

APPENDIX A.4

AMENDED AGREEMENT REGARDING THE COLORADO USE RULES, PDF EVALUATION, IMPLEMENTATION PROCESSES, AND RELATED MATTERS, AND NOT TO TERMINATE THE OFFSET ACCOUNT RESOLUTION

As amended June 2009

This amended agreement (“Agreement”) is entered into by the State of Colorado and the State of Kansas (referred to herein individually as “State” and collectively as “States”).

Recitals

WHEREAS, in 1995, the Colorado State Engineer adopted Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado (“Use Rules”) to prohibit diversions of tributary ground water for irrigation use within the Hydrologic Institutional (H-I) Model domain (with the exception of the 15,000 acre-foot precompact allowance) unless replacement water is provided to offset depletions to usable Stateline flows, which were approved by the Colorado Water Judge effective on June 1, 1996; and

WHEREAS, Rule 4.2 of the Use Rules also establishes presumptive stream depletion percentages to determine stream depletions for certain irrigation uses of ground water to be used by the Colorado State Engineer and Division Engineer for Water Division No. 2 (“State and Division Engineers”) in approving and administering plans to replace out-of-priority depletions to senior surface water rights in Colorado; and

WHEREAS, Section IV.A of the Judgment and Decree in *Kansas v. Colorado*, No. 105, Original, U.S. Supreme Court (“Decree”), provides that the Court retains jurisdiction for a limited period of time after the end of the initial ten-year startup period (which ended in 2006) for the purpose of evaluating the sufficiency of the Use Rules and their administration and

whether changes to the Decree are needed to ensure Compact compliance (“Retained Jurisdiction”); and

WHEREAS, in accordance with procedures set out in Part VII of Appendix B.1 to the Decree, the States exchanged reports on their evaluations of the sufficiency of the Use Rules and their administration on October 3, 2008, and November 7, 2008; and

WHEREAS, experts for the States met on October 21, 2008, and conducted a telephone conference on December 15, 2008, to discuss their respective reports and to work together informally to try to resolve the differences regarding the evaluations; and

WHEREAS, Kansas gave notice to Colorado and the Special Master on December 16, 2008, that there was a dispute concerning the sufficiency and the administration of the Use Rules that was being submitted to the Dispute Resolution Procedure in the Decree as a Non-Fast Track Issue and designated the Kansas experts; and

WHEREAS, the Colorado State Engineer designated the Colorado experts to participate in discussions to attempt to resolve the disputed issues in accordance with the Dispute Resolution Procedure; and

WHEREAS, the States and their experts have reached an agreement to resolve the differences regarding the sufficiency of the Use Rules and their administration; and

WHEREAS, the Arkansas River Compact Administration (“Administration”) adopted a *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping* dated March 17, 1997, as amended twice on March 30, 1998 (“Offset Account Resolution”) (Appendix L to the Decree), establishing an Offset Account in John Martin Reservoir for Colorado Pumping (“Offset Account”); and

WHEREAS, paragraph 17.A of the Offset Account Resolution provides that either State, through its Compact delegation, may terminate the Offset Account Resolution effective March 31 by giving written notice to the Administration by February 1 of the same Compact year; and

WHEREAS, the States have entered into a *Stipulation Re Offset Account in John Martin Reservoir* filed April 3, 1997, and approved by Special Master Arthur L. Littleworth (Appendix F.1 to the Decree) and have entered into agreements concerning the determination of credits, transit losses, and evaporation credits for water stored and released from the Offset Account; and

WHEREAS, both States derive benefits from the Offset Account; and

WHEREAS, the States entered an *Agreement Not To Terminate The Offset Account Resolution For A Specified Period And Related Matters* jointly approved on October 31, 2007, which is included as Appendix A.4 to the Decree; and

WHEREAS, the States have agreed that this Agreement shall replace the October 31, 2007 version of Appendix A.4 to the Decree.

Agreement

NOW, THEREFORE, during the term of this Agreement, the States agree as follows:

1. Right to Terminate the Offset Account Resolution.

Neither State will exercise its right to terminate the Offset Account Resolution pursuant to paragraph 17.A of the Offset Account Resolution unless this Agreement has terminated in accordance with paragraph 14 of this Agreement.

