April 17, 2020

**America’s Power Comments on EPA’s Part B Closure Coal Combustion Residuals Rule**

America’s Power submits the following comments on the Environmental Protection Agency’s (EPA’s) proposal to revise the current federal rules to regulate the disposal of coal combustion residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act (RCRA).\(^1\)

America’s Power is the only national trade organization whose sole mission is to advocate at the federal and state levels on behalf of coal-fueled electricity and the nation’s coal fleet. Our members represent every facet of the coal-fueled electricity industry: electricity generators, coal producers, railroads, barge operators, and equipment manufacturers.\(^2\)

The main focus of EPA’s proposal is to revise key requirements for closing unlined and clay-lined surface impoundments that are subject to a forced closure mandate under the federal CCR rules. America’s Power generally supports EPA’s proposed approach to establish reasonable closure requirements that will ensure the protection of human health and the environment while minimizing adverse economic and operational impacts on coal-fueled power plants.

**Reasonable And Flexible Closure Requirements Are Needed To Avoid The Premature Retirement Of Coal-Fueled Power Plants.**

There are a number of compelling reasons to preserve coal-fueled generation. In particular, the coal fleet provides fuel security, supports grid reliability and resilience, produces affordable electricity, contributes to fuel diversity, provides electricity when other fuels are not available or are too expensive, and promotes national security.

The importance of the coal fleet has been recognized by the Department of Energy, Federal Energy Regulatory Commission, North American Electric...
Reliability Corporation, and grid operators, to name just a few. These entities have recognized the essential attributes the coal fleet provides to the electric grid and have expressed concerns about the impact of the changing electricity mix on grid reliability and resilience.³

Unfortunately, U.S. power plant owners have announced the retirement or conversion to other fuels of a staggering number of coal-fueled electric generating units (EGUs) since 2010.⁴ Almost 700 coal-fueled EGUs in 43 states—totaling 133,200 megawatts (MW) of generating capacity—have retired or announced plans to retire. These retirements now exceed 42 percent of the coal fleet that was operating in 2010. Through the end of 2019, approximately 97,600 MW of coal-fueled generating capacity had retired. Between 2020 and 2025, an additional 23,200 MW are expected to retire, bringing total retirements to 120,800 MW by the end of 2025.

Without changes to the current CCR regulations, this disturbing trend in coal plant retirements would be exacerbated with the imposition of inflexible rules on the forced closure of all unlined and clay-lined surface impoundments in response to the forced closure mandate imposed by the D.C. Circuit’s decision in Utility Solid Waste Activities Group v. EPA (USWAG).⁵ Therefore, it is imperative that EPA take reasonable steps to ensure CCR closure requirements imposed on unlined surface impoundments at existing coal-fueled EGUs do not jeopardize the reliability and resilience of the electric grid by causing the premature retirement of even more coal-fueled generating capacity.

Unlined CCR Surface Impoundments Should Not Be Forced To Close If They Do Not Pose Unreasonable Risks To Human Health Or The Environment. America’s Power supports EPA’s proposal to establish an alternative liner demonstration mechanism that will allow for the continued operation of those unlined CCR surface impoundments that do not pose an unreasonable risk to human health or the environment. Notably, the USWAG decision did not say every unlined impoundment poses such risks and must close. Rather, the court left open the possibility that owners and operators may demonstrate that their unlined impoundments can satisfy the RCRA Subtitle D standard for protecting human health and the environment due to site-specific characteristics.⁶

Evidence now shows that certain unlined CCR surface impoundments can operate safely due to the site-specific characteristics of alternate liner systems and therefore should not be forced to close simply because they have not installed a double-liner composite system meeting the specific requirements imposed under the CCR rule. Notable examples identified in the rulemaking record include coal-fueled EGUs located in Arizona, North Dakota, Michigan, and Louisiana. In the case of these coal-fueled units, the evidence in the record clearly indicates that surface impoundments employing alternate liner systems with naturally low permeability clays and other site-specific characteristics can provide the same or better level of protection from potential migration of contaminants than a composite liner system meeting the requirements of the CCR rule.⁷

These and other surface impoundments at coal-fueled EGUs should not be forced to close if they have in place an alternate liner system (which accounts for the
impermeability of the underlying soils and other design features) that can meet the performance levels of the CCR rule’s composite liner system. Such an approach will assure the protection of human health and the environment, while also avoiding the extremely costly closure requirements for some coal-fueled EGUs – costs that could force the premature retirement of additional coal-fueled generating capacity.

