SUPPORTING STATEMENT PART A:
INFORMATION COLLECTION REQUEST
FOR THE MANDATORY REPORTING OF GREENHOUSE GASES (FINAL RULE FOR INJECTION AND GEOLOGICAL SEQUESTRATION OF CARBON DIOXIDE, SUBPARTS RR and UU)

EPA ICR No. 2372.02

1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) Title of the Information Collection

TITLE: "Mandatory Reporting of Greenhouse Gases (Injection and Geological Sequestration of Carbon Dioxide, Subparts RR and UU."

1(b) Short Characterization/Abstract

The United States (U.S.) Environmental Protection Agency (EPA) is amending the Mandatory Reporting of Greenhouse Gases Program at 40 CFR 98 to add reporting requirements covering facilities that conduct injection of carbon dioxide (CO_2) (subpart UU) and geologic sequestration of CO_2 (subpart RR). The new subparts enable EPA to track the flow of CO_2 across the CCS system. Subpart UU information on CO_2 received reconciled with CO_2 supply information enables EPA to better understand the quantity of CO_2 supply that is used for underground injection compared to the quantity supplied to other end-uses. Subpart RR information will provide a nationally consistent approach for quantifying CO_2 sequestered, and monitoring the growth and efficacy of GS as a GHG mitigation technology to evaluate relevant policy options.

Under subpart UU, all facilities that inject CO_2 underground, regardless of the amount of emissions from the facility or the amount of CO_2 injected, must report the mass of CO_2 supply received for injection and the inputs used to calculate this quantity, and the source of the CO_2, if known.

Subpart RR requirements apply to all facilities that conduct geologic sequestration (GS) unless they receive approval from EPA for a GS Research and Development (R&D) waiver. Facilities covered by subpart RR source category must calculate the mass of CO_2 geologically sequestered by subtracting total CO_2 emissions from the annual mass of CO_2 injected. Facilities that are conducting enhanced oil and natural gas recovery (ER) must additionally subtract the mass of CO_2 produced from oil and gas production wells from the annual mass of CO_2 injected. In the subpart RR regulations, facilities must report the mass of CO_2 supply received for injection, the mass of CO_2 injected, the annual mass of CO_2 geologically sequestered, the inputs used to calculate these quantities. They will also be required to report source of the CO_2 if known and the cumulative amount of CO_2 geologically sequestered since the facility first reported under subpart RR. EPA is also requiring monitoring according to a site-specific monitoring, reporting, and verification (MRV) plan, which will be used to verify the amount of injected CO_2 as sequestered and to quantify emissions in the event that injected CO_2 leaks to the surface.

2. NEED FOR AND USE OF THE COLLECTION

2(a) Need/Authority for the Collection

EPA is extending the mandatory reporting program using its existing authority under §114 of the Clean Air Act (CAA). CAA §114(a) provides EPA broad authority to collect data for the purpose of, among other things, "carrying out any provision" of the Act. Under §114(a)(1), the Administrator may require emissions sources, persons subject to the CAA, or persons whom the Administrator believes may have necessary information to monitor and report emissions and provide such other information as the Administrator requests for the purposes of carrying out the provisions in the CAA.

Further information on the authority provided under §114 of the CAA is contained in section I.C. of the preamble to the proposed Mandatory Reporting of Greenhouse Gases Rule (MRR) (74 FR 16448).

The CAA provides EPA with broad authority to require the comprehensive and accurate information mandated in this rule because such data will inform, and are relevant to, EPA's analyses of various CAA provisions. EPA may gather information for a variety of purposes, including for the purpose of assisting in the development of implementation plans or of emissions standards under CAA §111, determining compliance with implementation plans or such standards, or more broadly for "carrying out any provision" of the CAA. In addition, CAA §103 authorizes EPA to establish a national research and development program, including non-regulatory approaches and technologies for the prevention and control of air pollution as it relates to GHGs and climate change.

The above discussion is not a comprehensive listing of all the possible ways the information collected under this rule could assist EPA in carrying out any provision of the CAA. Rather it illustrates how the information request fits within the parameters of EPA's CAA authority.

The information from CO_2 injection and facilities that conduct geologic sequestration will allow EPA to make well-informed decisions about whether and how to use the CAA to regulate these facilities and encourage voluntary reductions. Because EPA does not yet know the specific policies that will be adopted, the data reported through the mandatory reporting system should be of sufficient quality to inform policy and program development. Also, the reporting rule covers a broad range of sectors of the economy.

EPA has identified the following goals of the mandatory reporting system, including:

- Obtain data that is of sufficient quality that it can be used to analyze and inform the development of a range of future climate change policies and potential regulations.

- Balance the rule's coverage to maximize the amount of emissions reported while excluding small emitters.

- Create reporting requirements that are, to the extent possible and appropriate, consistent with existing GHG reporting programs in order to reduce reporting burden for all parties involved.

2(b) Practical Utility/Users of the Data

The rule provides EPA, other government agencies, industry, and the public with the ability to start tracking data on CO_2 injected underground and CO_2 sequestered. These data will provide information and transparency on the amount of CO_2 injected and geologically sequestered in the United States and, in combination with other subparts of the MRR, will enable EPA to track the flow of CO_2 across the entire CO_2 capture and sequestration (CCS) system.