2. Use of the Offset Account.

The State and Division Engineers will require well users subject to Rules 3 and 4 of the Use Rules, except for well users subject to Rule 4.1.b, and ground water users with post-

1985 structures or uses located downstream of John Martin Reservoir that are included in the Lower Arkansas Water Management Association (“LAWMA”) plan for augmentation decreed in Case No. 02CW181 (“LAWMA Decree”) to deliver replacement water to the Offset Account to replace their depletions to usable Stateline flow, to the extent LAWMA can do so legally and physically, as a condition of approval of the annual replacement plans in accordance with the Use Rules; provided, however, that:

- a. Delivery of replacement water to the Offset Account shall not be required if the Offset Account is full;
- b. If the Offset Account is full, Colorado will be given credit for the consumptive portion of the direct-flow yield of the Highland Canal water rights as input to the H-I Model as a special water at John Martin Reservoir; and
- c. Delivery of replacement water to the Offset Account shall not be required for sources that are not approved to be delivered to the Offset Account pursuant to the terms and conditions of a Water Court decree or when downstream sources cannot be stored by exchange in the Offset Account because no exchange potential exists to allow upstream storage. The Keesee and Highland water rights will be used primarily to replace depletions to usable Stateline flow, but may be used to replace depletions to senior surface water rights in Colorado and shall not be used to make physical deliveries to Kansas outside of the Offset Account except as provided in subparagraphs (a) and (b) of this paragraph. Accordingly, to the extent Keesee and/or Highland water rights are not needed to replace

depletions to usable Stateline flow, LAWMA shall not be required to deliver these water rights to the Offset Account. Should LAWMA receive Administration approval to allow water available under the Keesee water rights to be delivered to the John Martin Reservoir Permanent Pool (“Permanent Pool”), that portion of the Keesee water rights used to deliver water to the Permanent Pool would be exempt from this Agreement during times when such water is being delivered to the Permanent Pool under the Keesee water rights.

Replacement for depletions below the Buffalo Canal headgate during the months of April through October and replacement for depletions downstream of John Martin Reservoir during the months of November through March, to the extent not generated by direct-flow sources, or portions of direct-flow sources, specifically approved by the LAWMA Decree or replacements generated by the Sisson water right operated in a manner consistent with the Stubbs portion of the LAWMA Decree, shall be delivered to the Offset Account, subject to the conditions stated above.

3. Presumptive Stream Depletion Percentage to be Used through December 31, 2012.

The State and Division Engineers will determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b, using a presumptive stream depletion percentage (“PDF value”) of thirty-nine percent (39%) of the amount diverted for supplemental flood and furrow irrigation (“supplemental irrigation”) unless the use of a PDF value of 39% is prohibited by a final Water Court order. If the use of a PDF value of 39% for supplemental irrigation for such plans is prohibited by a final Water Court

order, (a) stream depletions shall be determined using the PDF value specified in the Use Rules for supplemental irrigation and (b) well users shall be required to deliver an additional amount of water to the Offset Account equal to the difference between a PDF value of 39% for supplemental irrigation and the PDF value specified in the Use Rules for supplemental irrigation. In addition, if a final Water Court order requires the use of a PDF value of more than 39% for diversions of ground water used for supplemental irrigation for some, but not all, diversions of ground water used for supplemental irrigation by users in any such plan, then the State and Division Engineers shall determine the PDF value for supplemental irrigation for all users in the plan using a weighted average and shall then require well users in the plan to deliver an additional amount of water to the Offset Account equal to the difference between a PDF value of 39% and the weighted average, if the weighted average for the PDF value is less than 39%.

4. Presumptive Stream Depletion Percentages to be Used after December 31, 2012.

Beginning in 2012, Colorado will conduct an annual evaluation (“Evaluation” and collectively “Evaluations”) of the PDF values to be used to determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b. The Evaluations will be conducted according to the process described below. The annual Evaluations will occur after June 1, 2012, and after June 1st of each year thereafter. Colorado shall provide a written report and supporting documentation of the annual Evaluation to Kansas by September 1, 2012, and by September 1st of each year thereafter.

a. Evaluation Review Period: For Evaluations conducted before 2017, the Evaluation Review Period will be from 1997 through the year for which the H-I Model has most

recently been updated. For example, the Evaluation Review Period for the Evaluation in 2012 will be from 1997 through 2011.