Beneficial Use Of CCR For The Closure Of Surface Impoundments Should Be Allowed To Ease Implementation Of The Closure Requirements. America’s Power supports EPA’s efforts to clarify that CCR materials may be used for the closure of unlined surface impoundments that are subject to forced closure under 40 C.F.R. §257.101. The importance of providing this clarification cannot be overstated given the many useful purposes for which the CCR materials can be used. Notable examples include using CCR as structural fill, grading, and in the design and construction of the final cover system for closing the surface impoundment.

Furthermore, the use of CCR materials for these and other purposes has many advantages. It can significantly lower costs, time, and resources required for completing the lengthy closure process. For example, the use of CCR for closure avoids the consumption of virgin materials as well as the energy required to produce, refine, and transport those materials to the CCR disposal facilities. Similarly, in the case of those facilities that do not have reasonable access to and thus are unable to receive easily these types of structural fill materials from other sources, the ability to beneficially use onsite CCR materials can significantly lower transportation costs and aid in expediting the time required for completing closure of the surface impoundments.

Another important advantage of using onsite CCR materials for closing unlined impoundments is that it provides the opportunity for EGU owners and operators to consolidate multiple CCR disposal facilities into just one single facility. This consolidation of CCR materials at the site results in an overall smaller CCR disposal footprint and thus a corresponding smaller impacted area. As a result of this consolidation, owners and operators are better able to focus their long-term monitoring, care, and cleanup efforts on one single CCR disposal facility, instead of multiple facilities. EPA itself has recognized in the preamble to the proposed rule the many benefits of consolidating and thereby limiting the CCR footprint to one location.

And finally, the ability to beneficially use CCR materials for closure has important environmental benefits by helping to expedite the closure of the surface impoundments. As EPA itself has confirmed, expediting the closure of the impoundments is one key factor for limiting potential groundwater contamination and other risks posed by CCR impoundments that may be contaminating groundwater. This means that potential risks to human health and the environment can be significantly reduced to the extent that the use of CCR materials onsite can accelerate the timeframe for completing closure of the surface impoundment.
A More Realistic Deadline Should Be Set For Completing Groundwater Corrective Action.  The current CCR regulations set unrealistic deadlines for completing the requirements for closure by removal. Owners and operators of these surface impoundments must satisfy all of the closure requirements within five years, with a limited possibility for extending the closure deadline. Although extensions are provided based on the size of the impoundment, the federal rules only allow such extensions under narrowly defined factual circumstances. These circumstances are limited to situations where an owner or operator encounters significant delays that are "beyond the facility's control" and then meets the detailed requirements for demonstrating the need for the extension.

In effect, the federal rules provide that closure by removal cannot be achieved until the following two sets of requirements are fully satisfied. First, the owner or operator must remove all CCR from the impoundment and then decontaminate all areas affected by releases from the closing CCR unit. Second, groundwater corrective action must be completed so that the owner or operator can demonstrate that there are no exceedances of any groundwater protection standards for Appendix IV constituents.

The achievement of this second requirement is not feasible for many impoundments within the timeframes specified in the current federal regulations. Five years is simply not enough time for completing all of the necessary corrective action measures required for remediating the groundwater contamination for many impoundments. EPA itself expressly acknowledged this problem in the proposed rule, stating that corrective action “can take years or decades to complete and that the actual cleanup time will depend on several factors, which would vary from site to site.” This conclusion is further supported by new information in the rulemaking record documenting that “the closure of CCR units will likely be more complex than EPA envisioned at the time the 2015 CCR rule was published.”

As a result of this arbitrary and unrealistic deadline for attaining all groundwater protection standards, many coal-fueled utility owners or operators may be unable to close their surface impoundments by removing the CCR from the disposal unit. This would likely put many EGU owners and operators in a very difficult position given that they are facing strong state regulatory mandates and local pressures to do so. In addition, setting realistic deadlines for completing groundwater corrective action measures will provide additional planning and timing flexibility, which will be extremely important for those electric utilities that are facing closure obligations at multiple surface impoundments within the same general timeframe.

