Policy Memorandum

To: **ACCOUNT HOLDERS**

Date: **JANUARY 13, 2011**

Re: **IMPLICATIONS OF NEW GREENHOUSE GAS PERMITTING REQUIREMENTS UNDER THE CLEAN AIR ACT FOR CLIMATE ACTION RESERVE PROTOCOLS AND GREENHOUSE GAS OFFSET PROJECTS**

The United States Environmental Protection Agency (EPA) will begin regulating greenhouse gas (GHG) emissions from major stationary sources under the Clean Air Act (CAA) beginning January 2, 2011.[1] Because the new regulation has the potential to require GHG mitigation from GHG sources currently eligible for earning offsets in the Climate Action Reserve (the Reserve), the additionality[2] of new projects and projects already listed and registered with the Reserve may be affected. This memorandum communicates the Reserve's interpretation of how CAA GHG permitting requirements could affect the additionality of projects, as well as planned actions to ensure that Reserve protocols appropriately reflect any EPA actions.

Implications of Clean Air Act Permitting Requirements

Background

For facilities that emit GHGs, any new Title V operating permits and Prevention of Significant Deterioration (PSD) permits under the CAA will be required to address GHGs if emissions exceed certain thresholds, outlined in the table below.

Type of Facility	Permit	Threshold Triggering Permit Requirement
Any stationary source	Title V	*Total* GHG PTE* of 100,000 tons CO_2e/yr
New major source	PSD	*Total* GHG PTE of 100,000 tons CO_2e/yr
Existing facility undergoing major modification	PSD	Modification results in GHG PTE *increase* of 75,000 tons CO_2e/yr

Note: Emissions are calculated in short tons, not metric tons.
Note: The implementation timeline for new and existing facilities is staggered based on factors outlined in the EPA guidance. For more information on timing, please refer to "Summary of EPA's Proposed Implementation Timeline" on the final page of this memorandum.
*PTE = Potential to Emit

A brief summary of how these two permitting processes will address GHGs is provided below, and a summary of EPA's implementation timeline is provided as an appendix to this memorandum. However, this memorandum does not provide a full overview of the new regulations. This memorandum and the issues discussed herein represent the Reserve's interpretation of the implications of the new regulations on Reserve Protocols. Because these

[1] "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule; Final Rule" 40 CFR Parts 51, 52, 70, and 71 (3 June 2010). http://www.gpo.gov/fdsys/pkg/FR-2010-06-03/pdf/2010-11974.pdf#page=1

[2] The Reserve's *Program Manual* asserts that a project is additional if it passes both a legal requirement test and a performance standard test. It goes on to define a project as passing the legal requirement test: "when there are no laws, statutes, regulations, court orders, environmental mitigation agreements, ***permitting conditions*** (emphasis added) or other legally binding mandates requiring its implementation, or requiring the implementation of similar measures that would achieve equivalent levels of GHG emissions reductions."

regulations have yet to be tested or implemented, EPA may issue additional guidance in the future that could impact the Reserve's interpretation as detailed herein.[3] This memorandum is not intended to, nor can it, replace the Reserve's determination of compliance with its programs and Protocols on an individual basis due to the unique nature of each project. The Reserve also encourages Account Holders to consult the EPA website[4] for further information on the new regulations.

Title V Permitting for GHGs

All stationary sources with greater than 100,000 tons of CO_2e emissions per year will be required to obtain operating permits pertaining to GHGs. The rule goes into effect on January 2, 2011 for sources already subject to Title V, and on July 1, 2011 for sources whose emissions exceed the threshold but have not previously been subject to Title V. Sources becoming subject to Title V permitting for the first time will have 12 months from July 1, 2011 to secure a Title V permit addressing GHGs, while sources with existing Title V permits will not be required to secure a new Title V permit that includes GHGs until the current permit expires or a substantial modification increases emissions by 75,000 tons per year (tpy) CO_2e.

According to EPA's recently published guidance, "Title V generally does not add new pollution control requirements," but rather "contains conditions necessary to assure compliance with all CAA requirements applicable to the source."[5] Thus, as a general matter, Title V provides an enforcement mechanism to ensure compliance with all CAA requirements, but in and of itself does not mandate specific pollution control requirements. This suggests that most existing sources, including those involved in currently registered and active Reserve projects, will not face any new CAA requirements pertaining to GHGs other than having to apply for a new Title V operating permit. The exceptions are sources that undergo a significant expansion (discussed further below), or other such sources that EPA may deem, in its discretion, require incorporation of substantive pollution control mandates that will be enforced through a Title V operating permit.

