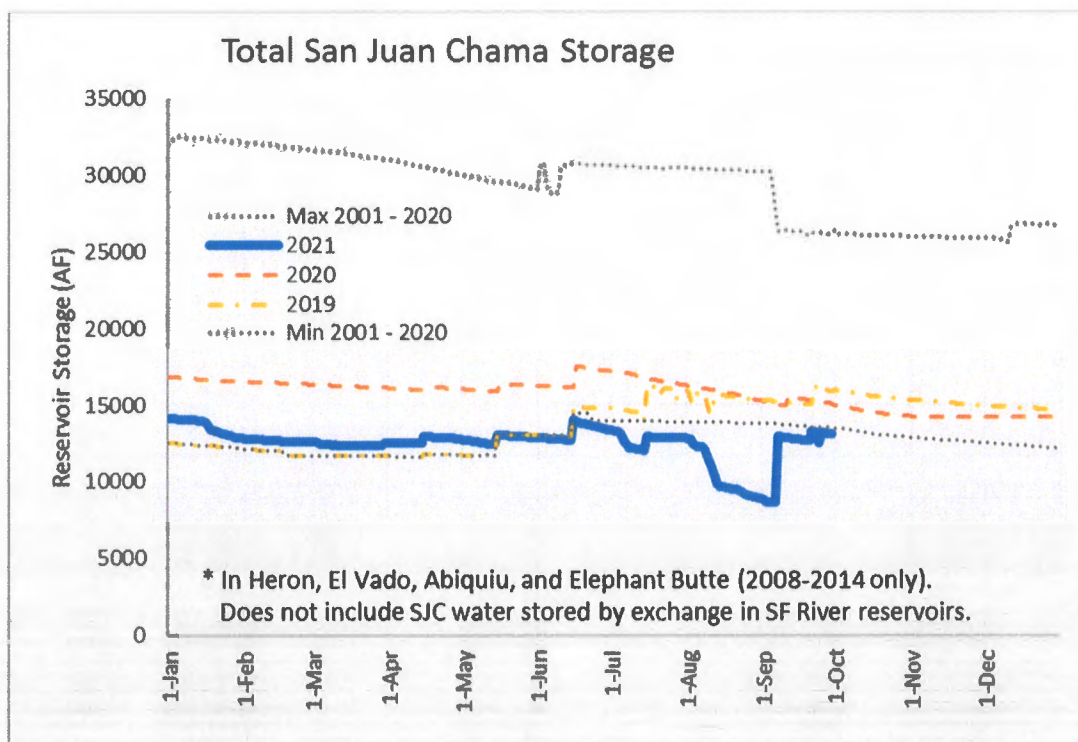
Regional Water Overview

Daily metered regional water demand for the month of November 2021 is approximately 6.3 MGD.

Rio Grande flows for November 2021 averaged approximately 575 CFS (cubic feet per second.)

CRWTP reservoir storage: Nichols: 70%/McClure: 13.5% (23% combined) Watershed Inflow: 0.68 MGD

City/County/LC Storage- as updated by partners.



ENSO Summary

November 22, 2021

ENSO Alert System Status: La Niña Advisory

La Niña is present.*

Equatorial sea surface temperatures (SSTs) are below average across the central and east-central Pacific Ocean.

The tropical Pacific atmosphere is consistent with La Niña conditions.

La Niña is likely to continue through the Northern Hemisphere winter 2021-22 (~90% chance) and into spring 2022 (~50% chance during March-May).