For Evaluations conducted in 2017 and in years thereafter, the Evaluation Review Period will include the previous 20 years, consisting of the year for which the H-I Model has most recently been updated and the previous nineteen years. For example, the Evaluation Review Period for the Evaluation conducted in 2017 will be from 1997 through 2016. This will result in the evaluation of eleven ten-year Compact compliance periods.

b. Coordination between the States: Experts for the States will coordinate their review of the Colorado Evaluation and attempt to agree on the PDF values by December 1, 2012, and by December 1st of subsequent years for implementation in the next replacement plan year in the manner described in paragraph 5 below. If the experts are unable to agree on the PDF values, the interim PDF values will be the average of both States' PDF values as determined by the process provided for herein. Disagreement on the PDF values may be submitted to the Dispute Resolution Procedure as set out in Appendix H to the Decree.

c. Determination of PDF value(s) by Colorado Water Court: If a final Water Court order requires the use of a PDF value less than the PDF value determined in accordance with the Evaluation ("Evaluation PDF") to determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b., then the State and Division Engineers shall require well users subject to that order to deliver an additional amount of water to the Offset Account equal to the difference between the amount of replacement water required using the PDF value ordered by the Water Court and the amount required using the Evaluation PDF. If a final Water Court order requires the use of a PDF value greater than the

Evaluation PDF value to determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b., then no further adjustments will be made.

d. Use of Ground Water Accounting Model (GWAM): Unless the States agree otherwise, the Evaluations will be based on the replacement requirements that are determined by Colorado using the Ground Water Accounting Model (GWAM) that is used by the State and Division Engineers in their monthly administration of replacement plans. The GWAM is included as Exhibit 1 on the attached compact disk. The same monthly historical supplemental and sole source pumping that was used as an input for the H-I Model will be used as an input for the GWAM in order to determine the replacement requirements. The GWAM will use the same unit response functions for each ditch service area that are used in the H-I Model, including any subsequent changes to the unit response functions agreed to by the States or implemented pursuant to the procedures in Appendix B to the Decree.

A Replacement Input File for the H-I Model will be created using the monthly depletions determined using the GWAM for supplemental and sole source pumping using the various PDF values being examined. The replacement requirements determined using the GWAM will be modified for appropriate reaches and months using the Durbin usable flow method with the Larson coefficients for reaches below John Martin Reservoir.

e. Use of the H-I Model: A “no replacement” version of the update.dat file will be used. In the “no replacement” version of update.dat, all special waters will be removed, dried-up acreage will be redistributed to surface water only and supplemental acreage, all spill factors will be set to zero, transmountain deliveries will be removed, any unexchanged transmountain return flows from Fountain Creek will be removed, and fractions of consumable water placed in the Winter Water undistributed pool will be set to zero. The Evaluation is

intended to determine the sufficiency of replacement water required by the PDF values by substituting the Replacement Input File for actual replacement operations and transmountain return flows.

Using the Replacement Input File and the “no replacement” version of the update.dat file, runs of the H-I Model (including any changes to the H-I Model agreed to by the States or implemented pursuant to the procedures in Appendix B to the Decree) will be made for both the Historical run and the Compact run. Depletions or accretions to usable Stateline flows will be determined for each year in the Evaluation Review Period. Using these annual depletions or accretions to usable Stateline flows, a ten-year Compact compliance accounting will be computed for each ten-year period in the Evaluation Review Period. The ten-year accounting for each ten-year period in the Evaluation Review Period will not include any separate delivery credits from the Offset Account. This process will be repeated, adjusting only the supplement PDF value, unless otherwise agreed to by the States, until PDF values are determined that result in Compact compliance (i.e., no Shortfall) for each of the ten-year Compact compliance periods in the Evaluation Review Period. See Exhibit 2 attached hereto as hardcopy and included in the attached compact disk. Colorado will report these PDF values to Kansas in accordance with the first paragraph of this paragraph 4, together with the annual results for each year in the Evaluation Review Period.