Data on CO_2 injection and GS will enable EPA to monitor the growth and efficacy of GS (and therefore CCS) as a GHG mitigation technology over time and to evaluate relevant policy options. For example, EPA will be able to track whether incentives or regulations are needed to encourage faster or further GS project development. EPA will also be able to track whether ER sites are transitioning to GS and consider whether incentives or regulations are needed. Where ER facilities are reporting GS, EPA will be able to evaluate ER as a potentially non-emissive end use. In combination with subpart PP, EPA will be able to reconcile this data with CO_2 supplied in order to better understand the quantity of CO_2 supplied to emissive and non-emissive end uses. Furthermore, this data will inform Agency policy decisions under CAA §§ 111 and 112 related to the use of CCS for mitigating GHG emissions.

Accurate and timely information on carbon emissions is essential for informing CAA GHG policies and future climate change policy decisions. These data could also be coupled with efforts at the local, state, federal, and international levels to assist corporations and facilities in determining their carbon footprints and identifying further opportunities to reduce emissions.

Standardization of GHG data will also be a benefit to industry. Once facilities invest in the institutional knowledge and systems to report emissions, the cost of monitoring should fall and the accuracy of the accounting should improve. A standardized reporting program will also allow for facilities to benchmark themselves against similar facilities to understand better their relative standing within their industry.

The rule is not intended to be a survey and the respondents affected by the rule are not intended to be a statistical sample of a larger universe of entities. EPA does not intend to use the data collected under this rule to characterize non-reporting entities or to draw statistical inferences about a larger population.

3. NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

3(a) Nonduplication

Before developing rule, EPA considered whether it could access the data needed for the purposes outlined through other inventory, reporting, and registry programs that exist, at the state, regional, and federal government levels. The Agency has determined that the CO_2 injection and sequestration reporting program will supplement and complement, rather than duplicate, existing programs' data. For example, EPA considered CO_2 data needed for its Underground Injection Control (UIC) program's new class of injection well – Class VI – for GS projects (73 FR 43492 (July 25, 2008)). The UIC program is not designed to provide sufficient assurance that sequestered CO_2 is not emitted to the atmosphere for GS facilities, and the reporting mechanism under the UIC program would not meet the Intergovernmental Panel on Climate Change (IPCC) guidelines (discussed below). Therefore, the GHG reporting rule builds on the UIC program requirements for monitoring with the additional goals of verifying the amount of CO_2 sequestered and collecting data on any CO_2 surface emissions from GS facilities.

Documentation of EPA's review of GHG (including CO_2) monitoring protocols used by federal, state, and international voluntary and mandatory GHG programs, and the review of state mandatory GHG rules, can be found in the docket at EPA-HQ-OAR-2008-0508-056. The programs that specifically relate to monitoring and reporting CO_2 injection and sequestration are described below:

- As described above, EPA is finalizing a new rule under the UIC program for Class VI permit regulation to address the risks to USDWs from CO_2 injection for GS. Data currently collected under a state-issued UIC permit is submitted to states while, under subparts RR and UU, reporters will be submitting data directly to EPA. Also, under subpart RR, any facility sequestering CO_2 underground, regardless of their UIC permit classification can choose to qualify and report as a facility covered by subpart RR source category. In the Agency's August 2009 Notice of Data Availability supplementing the UIC Class VI proposal, EPA noted that it was evaluating the need for a more comprehensive regulatory framework for GS. It is EPA's intention to coordinate GS requirements across relevant statutory programs to increase regulatory clarity and improve the accuracy of GS data collected.

- EPA also reviewed the *Inventory of U.S. Greenhouse Gas Emissions and Sinks* (Inventory), which is an assessment of national greenhouses gas emissions that the EPA prepares annually, with input from several other agencies, and submits to the Secretariat of the United Nations Framework Convention on Climate Change (UNFCCC). EPA currently follows the 1996 IPCC guidelines and accounts for CCS in the Inventory by making general, top-down assumptions about the fate of CO_2 supplied. In contrast, the new rule requires a more robust and complex approach that calculates CO_2 injection and, if applicable, sequestration. EPA anticipates that bottom-up facility-level reporting on

injection and, if applicable, sequestration will lead to improvements in the quality of the Inventory.

- The IPCC published new inventory guidelines in 2006 which directly address accounting for GS and include methodologies for the estimation of emissions from capture, transport, injection, and geologic sequestration of CO_2. In order to meet the 2006 IPCC guidelines, the U.S. needs to collect specific CO_2 end-use information at a high resolution, criteria that cannot be met by any existing CCS data collection efforts. EPA believes that the GS monitoring, reporting, and verification requirements of this rule are consistent with the 2006 IPCC guidelines and will help EPA transition to the IPCC 2006 guidelines.

- In addition, the Agency examined the voluntary GHG registry that the U.S. Department of Energy's (DOE's) Energy Information Administration (EIA) implements under §1605b of the Energy Policy Act of 1992. Under EIA's "1605(b) program," reporters can choose to prepare an entity-wide GHG inventory and identify specific GHG reductions made by the entity. The 2007 updated 1605(b) guidance outlines a voluntary process to report data on CO_2 sequestration. Currently, no CO_2 injection or sequestration entity has reported under the 1605(b) program per the 2007 guidelines. Furthermore, although the 1605(b) guidance cites the importance of reporting CO_2 leakage should it occur, the guidance does not include a discussion of, procedures for, or methodologies for using monitoring technologies and techniques to quantify the leakage. As a result of this, and the fact that reporting is voluntary, the 1605(b) program would not meet the data needs of this rule or the 2006 IPCC guidelines.