Buckman Direct Diversion Monthly SJC and Native Diversions

Nov-21	In Acre-Feet						
Month	Total SJC + Native Rights	SP-4842 RG Native COUNTY	SD-03418 RG Native LAS CAMPANAS	SJC Call Total	SP-2847-E SJC Call CITY	SP-2847-N-A SJC Call LAS CAMPANAS	All Partners Conveyance Losses
JAN	378.548	42.119	0.000	336.429	336.429	0.000	3.456
FEB	408.601	191.550	0.000	217.051	217.051	0.000	2.229
MAR	442.832	442.832	0.000	0.000	0.000	0.000	0.000
APR	624.282	506.349	0.000	117.933	117.933	0.000	1.195
MAY	868.184	483.518	0.000	384.666	384.666	0.000	2.477
JUN	879.493	302.801	0.000	576.692	576.692	0.000	3.555
JUL	562.156	-17.518	0.000	579.674	579.674	0.000	2.767
AUG	758.665	-0.154	0.000	758.819	758.819	0.000	3.757
SEP	542.059	-49.305	0.000	591.364	591.364	0.000	2.930
OCT	553.705	-22.895	0.000	576.600	576.600	0.000	5.614
NOV	438.210	383.033	0.000	55.177	55.177	0.000	0.543
DEC	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	6,456.735	2,262.328	0.000	4,194.406	4,194.406	0.000	28.523

In Million Gallons

Month	Native COUNTY	Native Las Campanas	SJC TOTAL	SJC CITY	SJC Las Campanas	All Partners Diversions
JAN	13.720	0.000	108.306	108.306	0.000	122.026
FEB	62.394	0.000	69.875	69.875	0.000	132.269
MAR	144.245	0.000	0.000	0.000	0.000	144.245
APR	164.934	0.000	37.971	37.971	0.000	202.906
MAY	157.498	0.000	123.871	123.871	0.000	281.369
JUN	98.632	0.000	185.788	185.788	0.000	284.420
JUL	-5.706	0.000	186.765	186.765	0.000	181.059
AUG	-0.050	0.000	244.396	244.396	0.000	244.346
SEP	-16.060	0.000	190.470	190.470	0.000	174.409
OCT	-7.458	0.000	185.724	185.724	0.000	178.266
NOV	124.766	0.000	17.973	17.973	0.000	142.740
DEC	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	736.915	0.000	1,351.139	1,351.139	0.000	2,088.054



Buckman Direct Diversion Monthly SJC and Native Diversions

Dec-20	In Acre-Feet						
Month	Total SJC + Native Rights	SP-4842 RG Native COUNTY	SD-03418 RG Native LAS CAMPANAS	SJC Call Total	SP-2847-E SJC Call CITY	SP-2847-N-A SJC Call LAS CAMPANAS	All Partners Conveyance Losses
JAN	438.797	134.433	0.000	304.364	298.249	6.115	2.759
FEB	396.508	218.194	0.000	178.314	178.314	0.000	1.679
MAR	357.764	185.598	0.000	172.165	172.165	0.000	1.621
APR	372.408	187.945	0.000	184.463	122.188	62.275	1.737
MAY	641.374	529.897	0.000	111.477	111.477	0.000	0.889
JUN	637.220	509.818	0.000	127.402	1.618	125.784	1.017
JUL	784.520	0.000	0.000	784.520	784.520	0.000	3.663
AUG	886.856	12.503	0.000	874.354	839.919	34.435	4.214
SEP	762.357	0.000	0.000	762.357	682.674	79.683	3.556
OCT	593.109	0.000	0.000	593.109	539.638	53.472	5.845
NOV	390.743	353.481	0.000	37.261	37.261	0.000	0.345
DEC	392.394	355.317	0.000	37.077	37.077	0.000	0.377
TOTAL	6,654.050	2,487.186	0.000	4,166.864	3,805.100	361.764	27.701