5. Implementation of PDF values.

For the replacement plan year beginning in April 2013 and for each replacement plan year thereafter, the State and the Division Engineers will determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b,

using the PDF values determined by the Evaluation in the previous year as provided in this Agreement.

a. The State and Division Engineers will not use new PDF values lower than the PDF values provided in Rule 4.2 of the Use Rules (supplemental = 30%; sole source = 50%; sprinkler = 75%) to determine stream depletions .

b. Nothing in this Agreement prevents the State and Division Engineers from increasing the PDF values or requiring additional replacement water in excess of the amount necessary to replace stream depletions pursuant to this Agreement if the State and Division Engineers determine that such increases are required to prevent a Shortfall.

6. Dispute Resolution regarding Inflows or Credits to the Offset Account.

Unless the States agree otherwise, disputes between the States regarding inflows or credits to the Offset Account delivered pursuant to paragraph 4 of the Offset Account Resolution will be resolved in accordance with the Fast Track Issue Resolution Procedure in the Dispute Resolution Procedure set forth in Appendix H of the Decree.

7. Five-Year Review.

The review of the operations of the Offset Account Resolution and the Agreement Concerning the Offset Account in John Martin Reservoir for Colorado Pumping, Determination of Credits for Delivery of Water Released for Colorado Pumping, and Related Matters dated September 29, 2005, (“Offset Account Crediting Agreement”) (Appendix F.2 to the Decree), as well as the provisions of the October 31, 2007 version of Appendix A.4, required by paragraph 5 of the October 31, 2007 version of Appendix A.4 and paragraph 11 of the Offset Account Crediting Agreement is hereby modified and replaced as follows: The States will conduct a review of the operations of the: (a) Offset Account Resolution; and (b) the Offset Account

Crediting Agreement beginning no later than September 30, 2010. The review by the States shall be completed and a joint report presented to the Administration at its December 2012 annual meeting. Notwithstanding anything in the Offset Account Crediting Agreement to the contrary, this review shall satisfy the requirements for the first five-year review required by paragraph 11 of the Offset Account Crediting Agreement. Thereafter, the five-year review required by paragraph 11 of the Offset Account Crediting Agreement shall be presented to the Administration every five years starting in 2017.

8. Negotiations on Procedures if the Offset Account does not Exist.

Not later than ninety days after the written notice of intent to terminate this Agreement is provided by either State, the States will commence work on an agreement as to how credit for direct deliveries of water to the Stateline for replacement of depletions to usable Stateline flow and credit to make up a Shortfall shall be determined if the Offset Account does not exist. If such an agreement is not completed within the three years of the notice of intent to terminate this Agreement, then each State shall submit a proposal to the other State as to how credit for such deliveries shall be determined if the Offset Account does not exist, and the procedures to determine such credits shall be resolved under the Dispute Resolution Procedure set forth in Appendix H of the Decree as a Non-Fast Track Issue. Nothing in this agreement prevents the States from reaching agreement on how to credit for direct deliveries of water to the Stateline for replacement of depletions to usable Stateline flow and credit to make up a Shortfall if the Offset Account does not exist.

9. Annual Reports to Kansas.

Colorado will prepare an annual calendar-year report summarizing the operation of replacement plans approved under Rule 14 of the Use Rules using the format of the draft

report included as Exhibit 3 on the attached compact disc, with any modifications agreed to by the States (“Annual Report”). Colorado will provide the Annual Report to Kansas by March 31st of the following year, beginning in 2010 for the 2009 calendar year.

10. Implementation of Rule 4.2 of the Use Rules.

The State and Division Engineers will implement procedures to increase the PDF value for diversions of ground water used as a supplemental supply for flood and furrow irrigation by well users who do not have a reasonably adequate surface supply for the acreage irrigated in accordance with Rule 4.2 of the Use Rules based on farm-unit interviews to determine if an adjustment of the PDF values for such diversions above the Evaluation PDF determined pursuant to this Agreement is indicated.