In light of these considerations, America's Power supports EPA's proposal to remove the requirement for completing all groundwater corrective action measures within five years and, instead, allow for the completion of these measures over an extended timeframe during the post-closure care period. Making this one change is critically important given that a much higher number of unlined surface impoundments must be closed by removing the CCR that was initially projected by EPA at the time the 2015 CCR rule was issued. According to EPA, more than 70 percent of the existing surface impoundments will now need to close because they are unlined and thus subject to forced closure because of the
USWAG decision, and that more than 40 percent of these impoundments are now expected to close by the removal of the CCR.\textsuperscript{16}

America’s Power therefore urges EPA to extend the current deadline for completing all groundwater corrective action measures and allow the completion of these measures after the closure of impoundment during the subsequent post-closure care period. This approach will greatly improve the efficiency and effectiveness of closure process, thereby providing additional planning and timing flexibility for EGU owners and operators while still ensuring the protection of human health and the environment.

\textbf{Additional Time Should Be Provided To Remove CCR From Surface Impoundments For Beneficial Use.} The current federal CCR regulations impose another requirement that may block or significantly restrict the beneficial use of the CCR that will be removed from many CCR surface impoundments subject to forced closure. In particular, the regulations impose an inflexible five-year deadline for closing CCR surface impoundments subject to forced closure.\textsuperscript{17} This means that most existing impoundments will have sufficient time to remove – at best – only a small portion of the total CCR materials (typically exceeding many millions of tons) that are being stored at the impoundment.\textsuperscript{18}

The inability to beneficially use the CCR will have many unfortunate effects – particularly given the increasing number of impoundments that may need to close by the removal of their CCR.\textsuperscript{19} A few of the most troubling impacts are briefly discussed below.

First, it will prevent many coal-fueled electric utilities from realizing the economic benefits that would otherwise result from the sale of the CCR materials for beneficial use. These revenue streams will be helpful to offset some of the high costs that EGU owners and operators must incur to remove the CCR materials from the impoundments. Furthermore, the inability to market the CCR due to inflexible CCR closure requirements means that additional costs will be incurred to landfill large volumes of CCR materials. In many cases, these additional costs will include the permitting and construction of entirely new landfills or the expansion of existing landfills. It makes no sense to impose unnecessarily these additional closure costs on existing coal-fueled EGUs, particularly given that additional costs could force the premature retirement of these units.

Second, the inability to beneficially use the CCR is flatly inconsistent with RCRA’s overarching goals to conserve natural resources and protect the environment.\textsuperscript{20} As EPA itself has recognized,\textsuperscript{21} CCR can be substituted for many virgin materials that would otherwise be mined and processed for use. These virgin materials include limestone to make cement, and Portland cement to make concrete; mined gypsum to make wallboard; and aggregate, such as stone and gravel, for uses in concrete and road bed. Using virgin materials for these and other applications requires mining and processing, which can impact wildlife habitats and disturb otherwise undeveloped land. By contrast, reducing mining, processing, and transporting of materials conserves energy, avoids greenhouse gas emissions and reduces other potential impacts on the environment.\textsuperscript{22}
And third, EPA’s inflexible closure rules will result in the waste of a valuable resource for which there is a strong market demand that continues to increase over time. This fact is evidenced by growing demand for fly ash that is used as a cement replacement. The American Road and Transportation Builders Association forecasts beneficial use of fly ash utilization will increase from 23.3 million tons in 2013 to 35.7 million tons by 2033. This represents a 53 percent increase in demand of CCR just for this one application of CCR materials.\(^{23}\) Similarly, the market demand is expected to increase for other CCR materials, such as bottom ash and boiler slag collected from the bottom of boiler, as well as synthetic gypsum produced by operating flue gas scrubbers. Furthermore, these increases in market demand of CCR materials will be occurring while the amounts of CCR materials produced by coal-fueled generation have been declining due to electric utility sector’s shift towards natural gas and renewable energy.\(^{24}\)

Based on these trends, it is clear that the increased market demand for CCR materials will likely outpace production of CCR materials over the next 10 to 15 years, thereby increasing the need to make efficient use of CCR materials currently stored in existing CCR surface impoundments. The failure of the CCR program to allow for the beneficial use of these CCR materials from existing surface impoundments due to inflexible closure requirements does not make good policy sense. It will result in the waste of a valuable local resource stored in existing surface impoundments and, instead, force the increased use of more energy-intensive virgin materials. Neither of these outcomes is good for the economy or the environment.\(^ {25}\)