In Million Gallons

Month	Native COUNTY	Native Las Campanas	SJC TOTAL	SJC CITY	SJC Las Campanas	All Partners Diversions
JAN	43.789	0.000	98.103	96.304	1.975	141.892
FEB	71.073	0.000	57.454	57.454	0.000	128.527
MAR	60.456	0.000	55.473	55.473	0.000	115.928
APR	61.220	0.000	59.435	39.440	20.101	120.655
MAY	172.605	0.000	35.812	35.812	0.000	208.417
JUN	166.065	0.000	40.927	0.520	40.407	206.992
JUL	0.000	0.000	252.754	252.754	0.000	252.754
AUG	4.073	0.000	281.681	271.072	11.113	285.754
SEP	0.000	0.000	245.686	219.960	25.726	245.686
OCT	0.000	0.000	191.019	174.109	17.252	191.019
NOV	115.140	0.000	12.008	12.008	0.000	127.148
DEC	115.738	0.000	11.937	11.937	0.000	127.676
TOTAL	810.158	0.000	1,342.289	1,226.843	116.574	2,152.447

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Memorandum



Buckman Direct Diversion

Date: December 2, 2021
To: Buckman Direct Diversion Board
From: Nancy R. Long
Subject: Appointment of Citizen Member and Alternate Citizen Member

Item and Issue:

Appointment of the citizen member and alternate citizen member to the Buckman Direct Diversion Board (BDDDB).

Background and Summary:

The Joint Powers Agreement (“JPA”), as amended, establishing the BDDDB, provides for the appointment of a citizen member and alternate citizen member to the BDDDB by a majority vote of the four other voting members of the BDDDB. The current Citizen Member is J.C. Helms and the Alternate Citizen Member is Peter Ives. The term of the citizen member and alternate citizen member is two years, and the current members were appointed for a two-year term in February 2020. The current terms for both the Citizen Member and Alternate Citizen Member expire on February 6, 2022.

During the last selection process, the BDDDB staff advertised for the citizen member position and alternate citizen member position by placing public notices in the *Santa Fe New Mexican*, and on the BDDDB's, the City's and County's websites. Then, a committee consisting of a City member, a County member, the BDDDB attorney and the Facilities Manager, held interviews of the applicants and made recommendations to the full board. The selection process this time could follow the same process or proceed otherwise as the Board determines.

Action Requested:

The BDDDB staff and attorney seek direction on the appointment of the citizen members.



Memorandum



Buckman Direct Diversion

Date: November 19, 2021

To: Buckman Direct Diversion Board

From: Rick Carpenter, BDD Facility Manager

Kyle Harwood, BDD Legal Counsel

Re: Update on BDD Board LANL MOU

Item and Issue:

The current BDD Board LANL MOU was extended last month to an expiration date of February 9, 2022.

Background:

BDD Board staff, consultants and counsel have been discussing changes to the current MOU with LANL Site office counterparts. We will present the agreed upon edits and the changes that do not have consensus at the Board meeting.

Attached to this memo is the current MOU and extension letter approved at the last Board meeting in November.

Recommendations:

To be determined by the BDD Board.



Buckman Direct Diversion 341 Caja del Rio Santa Fe, NM 87506



Michael Mikolanis, Manager
U.S. Department of Energy, Office of Environmental Management
Los Alamos Field Office
1200 Trinity Drive, Suite 400
Los Alamos, New Mexico 87544

cc: John Evans, Counsel, Environmental Management, Los Alamos Field Office
Cheryl Rodriquez, Program Manager, Environmental Management, Los Alamos Field Office

November 5, 2021

Re: Extension of the Memorandum of Understanding between the U.S. Department of Energy and the Buckman Direct Diversion Board Regarding Notification and Water Quality Monitoring

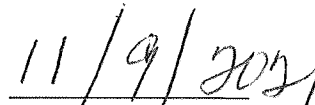
On November 20, 2017, the BDD Board and Doug Hintze, Manager, Environmental Management, Los Alamos Field Office executed a Memorandum of Understanding between the U.S. Department of Energy and the Buckman Direct Diversion Board Regarding Notification and Water Quality Monitoring (MOU). The MOU has a provision that allows for the extension of the MOU for an optional three (3) year period (see Article I. Period of Agreement, Modification or Termination).