Title V requires permit applicants to submit a description of emissions from their facility. If a facility has voluntarily installed a GHG abatement technology, the technology would likely be reflected in any new Title V permit operating conditions. The new Title V permit would make operating the voluntarily installed abatement technology a federally enforceable permitted operating condition at the facility from that point in time moving forward. However, because the issuance of the new or revised Title V permit will not itself require or mandate the implementation of any *new* GHG abatement, the Reserve expects that such permits will not affect the eligibility status of currently registered projects. In other words, carbon offset projects that are registered with the Reserve prior to obtaining a new Title V permit would as a general rule continue to be treated as additional, even if the permit effectively makes project activities federally enforceable going forward. In addition, if a newly submitted project meets all of the Reserve's other eligibility requirements – including start-date requirements – then its eligibility typically should not be affected by Title V permitting conditions that reference or

---

[3] In addition, EPA is committed to completing another rulemaking no later than July 1, 2012, to solicit comments on whether to take a third step of the implementation process to apply permitting programs to additional sources. EPA has also committed to undertaking another rulemaking after 2012.

[4] U.S. EPA Website: http://www.epa.gov/nsr/ghgpermitting.html, http://www.epa.gov/nsr/actions.html

[5] "PSD and Title V Permitting Guidance for Greenhouse Gases," U.S. Environmental Protection Agency (EPA), Office of Air Quality Planning and Standards, 10 November 2010, Available at: http://www.epa.gov/nsr/ghgdocs/epa-hq-oar-2010-0841-0001.pdf

incorporate project activities. Similarly, if a project applies for a renewed crediting period, its eligibility should typically not be affected by Title V permitting conditions applied during its initial crediting period.

PSD Permitting for GHGs and BACT Requirements

Prevention of Significant Deterioration (PSD) permits and installation of "best available control technology" (BACT) for GHGs will be required for (1) new source construction with emissions of 100,000 tons CO_2e per year or more and (2) major facility modifications resulting in GHG emission *increases* of 75,000 tons of CO_2e per year or more.[6] The rule goes into effect on January 2, 2011 for major modifications at sources already subject to PSD and on July 1, 2011 for new source construction and major modifications at facilities that have not previously been subject to PSD.

No prescriptive guidance on pre-approved BACT technologies for GHGs was provided in EPA's recently released guidance document. What constitutes BACT for a facility will be determined on a case-by-case basis with the ultimate decision on BACT made by the local permitting authority; therefore, it is difficult to draw conclusions about what specific technologies will be required for particular sources subject to PSD permitting.[7] However, it is possible that PSD permits may require the use of abatement technologies that are being voluntarily deployed today as part of carbon offset projects. By making these technologies legally mandated, PSD requirements may make them ineligible for carbon offsets because they would no longer be voluntary or additional.

Protocols Potentially Affected by the Clean Air Act Permitting Requirements

The Reserve expects a limited number of project activities to be affected by the CAA GHG permitting requirements in the near term due to the typical levels of facility emissions at project sites, and other protocol requirements that would otherwise be expected to exclude projects from eligibility. However, project types in sectors with large GHG sources (100,000 tons CO_2e per year or more) and where projects are implemented at new or expanded facilities may be affected by the Title V requirement, PSD requirement, or both. EPA has indicated that it plans to lower CAA GHG emission thresholds in future years, which may affect project types implemented at facilities with lower overall emissions. Details on EPA's implementation timeline and future plans can be found in the Appendix. The following table presents a preliminary indication of how project activities recognized by the Reserve may be affected based on the Reserve's understanding and assessment of general industry data about GHG emissions and typical permit requirements for facilities where Reserve projects have been implemented.

[6] For simplicity, this memorandum frequently refers to "major facility modifications resulting in GHG emission increases" as "expansions."