- The DOE also administers the Climate Vision program (Voluntary Innovative Sector Initiatives: Opportunities Now), whose goal includes accelerating the transition to technologies, practices, and processes that are capable of reducing, capturing, or sequestering GHGs. All voluntary reporting under the Climate Vision Program is covered under 1605(b), and as such, it also does not meet EPA's needs for mandatory reporting.

- EPA also reviewed the Internal Revenue Service (IRS) Notice 2009-83 Credit for Carbon Dioxide Sequestration under section 45Q. To claim the credit, a taxpayer must follow general monitoring and verification principles, calculate CO_2 sequestered in the fiscal year using a mass-balance equation, and report to IRS the amount of qualified CO_2 sequestered in the fiscal year. However, the level of reporting and transparency of the IRS data collected would not meet the verification needs of the rule. The IRS reporting requirement expires after 75 million metric tons of CO_2 is reported as sequestered to IRS, data reporting is only as robust as to meet the standards in the case of an IRS audit, and the IRS does not outline procedures for quantifying and reporting any CO_2 leakage that may occur as is necessary for the rule. Therefore, EPA has concluded that the IRS data would not meet the needs outlined in this rule.

EPA intends to harmonize CCS requirements across relevant statutory or other programs in order to minimize any redundancy and any burden on reporters. To reduce burden on reporters and program agencies, the Agency will share emissions data with the exception of any

confidential business information (CBI) data with relevant agencies or approved entities using, where practical, shared tools and infrastructure.

3(b) Public Notice Required Prior to Information Collection Request (ICR) Submissions to OMB

As part of the Federal Register notice on the regulation, EPA solicited comments on the ICR for the proposed rule and the estimates in the proposed ICR. EPA also solicited comments on specific aspects of the information collection. EPA did not receive any comments that specifically addressed the ICR. However, the Agency did receive and consider comments on the reporting requirements of the proposed rule. The preamble to the final rule contains and summary of these public comments.

3(c) Consultations

During the development of the GHG Reporting Rule, EPA conducted a proactive communications outreach program to inform the public about the rule development effort. Prior to the proposal signature, EPA staff held more than 100 meetings with stakeholders, including:

- Trade associations and firms in potentially affected industries/sectors;
- State, local, and tribal environmental control agencies and regional air quality planning organizations;
- State and regional organizations already involved in GHG emissions reporting, such as The Climate Registry, California Air Resources Board, and the Western Climate Initiative; and
- Environmental groups and other nongovernmental organizations.

EPA also met with federal agencies, including DOE and the U.S. Department of Agriculture, which have programs relevant to GHG emissions.

The proposed GHG Reporting Rule was signed on March 10, 2009 by Administrator Lisa Jackson and published in the Federal Register on April 10, 2009 (74 FR 16448). EPA held two public hearings, on April 6 and 7, 2009, in Arlington, Virginia, and on April 16, 2009, in Sacramento, California. In addition, EPA met with over 4,000 additional people in over 150 groups via webinars, conferences, individual meetings, and other forms of outreach. Details of these meetings are available in the docket (EPA-HQ-OAR-2008-0508).

During the sixty day comment period, EPA received approximately 16,800 comments, 15,800 of which were identical mass mailers. EPA received many comments on subpart PP (Suppliers of CO_2) that CO_2 injected underground should be considered when estimating emissions from the CO_2 supply industry. Some commenters specified that some of the CO_2 supplied for the purposes ER is additionally sequestered rather than emitted and characterized

ER operations as “closed systems” rather than emissive. Other commenters stated that including reporting requirements for geologically sequestered CO_2 will fill a critical gap in the reporting system.

EPA agrees that ER is a potentially non-emissive end use and that GS data reporting from ER sites can assist EPA in quantifying the amount of CO_2 that is permanently and securely geologically sequestered. In addition, EPA agrees that GS reporting requirements will provide information and transparency on the amount of CO_2 injected and geologically sequestered in the United States.

Therefore, EPA is amending the GHG Reporting Rule to add subparts RR and UU. On March 22, 2010, Administrator Jackson signed a proposed rule for the mandatory reporting of GHGs from facilities that inject carbon dioxide underground for the purposes of GS or ER. The public comment period for this proposed rulemaking was open for 60 days after publication in the Federal Register. In addition, a public hearing on this proposal was held on April 19, 2010, in Arlington, Virginia.

3(d) Effects of Less Frequent Collection

The reporting frequency for emissions data to EPA has been established to minimize the burden on owners and operators of affected facilities, while ensuring that the reporting rule collects facility-specific data of sufficient quality to achieve the Agency’s objectives. For entities required to report, the rule requires the submission of annual reports. EPA is requiring all CO_2 injection facilities monitor and report the CO_2 compositions and masses quarterly in order to account for fluctuations in the CO_2 composition over the reporting year that are caused by the source of the CO_2, the conditions of the capture and transportation, and the seasons of the year.