On November 19, 2020, the BDD Board and DOE extended the MOU from December 1, 2020 to December 1, 2021. The Parties now agree to extend the MOU to February 9, 2022. This extension will not preclude the Parties' ability to agree to further extensions as contemplated by Article I (up to three (3) years).

Upon the advice of counsel, the Parties' signature below by the BDD Board Chairperson and the Manager, Environmental Management, Los Alamos Field Office extend the November 20, 2017 MOU until February 9, 2022.

Buckman Direct Diversion Board


Anna Hansen, BDD Board Chairperson


Date

Department of Energy

Michael A. Mikolanis

Digitally signed by Michael A. Mikolanis
Date: 2021.11.15 17:06:34 -07'00'

Michael Mikolanis, Manager
Environmental Management, Los Alamos Field Office

Date

1 *MEMORANDUM OF UNDERSTANDING BETWEEN THE*
2 *U.S. DEPARTMENT OF ENERGY AND THE BUCKMAN DIRECT DIVERSION BOARD*
3 *REGARDING NOTIFICATION AND WATER QUALITY MONITORING*

4 **A. Parties**

5 The Parties to this MOU are the Buckman Direct Diversion Board (BDD Board) and the U.S. Department
6 of Energy (DOE).

7 **B. Background**

8 The Buckman Direct Diversion (BDD) is designed to divert water from the Rio Grande for use by the City
9 and County of Santa Fe water utilities in the Santa Fe area and to provide a source for the water supply
10 systems of Santa Fe County, the City of Santa Fe and the Club at Las Campanas. The diverted water is
11 San Juan-Chama Project water (a U.S. Bureau of Reclamation interbasin water transfer project) and
12 native New Mexico state waters regulated by the State of New Mexico.

13 The point of diversion for the BDD is on the east bank of the Rio Grande in northern New Mexico, near
14 the historic Buckman townsite. The point of diversion is approximately 15 miles northwest of the City of
15 Santa Fe and is located about three miles downstream from the confluence of the Rio Grande and Los
16 Alamos Canyon (where Route 502 crosses the Rio Grande at Otowi Bridge).

17 The Los Alamos National Laboratory (LANL) is owned and operated by DOE and is located on the Pajarito
18 Plateau above the Los Alamos/Pueblo Canyon watershed. The Los Alamos/Pueblo Canyon system
19 intermittently and infrequently flows to the Rio Grande just below the Otowi Bridge and upstream of
20 the BDD Project point of diversion. The Los Alamos/Pueblo Canyon watershed contains sediments with
21 LANL-origin contamination from historic releases from LANL. Rain events may cause the transport of
22 sediments, and these sediments have in the past and may in the future be transported to the Rio
23 Grande and then to the BDD intake. The Los Alamos/Pueblo system has been investigated under the
24 2005 Compliance Order on Consent between DOE and the State of New Mexico Environment
25 Department and which has been superseded by the 2016 Compliance Order on Consent. Measures
26 have been implemented (including infrastructure installation) to reduce the transport of contaminated
27 sediment.

28 The New Mexico legislature encouraged the BDD Board and DOE to memorialize their agreement to
29 certain activities relating to the mitigation and monitoring of LANL-origin water quality contaminants.
30 The BDD Board requested a written agreement with LANL and DOE in 2007 and the New Mexico
31 legislature passed resolutions in 2009 and 2010 that ultimately resulted in the Memorandum of
32 Understanding that was executed on May 13, 2010 (the 2010 MOU). The 2010 MOU represented an
33 agreement between the Parties that water quality management and monitoring are mutual priorities
34 and that the activities described were consistent with, and would be carried out subject to, the policies,
35 regulations, and applicable laws that pertain to the Parties. On January 12, 2015, the parties executed a
36 second and renegotiated MOU to further govern operations of the BDD Project. Upon the execution of

37 this MOU, the 2015 MOU will be terminated in accordance with Section J of that 2015 MOU and this
38 MOU shall evidence the consent of the Parties to the termination.