[7] "PSD and Title V Permitting Guidance for Greenhouse Gases," Available at: http://www.epa.gov/nsr/ghgdocs/epa-hq-oar-2010-0841-0001.pdf

Reserve Protocol	Relevant Information Pertaining to Implementation of EPA GHG Permitting Regulations
Nitric Acid Production	• Most nitric acid production (NAP) facilities will be subject to new Title V requirements starting January 2, 2011. While exact dates depend on circumstances at individual facilities, the majority of NAP facilities are subject to pre-existing Title V requirements, which means the Title V requirements impact them immediately. • Similarly, most NAP facilities that undertake significant expansion and increase GHGs by 75,000 tons or more per year will be subject to the new PSD requirements, starting January 2, 2011. • Projects at new facilities are ineligible under the Reserve protocol.
Coal Mine Methane	• Underground coal mines have not previously been regulated under the CAA but will be subject to the new Title V and PSD GHG permitting requirements starting July 1, 2011, if they meet the established thresholds. • Because the CAA is applying to coal mines for the first time, details on exactly how the permitting requirements will be applied to coal mines remain unclear, specifically regarding how to calculate a mine's "potential to emit" or how to determine the impact of mine expansion on GHG emissions.
Landfill	• Landfills meeting the CAA thresholds will be subject to the new Title V and PSD GHG permitting requirements in 2011, with exact dates depending on individual circumstances for pre-existing Title V and PSD requirements. • Landfills already subject to pre-existing Title V requirements will be subject to the new Title V GHG requirements January 2, 2011 if they meet the GHG threshold. • Landfills already subject to PSD due to their Non-Methane Organic Compound (NMOC) emissions will be affected by the new regulation as of January 2, 2011. However, GHG projects do not occur at these facilities because they are ineligible under the Reserve protocol due to legal requirements to destroy methane. • New or expanded landfills not already subject to PSD requirements that trigger the CAA GHG emission thresholds will be required to seek a PSD permit starting July 1, 2011.
Livestock	• Livestock operations are unlikely to be affected by the new CAA GHG Permitting rules at this time, as facility emissions are not expected to exceed the CAA GHG thresholds. However, large operations exceeding the threshold could potentially trigger both PSD and Title V requirements, starting July 1, 2011. • EPA may lower the GHG thresholds for permitting in the future, which could impact smaller sources such as livestock operations. EPA plans to issue a ruling on new thresholds by July 2012 and has indicated such thresholds would not take effect any earlier than April 30, 2016.
Organic Waste Digestion & Organic Waste Composting	• Facilities whose primary function is Organic Waste Digestion (OWD) or Organic Waste Composting (OWC) are unlikely to be affected by the new CAA GHG Permitting rules at this time, as facility emissions are not expected to exceed the CAA GHG thresholds. Similar to livestock operations, future EPA rule making could adjust GHG emissions thresholds, but this would take affect no earlier than April 30, 2016. • OWD and OWC projects could be located at facilities with GHG emissions exceeding CAA GHG thresholds, e.g., landfills, in which case the entire facility would be subject to the regulation. The OWD or OWC project itself is unlikely to be affected by the regulation in the near term because the regulated emission source would be outside the project boundary. However, over time, as the EPA regulates an increasing number of landfills through the CAA GHG permits, baseline assumptions for both protocols about the prevalence of landfill gas collection and collection efficiency may need to be recalibrated.
Forestry	• Not subject to CAA permitting requirements.
Urban Forestry	• Not subject to CAA permitting requirements.
Ozone Depleting Substances	• Ozone depleting substances are not subject to CAA GHG permitting regulations.

Planned Changes and Clarifications to Reserve Protocols

Based on our initial interpretation of the CAA GHG permitting requirements, the Reserve plans to clarify and/or modify its protocols as follows:

1. *Clarify that Title V permitting conditions generally will not be treated as "legal requirements" for the purpose of determining the additionality of otherwise eligible projects because Title V permitting conditions do not typically add substantive mandated conditions*. Language in the Reserve's protocols and its Attestation of Voluntary Implementation will be modified as appropriate to acknowledge that Title V permits generally should not be considered when determining whether a GHG abatement project is "legally required." In such rare cases where a Title V permit in and of itself mandates specific pollution control requirements, the Title V permitting conditions could be treated as "legal requirements" for the purpose of determining the additionality of projects.

2. *Clarify that BACT requirements associated with PSD permits will be treated as legal requirements for the purpose of determining additionality*. Language will be added to Reserve protocols to clarify that when projects are undertaken at new facilities or expanded facilities that trigger PSD requirements for GHGs, any BACT requirements imposed on those facilities – or that would have been imposed in the absence of the project – will be taken into account in determining whether a project passes the Legal Requirement Test for additionality. In general, a project will not be considered legally required until the date at which a BACT requirement takes effect. Reserve protocols will likely stipulate that Climate Reserve Tonnes (CRTs) may be issued until that date (as is done with other types of legal requirements).