For these reasons, America’s Power urges EPA to adopt changes to the current closure requirements that will provide additional time, beyond the current five-year closure deadline, in the case of those unlined surface impoundments where the CCR is being removed for beneficial use under an active beneficial use program.\(^ {26}\)

**EPA Should Maintain A Flexible Timeframe For The Selection And Implementation Of The Corrective Action Remedy.** For the reasons discussed above, America’s Power generally supports EPA’s proposed closure by removal option that would allow for groundwater corrective action measures to be completed after the removal of the CCR and closure of the surface impoundment during the post-closure care period. While this proposed change is essential for assuring that closure by removal will be a viable option for impoundments, we also are concerned with EPA’s proposal to require owners and operators to select and begin implementing the corrective action prior to removal of CCR and closure of the impoundment.\(^ {27}\) America’s Power questions the appropriateness of and need for imposing this requirement for the following reasons.

First, groundwater conditions at many sites may drastically change once the CCR materials have been removed from the impoundment.\(^ {28}\) It therefore makes little sense to require owners and operators of impoundments to make their final corrective action remedy selection before they have removed all of the CCR materials from the impoundment.
Second, the imposition of this requirement will not necessarily “help ensure that that impacted groundwater is returned to original conditions as soon as is practicable,” as EPA suggests in the preamble to the proposed rule.29 In fact, requiring the selection and implementation of a final remedy for a site that will significantly change with the removal of the CCR could be counterproductive and thereby impede the efficient and effective remediation of the groundwater at the site.

And third, the current CCR regulations already require owners or operators to select a remedy “as soon as feasible”30 and to implement the remedy within 90 days of selecting a remedy.31 These requirements therefore already assure the prompt selection and implementation of corrective action measures. The imposition of this additional requirement is not needed for remediating the impacted groundwater as soon as practicable.

Based on these considerations, we strongly recommend that EPA not adopt the proposed requirement to implement the corrective action remedy prior to completing closure by removal.

**EPA Should Adopt Risk-Based Alternatives For Tailoring CCR Requirements To Account For Site-Specific Conditions.** Although not included as part of the proposed rule, America’s Power urges EPA to incorporate into the CCR regulations many of the risk-based alternatives that are codified at 40 C.F.R. Part 258 of the Municipal Solid Waste Landfill Regulations (MSWLF). The incorporation of these alternatives into the federal CCR program is important because they allow for the tailoring of federal CCR requirements to take into account site-specific conditions and risks of each CCR disposal facility. As EPA itself has recognized many times,32 allowing for EGU owners and operators to tailor many of these inflexible and prescriptive requirements of the CCR rule makes good policy sense. For example, tailoring groundwater monitoring and corrective action requirements will avoid imposing one-size-fits-all, overly-conservative requirements that can impose unnecessary costs on coal-fueled EGUs and cause the premature closure of CCR disposal facilities in many cases.

At the time EPA promulgated the CCR rule in 2015, the Agency declined to adopt site-specific, risk-based provisions of the MSWLF program due to statutory limitations placed on the regulation of CCR waste streams under Subtitle D of RCRA. These limitations precluded EPA from implementing the CCR requirements through state or federal permit programs. As a result, EPA was forced to establish a self-implementing regulatory scheme in which plant operators themselves were required to administer and comply with the CCR requirements without any direct regulatory oversight by either EPA or the states. Due to this lack of regulatory oversight, EPA concluded that it was “impossible to include some of the alternatives available in [the MSWLF program], which establish alternative standards that allow a state, as part of its permit program, to tailor the default requirements to account for site specific conditions at the individual facility.”33

EPA’s decision to not adopt these risk-based alternatives has resulted in inflexible and unnecessarily prescriptive CCR requirements reflecting worst-case risk
assumptions, rather than tailoring those requirements to the actual risks posed by each particular CCR disposal facility. Moreover, these inflexible and overly conservative requirements of the 2015 CCR rule are imposing unnecessary costs on coal-fueled EGU s and threatening to cause the premature closure of CCR disposal units.