39 C. Objective

40 This MOU establishes roles and responsibilities with regard to coordination of notification activities by
41 the DOE and their contractor in Los Alamos and Pueblo Canyons and with regard to water quality
42 sampling by the BDD at the BDD intake in relation to operation of the BDD Project. The primary
43 objectives of this MOU include the following:

- 44 1. To continue the relationship developed between DOE and the BDD, and
- 45 2. To maintain the Early Notification System (ENS) to enable BDD staff to make decisions regarding
46 facility operations, and
- 47 3. To support water quality surveillance monitoring at the BDD Project location as part of its
48 sampling program.

49 D. Authorities

50 The Parties represent that they have the authority to enter into this MOU and are able to meet the
51 respective commitments herein to the extent permitted by law.

- 52 1. DOE. DOE is authorized to enter into this MOU pursuant to the Atomic Energy Act, as amended
53 (Title 42 U.S.C. 2011, et seq.).
- 54 2. BDD Board. The BDD Board is authorized to enter into this MOU pursuant to the March 7, 2005,
55 Joint Powers Agreement between Santa Fe County and the City of Santa Fe and associated state,
56 county, and municipal laws.

57 E. Agreement Principles

58 E.1 Memorandum of Agreement and Protocols between DOE and the Pueblo 59 de San Ildefonso

60 The Parties recognize that DOE must comply with the requirements of the 2014 Memorandum
61 of Agreement between DOE and the Pueblo de San Ildefonso (Pueblo), as amended in 2015, and the
62 associated *Protocols for Access to Pueblo Lands and for Protecting Confidential Pueblo Information*
63 pertaining to activities on, and information gathered by, DOE on Pueblo property. DOE will consult with
64 the Pueblo as necessary regarding the use of information gathered pursuant to this MOU, and provide
65 an update to BDD Project Staff.

66 E.2 Los Alamos / Pueblo Canyons Early Notification System

67 The ENS will continue to provide real time stream flow data or visual verification of flow to the BDD at
68 the following gage station locations to enable the BDD staff to make decisions regarding facility

operations, including temporarily ceasing diversion of water from the Rio Grande. The ENS includes the following parts:

- LANL Gage Station E050.1 in Los Alamos Canyon above the Pueblo Canyon confluence,
- LANL Gage Station E060.1 in Pueblo Canyon above the Los Alamos Canyon confluence,
- Station E062 in the narrow canyon below the confluence of Los Alamos and Pueblo Canyons (visual verification of flow only), and
- Station E099 in Guaje Canyon on Pueblo property above the confluence of Los Alamos canyon (transducer flow verification only). Date transmission to BDD is dependent upon BDD obtaining a permit from the Pueblo to receive the data.

LANL ENS stations E050.1 and E060.1 will be equipped with gaging (flow measurement) capabilities, real-time conveyance of stream-flow data (telemetry), and camera capability to act as a visual verification and backup (or secondary flow indication) for the gaging capabilities. Flows at the LANL gage stations E050.1 and E060.1 are measured within a trapezoidal supercritical-flow flume design as reported in "Techniques of Water-resources Investigations of the United States Geological Survey, Chapter A14, Use of Flumes in Measuring Discharge" (F.A. Kilpatrick and V.R. Snyder, 1983), and between approximately 1 and 350 cubic feet per second (cfs). The system shall be capable of a low flow trigger stage of 5 cfs (adjustable).

Secondary flow indication at stations will consist of either a visual (camera) or transducer signal as confirmation of storm water flows. Note that stations E062 and E099 provide primary flow verification only. Maintenance of the flow indication equipment shall be the responsibility of DOE.

Should force majeure destroy or render inoperable some or all of the identified ENS stations, or if operational costs become excessive for some or all of the identified stations, DOE shall have the prerogative to utilize the most cost effective and technologically advanced techniques to provide BDD with equivalent flow data to meet the objective of the ENS.