3. *Provide guidance on how to treat BACT requirements that would have been triggered in the absence of a project.* In some situations, a project at a new or expanded facility may effectively allow the facility to avoid triggering PSD requirements. In other words, without an installed GHG abatement technology, the facility would have triggered PSD, meaning that installation of BACT *would have been* required by law. In general, if the project itself involves BACT, then it should be considered non-additional. However, the Reserve acknowledges that it may be difficult to determine whether a specific project activity would have been required by BACT analysis in a counterfactual scenario. Specific rules for making such determinations will, if necessary, be incorporated into Reserve protocols on a protocol-by-protocol basis. As EPA begins to issue PSD permits and/or additional guidance on what constitutes BACT, the Reserve will review and incorporate this additional information into its Protocols as necessary.

Summary of EPA's Proposed Implementation Timeline[8]

Step 1—January 2, 2011 to June 30, 2011:

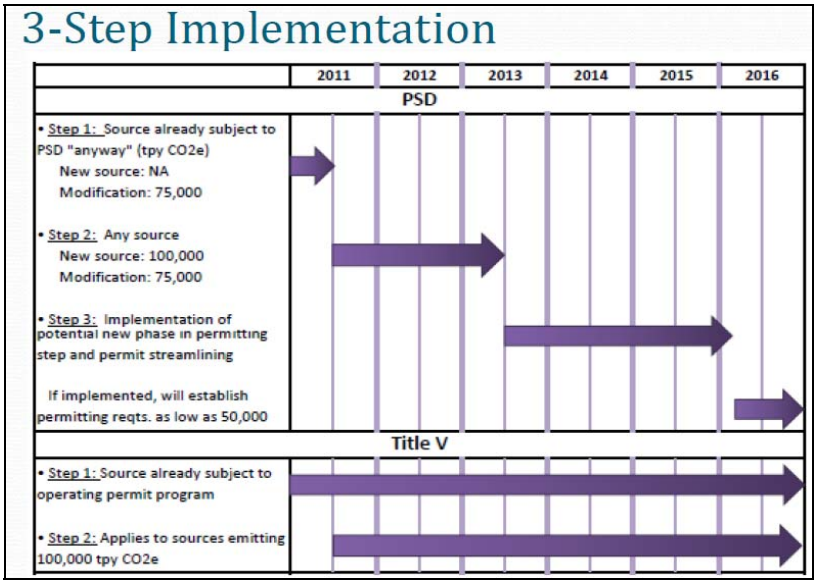
- Applies to: Sources *already subject to* PSD and/or Title V permitting requirements
  - Sources already subject to PSD: Will need to undergo PSD permitting for GHGs if the facility will undergo modifications that increase potential to emit by 75,000 tons per year of CO_2-equivalent (tpy CO_2e)
  - Sources already subject to Title V: Will need to pursue a Title V permit for GHG emissions if the facility's total potential to emit exceeds 100,000 tpy CO_2e

Step 2—July 1, 2011 to June 30, 2013:

- Applies to: *Any* major stationary source (regardless of previous PSD and Title V requirements)
  - Sources will be subject to PSD if:
    - Modification to a facility increases potential to emit by 75,000 tpy CO2e
    - New construction commences on a facility whose total potential to emit exceeds 100,000 tpy CO_2e
  - Sources will be subject to Title V: If the facility's potential to emit exceeds 100,000 tpy CO_2e, regardless of whether Title V would not have applied based on other pollutants

Step 3

- While the first two phases are underway, EPA plans to undertake a rulemaking and public comment process, addressing the potential inclusion of smaller GHG sources as well as streamlining the future GHG permitting process. EPA will begin this process in 2011 and conclude no later than July 1, 2012
- As part of Step 3, EPA may require permitting for sources with emissions lower than the previously set threshold of 100,000 tpy CO_2e, and as low as 50,000 tpy CO_2e. The EPA will not, however, require permitting for "smaller sources" earlier than April 30, 2016.



Source: Chart courtesy of BlueScape; Adapted from EPA.

[8] "Final Rule: Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule Fact Sheet," U.S. Environmental Protection Agency (EPA), Available at: http://www.epa.gov/NSR/documents/20100413fs.pdf