If the information collection were not carried out on this schedule, the Agency will not be able to develop an informed tracking system of trends in CO_2 injection and sequestration across the country. EPA needs the data quickly at the beginning of every reporting year in order to electronically verify it, publish it as authorized by the CAA, and use it for the purposes described. In addition, the annual reporting may eventually be used to climate policies and potential future regulations.

3(e) General Guidelines

This collection of information is consistent with all OMB guidelines under 5 CFR 1320.6.

3(f) Confidentiality

In general, emission data collected under §114 and §208 of the CAA cannot be declared CBI. However, if any CBI is reported under this GHG reporting rule, EPA would protect CBI in accordance with regulations in 40 CFR Chapter 1, part 2, subpart B. Although CBI determinations are usually made on a case-by-case basis, EPA has issued guidance on what constitutes emissions data that cannot be considered CBI (956 FR 7042 –7043, February 21, 1991).

3(g) Sensitive Questions

This information collection does not ask any questions concerning sexual behavior or attitudes, religious beliefs, or other matters usually considered private.

4. THE RESPONDENTS AND THE INFORMATION REQUESTED

The respondents in this information collection include owners or operators of CO_2 injection wells that must report in compliance with the rulemaking of their source categories. This section describes these CO_2 source categories (industry sectors) that must participate in subpart RR or subpart UU of the MRR, the data items required of program participants, and the activities in which participants must engage to collect, assess, and in some cases submit the required data items.

This section describes the industry sector (CO_2 source categories) that must participate in subparts RR or UU of the MRR, the data items required of program participants, and the activities in which participants must engage to collect, assess, and in some cases submit the required data items.

4(a) Respondents/North American Industrial Classification Systems (NAICS) Codes

Reporting facilities included in the subpart UU source category consists of any well or group of wells that inject a CO_2 stream into the subsurface, including sub-seabed offshore. These wells include any wells to enhance oil and gas recovery or for GS R&D (including some Federal respondents), not included in this source category are the facilities that report under subpart RR. Subpart RR source category consists of any well or group of wells that inject a CO_2 stream for long-term containment into a subsurface geologic formation, including sub-seabed offshore, at no threshold. However, facilities conducting ER and that not hold a UIC Class VI permit do not meet the definition of the subpart RR source category unless they choose to opt-in. Also, owners or operators of R&D wells may submit a request to receive an exemption from reporting under this source category. This source category does not include: (1) storage of CO_2 above ground; (2) temporary storage of CO_2 below ground; (3) transportation or distribution of CO_2; (4) purification, compression, or processing of CO_2; (5) capture of CO_2; and (6) CO_2 stored in cement, precipitated calcium carbonate (PCC), or any other technique that does not involve injection of CO_2 into the subsurface.

The industry sector is listed below by its subpart of the rule and its NAICS code for reference.

Part and Subpart	NAICS code(s)
CO_2 Enhanced Oil and Gas Recovery Projects	211 (Oil and gas extraction projects using CO_2 enhanced oil and gas recovery)
Acid Gas Injection Projects	211111 or 211112 (Projects that inject acid gas containing CO_2 underground)
GS Projects	N/A CO_2 geologic sequestration projects

4(b) Information Requested

(i) Data Items

Reporting Requirements

The following is a summary of the information requested by facilities that will be subject to subpart RR and subpart UU:

General requirements that apply to all sources. All respondents that belong to a source category in which all respondents report, including subpart RR and UU, must submit the general information required in 40 CFR 98.3 and adhere to the reporting, certification, and notification requirements in 40 CFR 98.4 and 40 CFR 98.2, if applicable. EPA is not making any changes to the reporting requirements contained in these sections. This information is described in the ICR for the Mandatory Reporting of Greenhouse Gases; Final Rule (EPA ICR No. 2300.03). In addition, many facilities that are affected by the supplemental rule have GHG emissions from

multiple source categories of 40 CFR Part 98, and they must meet the reporting requirements of the specific subparts that describe these requirements.

Data reporting requirements that apply to all facilities that are covered under Subpart RR. All facilities that meet the definition of this source category must report the following:

1) If CO_2 is received by pipeline, report the following for each receiving flow meter:
    a. The total mass of CO_2 received (metric tons) annually.
    b. If a volumetric flow meter is used to receive CO_2 report the following:
        (i) The volumetric flow through a receiving flow meter at standard conditions (in standard cubic meters) in each quarter.
        (ii) The volumetric flow through a receiving flow meter that is redelivered to another facility without being injected into your well (in standard cubic meters) in each quarter.
        (iii) The CO_2 concentration in the flow (volume percent CO_2/100) in each quarter.
    c. If a mass flow meter is used to receive CO_2 report the following:
        (i) The mass flow through a receiving flow meter (in metric tons) in each quarter.
        (ii) The mass flow through a receiving flow meter that is redelivered to another facility without being injected into your well (in metric tons) in each quarter.
        (iii) The CO_2 concentration in the flow (wt. percent CO_2/100) in each quarter.
    d. If the CO_2 received is wholly injected and not mixed with any other supply of CO_2, report whether the monitoring procedures in §98.444(a)(4) were followed.
    e. The standard or method used to calculate each value.
    f. The number of times in the reporting year for which substitute data procedures were used to calculate values reported.
    g. Whether the flow meter is mass or volumetric.
    h. A numerical identifier for the flow meter.
2) If CO_2 is received in containers, report:
    a. The mass (in metric tons) or volume at standard conditions (in standard cubic meters) of contents in containers in each quarter.
    b. The concentration of CO_2 of contents in containers (volume or wt. percent CO_2/100) in each quarter.
    c. The total mass of CO_2 received (in metric tons) annually.
    d. The standard or method used to calculate each value.
    e. The number of times in the reporting year for which substitute data procedures were used to calculate values reported.
3) If more than one receiving flow meter is used, report the total mass of CO_2 received (metric tons) through all flow meters annually.
4) The source of the CO_2 received according to the following categories:
    a. CO_2 production wells.
    b. Electric generating unit.