The BDD Board will, at its discretion, consult with the Pueblo regarding the installation of a real-time flow indicator(s) at the lower Los Alamos Canyon and the Rio Grande and to obtain permission for data transmittals from ENS station E099.

E.3 Rio Grande at BDD Project Location Sampling Program

The purpose is to provide both base-flow and event-based sampling of the Rio Grande when triggered by notification of flows in Los Alamos and/or Pueblo Canyons or as determined by the BDD Board for the purpose of water quality sampling of the Rio Grande at BDD in the search for operational criteria for ceasing diversion (BDD Project Location Sampling Program).

DOE shall pay up to \$96,000 in sampling and analytical costs per year for each of the three (3) years under this MOU (2018, 2019, and 2020) toward the BDD Project Location Sampling Program at the BDD intake. The BDD Board shall be responsible for any additional sampling and analytical costs, and the BDD Board is responsible for all maintenance, inspection and repair of the sampling station located at

105 the BDD intake. DOE will seek funding via a grant to the BDD Board for the sampling and analytical costs,
106 and provide an update to the BDD Project Staff.

107 E.4 TREAT Study

108 BDD Board will fund a continuation of the Contaminant Fate Analysis that was started under the 2010
109 MOU under "The Removal Efficiency and Assessment of Treatments" (TREAT) Study. The TREAT Study
110 will continue to examine the treatment efficiency of the conventional and advanced treatments at the
111 BDD with respect to contaminants in order to help determine the BDD operational criteria for diversion
112 from the Rio Grande. The TREAT Study will focus on the capabilities of the BDD with respect to removal
113 of contaminants as they are found to occur in the Rio Grande at the BDD intake.

114 E.5 Analysis

115 The BDD Board will evaluate the BDD Project Sampling Program results and TREAT data and make a
116 determination on operational parameters or criteria on whether or when to cease diverting waters from
117 the Rio Grande.

118 F. BDD Project Data Sharing

119 Real-time flow data and visual verification data from the ENS stations shall be provided by DOE and their
120 contractors to BDD Project as specified in Section E.2. Analytical results from the BDD intake will be
121 made available to both the BDD Board and DOE via the Intellus database as soon as they are available.

122 The BDD Board will make records available to the DOE consistent with requirements specified in the
123 grant.

124 G. Coordination

125 DOE and the BDD Board will coordinate as necessary with the Pueblo on any issues related to the
126 implementation of this MOU, and will engage in any consultation required to accomplish the purposes
127 of this MOU.

128 Coordination between the Parties shall be to the mutual benefit of both Parties and shall include data
129 sharing (as above), technical assistance, and data and analysis reviews. Both Parties should allow at
130 least one week for response when requesting technical assistance or data and for analysis reviews.
131 Additional coordination will occur on an as needed basis.

132 H. Contacts

133 All notices, correspondence, and communications arising under this MOU shall be provided to the
134 representatives listed below and any notice, demand, request, or information authorized of related to
135 this MOU shall be deemed to have been given if mailed (return receipt requested), hand-delivered, or
136 faxed (with confirmation of transmission) as follows:

- 137 • **DOE**
138 Douglas E. Hintze
139 Manager
140 DOE, Environmental Management
141 Los Alamos Field Office
142 1900 Diamond Drive, MSM984
143 Los Alamos, NM 87544
144 Phone: 505-665-5658
145 Cell: 505-695-5103
146 Email: douglas.hintze@em.doe.gov
147
148 With copy to:
149 DOE Counsel
150 Ben Underwood
151 Phone: 505-667-4995
152 Email: ben.underwood@em.doe.gov
153
154 • **BDD Board**
155 Charles Vokes
156 BDD Facility Manager
157 Buckman Direct Diversion
158 341 Caja De Rio Road
159 Santa Fe, NM 87506
160 Phone: 505-955-4507
161 Email: cmvokes@ci.santa-fe.nm.us
162
163 With copy to:
164 BDD Board Counsel
165 Nancy Long
166 Long, Komer & Associates
167 2200 Brothers Road
168 P.O. Box 5098
169 Santa Fe, NM 87502
170 Cell: 505-470-2158
171 Email nancy@longkomer.com
172