To correct this problem, America’s Power urges EPA to adopt the following MSWLF risk-based alternatives for ensuring flexible, site-specific implementation of the CCR requirements:

- Establish risk-based groundwater protection standards for constituents without maximum contaminant levels;
- Select modified correction action remedies that do not require closure of the impoundment or other such correction action measures that would not result in any meaningful environmental benefit;
- Modify various groundwater monitoring requirements to reflect site-specific factors, such as the suspension of groundwater monitoring requirements where there is no potential for migration of contaminants;
- Allow use of an alternate period of time for demonstrating compliance with corrective action based on specified regulatory criteria that take into account site-specific conditions; and
- Allow shortening of the length of the post-closure period to reflect risk-based considerations at specific sites.

**EPA’s Underlying Rationale For Not Adopting Risk-Based Alternatives Is No Longer Valid.** RCRA amendments enacted into law in December 2016 establish a new regulatory framework that authorizes the implementation and enforcement of the federal CCR requirements through state and federal CCR permit programs. Several states have already adopted and are now implementing state permit programs that have been approved by EPA. In addition, the Agency currently has under development federal rules for administering a federal CCR permit program for every state that does not adopt an EPA-approved state permit program. With the upcoming implementation of state and federal CCR permit programs in every state, it makes good policy sense for the EPA now to begin to develop the risked-based alternatives that can be efficiently and effectively administered by state or federal permitting authorities.

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America’s Power appreciates the opportunity to submit these comments on the proposed Part B CCR closure rule. Should you have any questions, please contact me at mbloodworth@americaspower.org.

Sincerely,

Michelle Bloodworth
President and CEO
In that interpretation, the Agency concluded that owners and operators are prohibited from "placing" any CCR materials in unlined surface impoundments subject to forced closure. See 83 Fed. Reg. at 11,605. This interpretation is contrary to the plain language of the CCR applicability rules in 40 C.F.R. §257.50(g), which expressly exempts all beneficial uses from CCR regulation. This means that if the use of CCR meets all of the applicable criteria beneficial use specified in the CCR regulations at 40 C.F.R. 257.53 (definition of beneficial use), then that use of CCR is not regulated under the federal CCR program. Given the considerable uncertainty created by EPA’s erroneous interpretation of its regulations, America’s Power recommends that EPA issue in the final rule an updated interpretation confirming that CCR can be used to close impoundments subject to forced closure in those cases where all of the regulatory criteria for beneficial use are satisfied. In addition, we support the adoption of EPA’s proposed regulatory fix that allow the use of CCR for purposes of closing impoundments subject to forced closure if certain alternate criteria are satisfied. The adoption of this proposed option would provide EGU owners and operators with another way to
use CCR materials for closure without having to demonstrate compliance with each of the criteria for beneficial use.

9 See 85 Fed. Reg. at 12,463.

10 See 85 Fed. Reg. at 12,463.

11 These requirements are specified in the federal CCR regulations at 40 C.F.R. §257.102(c).

12 40 C.F.R. §257.102(f). For surface impoundments of 40 acres or smaller, the rules allow only one extension of up to two years, while impoundments greater than 40 acres may qualify for up to five, two-year extensions, provided that the owner or operator “substantiates the need” for each two-year extension for reasons beyond the control of the owner or operator. Id. at §257.102(f)(2)(ii).

13 Notably, the completion of groundwater corrective action entails the owner or operator completing all of the actions and measures that must be taken to implement the selected remedy specified in 40 C.F.R. §257.98(c) in order to attain all groundwater protection standards in 40 C.F.R. §257.95(h).

14 85 Fed. Reg. at 12,469.

15 85 Fed. Reg. at 12,469. Among other things, the preamble states: “The closure activity is simply not a matter of removing CCR from the unit, but instead will likely require a significant undertaking to remEDIATE impacted soil and groundwater in order to achieve the current CCR removal and decontamination standards. With this new information, the Agency believes that the existing timelines to complete closure by removal of CCR were not designed to also provide sufficient time to complete groundwater corrective action.” 85 Fed. Reg. at 12,469.

16 85 Fed. Reg. at 12,469.