11. Implementation of Rule 6 of the Use Rules.

Rule 6 of the Use Rules limits the number of years that certain water rights which have not been decreed for augmentation use can be used as a source of augmentation water in a plan approved by the State and Division Engineers pursuant to the Use Rules. For such water rights, the State and Division Engineers will require that the well user or plan proponent file an application for a change of water right(s) approving the use of the water right for augmentation use if the water right has been included as a source of augmentation water in any plan approved pursuant to the Use Rules (“Rule 14 Plan”) for a total of three years. For such water rights that have been included as a source of augmentation water in a Rule 14 Plan approved prior to the date of this Agreement, this requirement will be implemented as provided below in this paragraph. Thereafter, the State and Division Engineers will not approve such sources as augmentation water in a Rule 14 Plan where no decree has been obtained, except that, for a reasonable time after an application for a change of water right has been filed, the State and

Division Engineers may approve such sources as augmentation water in a Rule 14 Plan while such filed application is pending, provided that a reasonable time shall not exceed five years after the filing of such application unless the well user or plan proponent has demonstrated to the State and Division Engineers that the delay in obtaining a decree has been justifiable and that not being able to continue operating under a Rule 14 Plan until a decree is entered will cause undue hardship to the well user or plan proponent; and provided, further, that in no case shall such approval be for more than seven years after the filing of the application.

A well user or plan proponent may not avoid the above requirements and deadlines by substituting mutual ditch company shares used for augmentation in a prior Rule 14 plan with: (1) other shares in the same mutual ditch company that were used as part of the same farm unit, (2) other shares used to irrigate the same acres identified for dry-up or (3) other shares, in the same mutual ditch company, owned or controlled by the same owner or entity of the shares being substituted for, or shares that have been used to augment depletions from other wells in a Rule 14 Plan in three prior years.

To implement the provisions of this paragraph, the State and Division Engineers will notify well associations, either through the Plan Expectations Letter sent to the well associations in January each year or through other correspondence, that certain sources of augmentation water meeting the above criteria will be subject to this requirement and that an application for a change of water right must be filed with the Water Court no later than January 31, 2011, in order to be used in the 2011-2012 Rule 14 Plans or in any subsequent plan. Approval letters for 2010-2011 plans will also include a similar term and condition to enforce the requirement to apply to Water Court.

12. Implementation of Rule 12 of the Use Rules.

When a report of monthly ground water use is not received or is incorrectly or falsely reported by a well user or entity acting on behalf of well users, the Division Engineer will estimate or adjust the pumping amount and then update the pumping data when the correct meter reading is received. The State and Division Engineers will use their enforcement authority pursuant to Rule 12 of the Use Rules or section 37-92-503(6)(b), Colo.Rev.Stat., to minimize the need for such changes to the monthly pumping data supplied to Kansas.

13. Deadline for Nomination of Dry-Up Parcels.

The State and Division Engineers will implement procedures to require replacement plan proponents to select and nominate parcels for dry-up credit and provide other information required to comply with deadlines for nomination of dry-up parcels in accordance with Exhibit A to Appendix B.3 to the Decree to provide notice to Kansas of parcels that will be dried up and any parcels that will be irrigated by a sole source well, and will enforce those deadlines.

14. Termination of this Agreement.

After December 31, 2012, either State may terminate this Agreement by giving notice in writing to the other State of its intent to terminate this Agreement. Such notice shall be sent by registered mail addressed to the chief official of the other State charged with the administration of water rights, with a copy to the Attorney General of that State and a copy to the Administration. Such notice shall be effective on the date of mailing. In the event that either State provides such notice, this Agreement shall terminate five years after December 31 of the year such notice was given, unless the notice is rescinded. If this Agreement has terminated in

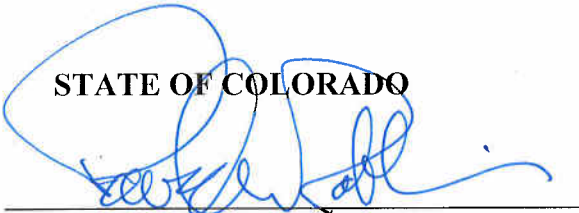
accordance with the preceding sentence, then either State may thereafter exercise its right to terminate the Offset Account Resolution in accordance with paragraph 17.A of the Offset Account Resolution, and the provisions of this Agreement shall be of no further force and effect.