173 **I. Period of Agreement, Modification or Termination**

174 This MOU is effective upon the signature of the BDD Board and DOE as shown below. This agreement is
175 intended to address 2018, 2019 and 2020 and shall expire on December 1, 2020, UNLESS both Parties

176 agree to extend this MOU for an optional three (3) year period. This optional extension may be
177 executed by a re-signed copy of the signature page by the respective authorized parties to this MOU.

178 The Parties may modify this MOU by written amendment and in the same manner as this MOU was
179 executed. Either Party may unilaterally terminate this MOU before the date of expiration, provided the
180 Party seeking termination provides written notice to the other Party's representative 90 days before the
181 intended termination date.

182 J. Dispute Resolution

183 If the Parties disagree over any issue related to this MOU, representatives of the Parties shall present
184 their differences in writing to the Points of Contact for the other Party. If the Parties fail to resolve their
185 differences within 30 days, the BDD Project Facility Manager and the DOE, Environmental Management,
186 Los Alamos Field Office (EM-LA) Manager shall prepare a written description of the dispute and the BDD
187 Board Chair and the DOE EM-LA Manager, along with appropriate staff, shall meet to reconcile the
188 dispute. These representatives shall use alternative dispute resolution methods such as negotiation,
189 facilitation, and mediation to resolve the dispute.

190 K. Other Provisions

191 Nothing in this MOU is intended to conflict with requirements of the Parties or applicable laws. Any
192 such conflicting terms shall be invalid, but the remainder of this MOU shall remain in effect. If a term is
193 deemed invalid, the Parties shall take appropriate action, including amendment or termination. The
194 activities described in this MOU are consistent with, and will be carried out subject to, all known
195 policies, regulations, and applicable laws that pertain to the Parties.

196 This MOU in no way restricts the Parties from participating in any activity with other public or private
197 agencies, organizations, or individuals.

198 Activities described in this MOU are subject to the availability of appropriated funds. Both the BDD
199 Board and DOE EM-LA Manager shall make the appropriations of funds for the activities described in this
200 MOU a priority when seeking regular or project specific funding requests.

201 This MOU describes the basis on which the Parties will cooperate on the topics described herein. This
202 MOU is NOT a financial obligation that serves as a basis for expenditures, and any financial obligations
203 necessary to carry out the activities described herein shall be addressed in other documents internal to
204 each Party. Expenditure of funds, human resources, equipment, supplies, facilities, training, public
205 information, and technical expertise will be provided by each Party as necessary to fulfill its obligations
206 under this MOU.

207 This MOU is neither a fiscal nor a funds obligation document. Nothing in this MOU authorizes or is
208 intended to obligate the parties to expend, exchange, or reimburse funds, services, or supplies, or
209 transfer or receive anything of value. Any requirement for the payment or obligation of funds by DOE

210 established by the terms of this MOU shall be subject to availability of funds and Secretarial discretion,
211 and no provision herein shall be interpreted to require obligation or payment of funds in violation of the
212 Anti-Deficiency Act, 31 U.S.C. §1341.

213 This MOU is not legally enforceable and shall not be construed to create any legal obligation on the part
214 of either Party. This MOU shall not be construed to provide a private right, or cause of action, for or by
215 any person or entity.

216 **L. Signatures**

217 NOW, each of the BDD Board and DOE has caused this MOU to be executed and delivered by its duly
218 authorized representatives as of the last date shown below,

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220 BDD Board

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228 DOE

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Henry Roybal, BDD Board Chair

Date

11/12/17


Douglas E. Hintze, Manager
Environmental Management, Los Alamos Field Office

Date

24 Nov 2017

This Memorandum of Understanding expires on December 1, 2020.

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