c. Ethanol plant.
d. Pulp and paper mill.
e. Natural gas processing.
f. Gasification operations.
g. Other anthropogenic source.
h. Discontinued enhanced oil and gas recovery project.
i. Unknown.

5) Whether data collection began according to the approved MRV plan in a reporting year prior to this annual report submission.
6) If yes is reported in paragraph (5) above, report the following. If this is the first year of reporting, report the following starting on the date data collection began according to the approved MRV plan.
    a. For each injection flow meter (mass or volumetric), report:
        (i) The mass of CO_2 injected (metric tons) annually.
        (ii) The CO_2 concentration in flow (volume or wt. percent CO_2/100) in each quarter.
        (iii) If a volumetric flow meter is used, the volumetric flow rate at standard conditions (in standard cubic meters) in each quarter.
        (iv) If a mass flow meter is used, the mass flow rate (in metric tons) in each quarter.
        (v) A numerical identifier for the flow meter.
        (vi) Whether the flow meter is mass or volumetric.
        (vii) The standard used to calculate each value.
        (viii) The number of times in the reporting year for which substitute data procedures were used to calculate values reported.
        (ix) The location of the flow meter.
    b. The total CO_2 injected (metric tons) in the reporting year as calculated in Equation RR-6.
    c. CO_2 equipment leakage and vented CO_2 emissions.
        (i) The mass of CO_2 emitted (in metric tons) annually as equipment leakage or vented emissions from equipment located on the surface between the flow meter used to measure injection quantity and the injection wellhead.
        (ii) The mass of CO_2 emitted (in metric tons) annually as equipment leakage or vented emissions from equipment located on the surface between the production wellhead and the flow meter used to measure production quantity.
    d. For each separator flow meter (mass or volumetric), report:
        (i) CO_2 mass produced (metric tons) annually.
        (ii) CO_2 concentration in flow (volume or wt. percent CO_2/100) in each quarter.
        (iii) If a volumetric flow meter is used, volumetric flow rate at standard conditions (standard cubic meters) in each quarter.
        (iv) If a mass flow meter, mass flow rate (metric tons) in each quarter.
        (v) A numerical identifier for the flow meter.
        (vi) Whether the flow meter is mass or volumetric.

(vii) The standard used to calculate each value.
(viii) The number of times in the reporting year for which substitute data procedures were used to calculate values reported.

e. The value for X (%) used in Equation RR-9 and as determined according to the EPA-approved MRV plan.
f. Annual CO_2 produced in the reporting year as calculated in Equation RR-9.
g. For each leakage pathway through which CO_2 emissions occurred, report:
    (i) A numerical identifier for the leakage pathway.
    (ii) The CO_2 (metric tons) emitted through that pathway in the reporting year.
h. Annual CO_2 mass emitted (metric tons) by surface leakage in the reporting year as calculated by Equation RR-10.
i. Annual CO_2 (metric tons) sequestered in subsurface geologic formations in the reporting year as calculated by Equation RR-11 or RR-12.
j. Cumulative mass of CO_2 (metric tons) reported as sequestered in subsurface geologic formations in all years since the well or group of wells became subject to reporting requirements under this subpart.
k. Date that the most recent MRV plan was approved by EPA and the MRV plan approval number that was issued by EPA.
l. An annual monitoring report that contains the following components:
    (i) A narrative history of the monitoring efforts conducted over the previous calendar year, including a listing of all monitoring equipment that was operated, its period of operation, and any relevant tests or surveys that were conducted.
    (ii) A description of any changes to the monitoring program that were concluded were not material changes warranting submission of a revised MRV plan under §98.448(d).
    (iii) A narrative history of any monitoring anomalies that were detected in the previous calendar year and how they were investigated and resolved.
    (iv) A description of any surface leakages of CO_2, including a discussion of all methodologies and technologies involved in detecting and quantifying the surface leakages and any assumptions and uncertainties involved in calculating the amount of CO_2 emitted.
m. If a well is permitted under the Underground Injection Control program, for each injection well, report:
    (i) The well identification number used for the Underground Injection Control permit.
    (ii) The Underground Injection Control permit class.
n. If an offshore well is not subject to the Safe Drinking Water Act, for each injection well, report any well identification number and any identification number used for the legal instrument authorizing geologic sequestration.