15. By entering into this Agreement the States have accomplished the purpose of the Retained Jurisdiction. The States will take such further actions, if any, as may be necessary for the U.S. Supreme Court to relinquish the Retained Jurisdiction.

16. This Agreement replaces the October 31, 2007 version of Appendix A.4 to the Decree.

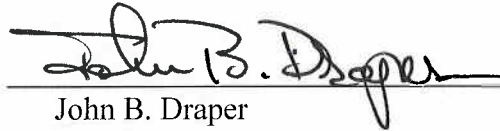
JOINTLY APPROVED AS OF June 26, 2009.

STATE OF COLORADO



David W. Robbins
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STATE OF KANSAS



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Dick Wolfe
Colorado State Engineer



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EXHIBITS

TO

**AMENDED AGREEMENT REGARDING THE COLORADO USE RULES, PDF
EVALUATION, IMPLEMENTATION PROCESSES, AND RELATED
MATTERS, AND NOT TO TERMINATE THE OFFSET ACCOUNT
RESOLUTION**

As amended June 2009

1. Electronic version of the Ground Water Accounting Model (GWAM) (on attached compact disk).
2. Results of Evaluation of PDF Values, as Described in Paragraph 4.e (attached as hard copy and included on attached compact disk).
3. Draft Annual Report as Described in Paragraph 9 (on attached compact disk).

Exhibit 2
To Amended Appendix A.4

Dated June, 2009

Results of Evaluation of PDF Values, as Described in Paragraph 4.e.

A. Example of Insufficient PDF (i.e., Shortfall)

PDF = 38% supplemental / 50% sole source / 75% sole source sprinkler fails to produce results without depletions in one 10-year total in Evaluation Review Period

Year of Evaluation Review Period	Calendar Year	Usable Stateline Depletions (+) / Accretions (-) (acre-feet)	10-Year Period	10-year Sum of Usable Stateline Depletions (+) / Accretions (-) (accretions required) (acre-feet)
1	1997	-4,551		
2	1998	-269		
3	1999	-467		
4	2000	-189		
5	2001	163		
6	2002	32		
7	2003	1,868		
8	2004	276		
9	2005	-171		
10	2006	-331	1997 - 2006	-3,639
11	2007	-708	1998 - 2007	204
12	2008	—	1999 - 2008	—
13	2009	—	2000 - 2009	—
14	2010	—	2001 - 2010	—
15	2011	—	2002 - 2011	—
16	2012	—	2003 - 2012	—
17	2013	—	2004 - 2013	—
18	2014	—	2005 - 2014	—
19	2015	—	2006 - 2015	—
20	2016	—	2007 - 2016	—

Exhibit 2
To Amended Appendix A.4

Dated June, 2009

Results of Evaluation of PDF Values, as Described in Paragraph 4.e.

B. Example of Sufficient PDF (i.e., no Shortfall)

PDF = 39% supplemental / 50% sole source / 75% sole source sprinkler produces results without depletions in any 10-year total in Evaluation Review Period

Year of Review Period	Calendar Year	Usable Stateline Depletions (+) / Accretions (-)	10-Year Period	10-year Sum of Usable Stateline * Depletions (+) / Accretions (-) (accretions required)
1	1997	-4,743		
2	1998	-380		
3	1999	-549		
4	2000	-265		
5	2001	7		
6	2002	-189		
7	2003	1,735		
8	2004	-128		
9	2005	-289		
10	2006	-466	1997 - 2006	-5,268
11	2007	-791	1998 - 2007	-1,316
12	2008	—	1999 - 2008	—
13	2009	—	2000 - 2009	—
14	2010	—	2001 - 2010	—
15	2011	—	2002 - 2011	—
16	2012	—	2003 - 2012	—
17	2013	—	2004 - 2013	—
18	2014	—	2005 - 2014	—
19	2015	—	2006 - 2015	—
20	2016	—	2007 - 2016	—