17 40 C.F.R. §257.102(f)(i)(ii). Notably, most of these impoundments would not qualify for any of the two-year extensions that are provided for completing closure under §257.102(f)(2). These extensions are only available to those impoundments for which the owners or operators “can demonstrate it was not feasible to complete closure of the CCR unit within the required time frames due to factors beyond the facility’s control.” 40 C.F.R. §257.102(f)(2)(i).

18 It should be noted that the federal CCR regulations do contain special provisions that provide extra time for those CCR disposal facilities that intended to remove and beneficially use the CCR. See 40 C.F.R. §257.102(e)(1), (2) (providing that the five-year clock for completing closure does not begin until after the last removal of the CCR material for beneficial use). Unfortunately, this extra time is not provided for completing closure of surface impoundments that are subject to forced closure. Owners and operators of these impoundments must complete closure within five years of commencing closure activities, which must be initiated as early as August 31, 2020 under the proposed Part A closure rule. See 84 Fed. Reg. at 65,941.

19 As previously noted, EPA has reported that there are over 500 unlined surface impoundments that are currently subject to force closure in response to the USWAG decision, of which more than 40 percent are now expected by EPA to close by the removal of the CCR based on information and data filed on those impoundments. See 85 Fed. Reg. at 12,469.


21 See 80 Fed. Reg. at 21,329–30 (discussing the benefits resulting from the need to mine and process virgin materials).

22 In addition, the use of CCR in lieu of virgin materials has many important economic benefits. It can improve the strength and durability of the materials produced (such as in the case concrete), reduce significantly production and energy costs, and use less green space that would otherwise be needed for landfills.

23 Fly Ash – Current and Future Supply, Caltrans at page 9

24 Moreover, this inflexible limitation on the beneficial use of the CCR would apply to even those unlined surface impoundment that are not violating a groundwater protection standard or otherwise posing risks to human health or the environment. As a result, EPA’s current closure regulations will have the effect of precluding the beneficial use of CCR in the case of those impoundments for which absolutely no environmental gains would be achieved. Furthermore, in the case of those unlined impoundment that may happen to be exceeding a groundwater protection standard, any potential risk to human health and the environmental can be effectively mitigated through the current CCR rule requirements for groundwater monitoring and corrective action that would apply during the extended closure period.

In particular, we recommend that EPA establish in 40 C.F.R. §257.104(g) a provision that would allow for the extension of the current five-year closure deadline in the case of those impoundments for which the CCR materials are being removed for the purpose of beneficial use under an active beneficial use program.

85 Fed. Reg. at 12,470 (proposing to require the selection and implementation of the corrective action remedy prior to completing closure of the impoundment). Under the current CCR regulations, a corrective action program must be initiated if the surface impoundment exceeds a groundwater protection standard set for any Appendix IV constituent. 40 C.F.R.§257.95(g). The corrective action program includes an assessment of corrective action measures necessary to remediate any releases and restore all affected areas to original conditions. 40 C.F.R.§257.96(a). After an assessment of corrective action measures has been completed, the owner or operator of the impoundment must select a remedy that identifies the measures and activities for attaining the groundwater protection standards and then begin the implementation of those measures and activities within 90 days of selecting the remedy. 40 C.F.R. §257.98(a). To be eligible for the new closure by removal option, EPA is proposing to make one important modification to these requirements for development and implementation of a corrective action program for the impoundment. In particular, the proposal requires the owner or owner to have selected and begun the implementation of selected corrective action measures. In effect, this new requirement would apply as a condition for completing closure by removal of the surface impoundment. 85 Fed. Reg. at 12,470.


40 C.F.R. § 257.97(a).

40 C.F.R. § 257.98(a).


EPA readily acknowledged this point when it removed the risk-based alternatives from the 2015 final CCR rule. For example, the Agency recognized that it may be possible at certain sites to engineer an alternative to closure of the unit that would adequately control the source of the contamination and would otherwise protect human health and the environment.” 80 Fed. Reg. at 21,371. However, the Agency concluded that “the regulatory structure under which this rule is issued effectively limits the Agency’s ability to develop those types of risk-based requirements that can be individually tailored to accommodate particular site conditions.” Id.

35 See Water Infrastructure and Improvements for the Nation Act of 2016 (amending RCRA Subtitle D by authorizing the states to administer the rule through permit programs or other systems of prior approval and conditions in lieu of the federal rule and directing EPA to do so in states that choose not to do so).