Facilities that meet the requirements of a subpart RR source category must develop an monitoring, reporting, and verification (MRV) plan, submit the MRV plan to EPA, receive an

approved MRV plan from EPA, implement the EPA-approved plan, and submit annual reports. A MRV plan must contain the following components:

1. Delineation of the maximum monitoring area and the active monitoring area.
2. Identification and evaluation of the potential surface leakage pathways and an assessment of the likelihood, magnitude, and timing, of surface leakage of CO_2 through these pathways in the MMA.
3. A strategy for detecting and quantifying any surface leakage of CO_2 in the event leakage occurs.
4. An approach for establishing the expected environmental and operational baselines.
5. A summary of considerations made to calculate site-specific variables for the mass balance equation.

Data reporting requirements that apply to all facilities that are covered under Subpart UU. All facilities that meet the definition of this source category must report the following:

1) If CO_2 is received by pipeline, report the following for each receiving flow meter:
    a. The total mass of CO_2 received (metric tons) annually.
    b. If a volumetric flow meter is used to receive CO_2:
        i. The volumetric flow through a receiving flow meter at standard conditions (in standard cubic meters) in each quarter.
        ii. The volumetric flow through a receiving flow meter that is redelivered to another facility without being injected into your well (in standard cubic meters) in each quarter.
        iii. The CO_2 concentration in the flow (volume percent CO_2/100) in each quarter.
    c. If a mass flow meter is used to receive CO_2:
        i. The mass flow through a receiving flow meter (in metric tons) in each quarter.
        ii. The mass flow through a receiving flow meter that is redelivered to another facility without being injected into your well (in metric tons) in each quarter.
        iii. The CO_2 concentration in the flow (wt. percent CO_2/100) in each quarter.
    d. The standard or method used to calculate each value.
    e. The number of times in the reporting year for which substitute data procedures were used to calculate values reported.
    f. Whether the flow meter is mass or volumetric.
2) If CO_2 is received in containers, report:
    a. The mass (in metric tons) or volume at standard conditions (in standard cubic meters) of contents in containers in each quarter.
    b. The concentration of CO_2 of contents in containers (volume or wt. percent CO_2/100) in each quarter.
    c. The total mass of CO_2 received (in metric tons) annually.
    d. The standard or method used to calculate each value.
    e. The number of times in the reporting year for which substitute data procedures were used to calculate values reported.

3) If more than one receiving flow meter is used, report the total mass of CO_2 received (metric tons) through all flow meters annually.
4) The source of the CO_2 received according to the following categories:
    a. CO_2 production wells.
    b. Electric generating unit.
    c. Ethanol plant.
    d. Pulp and paper mill.
    e. Natural gas processing.
    f. Gasification operations.
    g. Other anthropogenic source.
    h. Discontinued enhanced oil and gas recovery project.
    i. Unknown.

Recordkeeping Requirements

General requirements that apply to all sources. EPA is not making any changes to the general recordkeeping requirements that apply to all sources, including subparts RR and UU. This information is described in the ICR for the Mandatory Reporting of Greenhouse Gases; Final Rule (EPA ICR No. 2300.03, OMB Control Number 2060-0629). In addition, many facilities that are affected by the new rule have GHG emissions from multiple source categories of 40 CFR Part 98, and they must meet the reporting requirements of the specific subparts that describe these requirements.

Recordkeeping Requirements that apply to all facilities that are covered under Subpart RR. All facilities that meet the definition of this source category must keep the following records in an electronic or hard-copy format (as appropriate):

1. Retain quarterly records of CO_2 received, including mass flow rate of contents of containers (mass or volumetric) at standard conditions and operating conditions, operating temperature and pressure, and concentration of these streams.
2. Quarterly records of produced CO_2, including mass flow or volumetric flow at standard conditions and operating conditions, operating temperature and pressure, and concentration of these streams.
3. Quarterly records of injected CO_2 including mass flow or volumetric flow at standard conditions and operating conditions, operating temperature and pressure, and concentration of these streams.
4. Annual records of information used to calculate the CO_2 emitted by surface leakage from leakage pathways.
5. Annual records of information used to calculate the CO_2 emitted as equipment leakage or vented emissions from equipment located on the surface between the flow meter used to measure injection quantity and the injection wellhead.
6. Annual records of information used to calculate the CO_2 emitted as equipment leakage or vented emissions from equipment located on the surface between the production wellhead and the flow meter used to measure production quantity.
7. Any other records as specified for retention in the EPA-approved MRV plan.

Recordkeeping Requirements that apply to all facilities that are covered under Subpart UU. All facilities must also keep the following records in an electronic or hard-copy format (as appropriate):

1. Retain quarterly records of CO_2 received for injection, including mass flow rate or contents of containers (mass or volumetric) at standard conditions and operating conditions, operating temperature and pressure, and concentration of these streams.

(ii) Respondent Activities

The owner or operator of a facility that is subject to subpart RR must report total annual GHG emissions in metric tons of CO_2. The primary tasks that reporting program respondents will perform include:

1. Developing appropriate monitoring plans for each affected source and each affected unit at a source, as applicable;
2. Operation and maintenance activities associated with the monitoring, including quality assurance activities;
3. Ensuring data quality, preparing annual reports of emissions data, and submitting these reports to EPA;
4. Potentially responding to questions or error messages from EPA; and
5. Maintaining records for a minimum of three years. In addition, respondents must purchase the necessary monitoring hardware and purchase the electronic data reporting software (or software upgrades) if they had not done so for another reporting program.

Reports must present the annual mass GHG emissions from each source category separately. The calculations used to determine GHG emissions, the frequency at which those calculations are required, the methods used to estimate missing data, and the QA/QC requirements depend on the specific source category.

Facilities subject to subpart UU must report the mass of CO_2 received for injection. It is anticipated that these data will be gathered from company records.

5. THE INFORMATION COLLECTED – AGENCY ACTIVITIES, COLLECTION METHODS, AND INFORMATION MANAGEMENT

5(a) Agency Activities

EPA Headquarters activities associated with the rule include program start-up activities to prepare for receiving the reported data. These activities include database and software design, developing guidance and training affected sources, responding to stakeholders, and communication and outreach on the rule requirements.

Once the reporting program is in place, EPA program operation activities will include monitoring and verification of emission reports, database and software maintenance, communication and outreach, and program evaluation.

5(b) Collection Methodology and Management

EPA will establish a central repository of inventory data for all respondents. Respondents will report data electronically, and EPA will store the data in the database. The electronic format, which will reflect the underlying electronic data reporting system, will be developed prior to the first reporting date. By specifying in the rule text the exact information that must be reported but not specifying the exact reporting format, EPA informs reporters about exactly what information they must report and has flexibility to modify the electronic reporting format and electronic data reporting system in a timely manner based on implementation experience and new technology. EPA has used this approach successfully in existing programs, such as the Acid Rain Program and the Title VI Stratospheric Ozone Protection Program, facilitating the deployment of new reporting formats and reporting systems that take advantage of technologies such as eXtensible Markup Language (XML), and reduce the burden on reporters and the Agency. The electronic reports submitted under this rule are subject to the provisions of 40 CFR part 3, specifying EPA systems to which electronic submissions must be made and the requirements for valid electronic signatures.

The Designated Representative must use an electronic signature device (e.g., a PIN or password) to submit a report. If the Designated Representative holds an electronic signature device that is currently used for valid electronic signatures accepted under another Agency program, EPA intends to design the new reporting system to also accept valid electronic signatures executed with that device where feasible.

EPA's reporting format for a given reporting year could make use of several ID codes – unique codes for a unit or facility. To ensure proper matching between databases, e.g., EPA-assigned facility ID codes and the ORIS (DOE) ID code, and consistency from one reporting year to the next, we plan for the reporting system to provide each facility with a unique identification code to be specified by the Administrator.

The Agency plans to publish data submitted or collected under this rulemaking through EPA's Web site, reports, and other formats (e.g., XML), with the exception of any CBI data. The data could be used by EPA and other agencies, and other organizations and stakeholders for air modeling, analyzing emissions by industry sector and region, informing future climate change policy decisions, and answering questions from the public. The new system will follow Agency standards for design, security, data element and reporting format conformance, and accessibility. In designing the data base, EPA will attempt to minimize respondents' burden by integrating the new reporting requirements with existing data collection and data management systems, when feasible.

5(c) Small Entity Flexibility

The Agency has determined that the rule will not have a significant economic impact on a substantial number of small entities and furthermore, will not impose any requirements on small entities. Currently EPA believes small ER operations will most likely be UIC Class II ER projects. Sequestering CO_2 via injection wells is a voluntary action that will only be undertaken by a small entity if it were economically beneficial for the firm. Furthermore, GS of CO_2 is still a scientifically complex activity, the cost of which is anticipated to be prohibitive to small entities. Therefore, it is anticipated that small firms would not elect to sequester CO_2 via injection wells.

Although this rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless took several steps to reduce the impact of this rule on small entities. For example, EPA is establishing monitoring and reporting requirements that build off of the UIC program. In addition, EPA is establishing equipment and methods that may already be in use by a facility for compliance with its UIC permit. Also, EPA is requiring annual reporting instead of more frequent reporting.

5(d) Collection Schedule

Facilities must collect data and calculate emissions at varying frequencies, as described in the subpart RR and UU requirements. Facilities that must meet the subpart RR's reporting requirements must submit GHG emission reports annually. EPA is requiring facilities that conduct GS to resubmit an updated MRV plan to EPA for approval at a minimum frequency of every five years from the first year of implementation. This is consistent with the frequency suggested by the IPCC. In general, the MRV plan should be revised as experience is gained over the course of the project and should keep pace with the development of monitoring instruments and methods.

6. ESTIMATING THE BURDEN AND COST OF THE COLLECTION

This section presents EPA's estimates of the burden and costs to respondents associated with the activities described in Section 4 as well as the federal burden hours and costs associated with the activities described in Section 5(a). EPA estimates that, over the three years covered by this request, the total respondent burden associated with this reporting will average 4,794 hours per year and the cost to respondents of the information collection will average $884,493 per year.

Section 6(a) of this ICR provides estimates of burden (hours) for all respondent types. Section 6(b) contains estimates of respondent costs for the information collection. Section 6(c) summarizes federal burden and costs. Section 6(d) describes the respondent universe and the total burden and cost of this collection to respondents. Section 6(e) presents the bottom line burden and cost. The burden statement for this information collection is in Section 6(f).

6(a) Estimating Respondent Burden

Respondent burden estimates are presented in Exhibit 6.1. EPA estimates that the total annual burden to all affected entities is 4,794 hours per year over the three years covered by this information collection. EPA also estimated the number of responses, or actions taken as a result of the rule, per respondent (facility) per year; for facilities collecting samples on a daily basis, this means a minimum of 365 responses per year. Exhibit 6.1 presents aggregate burden by sector only; for the details of burden calculations, please see Appendix A (for Subpart RR) and Appendix B (for Subpart UU).

6(b) Estimating Respondent Costs

Costs to respondents associated with this information collection include labor costs (i.e., the cost of labor by facility staff to meet the rule's information collection requirements) and non-labor costs (e.g., the cost of purchasing and installing monitoring equipment or contractor costs associated with providing the required information).

To calculate labor costs, EPA estimated technical, managerial, clerical, and legal loaded labor rates for each industry sector using labor rates from the Bureau of Labor Statistics[1] and applying a 60% loading factor[2]; these rates vary somewhat by sector. For Subpart RR, the labor rates are: $101.31 for industrial managers; $63.89 for industrial engineers/technicians; $29.65 for clerical staff; and $107.23 for geologists. Non-labor costs (capital and O&M) are presented in Exhibit 6-1 below.

EPA estimates that the total annual cost to all affected non-federal entities is approximately $884 thousand over the three years covered by this information collection. Exhibit 6.1 presents aggregate costs; for the details of EPA's cost calculations, please see Appendix A.

Exhibit 6.1 Annual Average Respondent Burden and Cost
For the GHG Reporting Rule

[1] These rates reflect adjustments of the manufacturing sector's average productivity increase of 3.7% per year for 6 quarters between 2006 Q2 and 2007 Q4, based on the estimate released by the Bureau of Labor Statistics in March 2008.

[2] The ICR Handbook (November 2005) recommends using a multiplier of 1.6 to account for benefits and overhead related to government wages; this is considered a conservative estimate (potentially high) for the private sector.

Source Category	Annual Average - 3 year ICR Period								
	No. Respondents	Responses/ Respondent	Total Responses	Average Burden per Response (hrs)	Total Burden (hrs)	Total Labor Cost ($K)	Capital Cost ($K)	O&M Cost ($K)	Total Cost ($K)
RR. Injection of Carbon Dioxide	2	16.1	32	38.45	1,234	$133	$88	$244	$465
UU. Geological Sequestration of Carbon Dioxide	87	6.0	520	6.85	3,560	$224	$0	$196	$420
TOTAL	89	22	552	45	4,794	$357	$88	$439	$884

6(c) Estimating Agency Burden and Cost

This section describes the burden and cost to the federal government associated with this information collection. Federal activities under this information collection include EPA Headquarters oversight of the reporting program and required reporting by federally owned GHG generating facilities.

EPA burden and cost

EPA activities associated with subparts RR and UU of the MRR include Headquarters oversight and implementation of the reporting program, e.g., monitoring and verification of emission reports, database and software maintenance, communication and outreach, and program evaluation. EPA estimates that Headquarters will devote up to 2 full time equivalents (FTEs), or 4,160 hours to these activities. EPA will incur incremental costs for subparts RR and UU of approximately $344,000 for database and software design, developing guidance, training, responding to stakeholders, communication and outreach, contractor support and data base maintenance, and for third-party verification activities.

In addition, the Federal government will burden associated with MRV plans and annual reports from DOE Federal facilities.

To develop EPA labor costs, EPA estimates the average hourly labor rate for salary and overhead and benefits for Agency staff to be $50.14. To derive this figure, EPA multiplied the hourly compensation at GS-12, Step 5 on the 2008 GS pay scale ($31.34) by the standard government benefits multiplication factor of 1.6 to account for overhead and benefits.

Burden and cost for federal facilities covered by the rule

Exhibit 6.2 presents the annual burden and cost for federal facilities that must comply with the rule.

Exhibit 6.2 Annual Agency Burden and Cost

6(d) Estimating the Respondent Universe and Total Burden and Costs

The number of respondents in each sector that will perform the required activities under this information collection is presented in Exhibit 6.1. The required activities depend on whether the facility is a Class VI or a non-Class VI injection facility. These activities are described in Section 4(b) of this ICR.

6(e) Bottom Line Burden Hours and Costs

The bottom line burden hours and costs are shown in Exhibit 6.3.

Exhibit 6.3 Bottom Line Annual Burden and Cost

Note: Totals may not add due to independent rounding.

6(f) Burden Statement

The respondent reporting burden for this collection of information is estimated to average 4,794 hours per year for a three year period, including a first year where initial and capital costs are anticipated, and two subsequent years in which identical annual costs are estimated. The average annual burden to EPA and other federal entities for this period is estimated to be 4,283 hours, which includes 4,160 hours for agency oversight activities and 492 hours for DOE Federal facilities that must comply with the rule. The annual public reporting and recordkeeping burden for this collection of information is estimated to average 9 hours per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to respond to a collection of

information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OAR-2008-0508, which is available for online viewing at http://www.regulations.gov, or in person viewing at the Air and Radiation docket in the EPA Docket Center (EPA/DC), EPA West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation docket is (202) 566-1742. An electronic version of the public docket is available at http://www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. When in the system, select "search," then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OAR-2008-0508 and OMB Control Number 2060-NEW on any correspondence.