

PLAINS CO₂ REDUCTION PARTNERSHIP PHASE III

Quarterly Technical Progress Report

(for the period April 1 – June 30, 2008)

Prepared for:

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PLAINS CO₂ REDUCTION PARTNERSHIP PHASE III
Quarterly Technical Progress Report
April 1 – June 30, 2008

INTRODUCTION

The Plains CO₂ Reduction (PCOR) Partnership has been established as a U.S. Department of Energy (DOE) National Energy Technology Laboratory (NETL) Regional Carbon Sequestration Partnership (RCSP). The PCOR Partnership is managed by the Energy & Environmental Research Center (EERC) at the University of North Dakota (UND) in Grand Forks, North Dakota. The PCOR Partnership region includes all or part of nine states (Iowa, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming) and four Canadian provinces (Alberta, British Columbia, Manitoba, and Saskatchewan).

The EERC was awarded a contract for Phase III activities in late September 2007. Phase III is a 10-year project, in three budget periods, running from October 1, 2007, to September 30, 2017. This progress report summarizes the activities for the reporting period (April 1 – June 30, 2008) for Phases III.

The activities for Phase III of the PCOR Partnership include two large-volume sequestration demonstration tests (Figure 1) along with continued regional characterization and outreach. Thirteen tasks will be implemented; see Table 1 for the responsibility matrix.

Table 1. Phase III Responsibility Matrix

Phase III Task Description	Responsible Party
Task 1 – Regional Characterization	Erin O’Leary/Wes Peck
Task 2 – Public Outreach and Education	Dan Daly
Task 3 – Permitting and Compliance (NEPA)	Lisa Botnen
Task 4 – Site Characterization and Modeling	Jim Sorensen
Task 5 – Well Drilling and Completion	TBA
Task 6 – Infrastructure Development	Melanie Jensen
Task 7 – CO ₂ Procurement	John Harju
Task 8 – Transportation and Injection Operations	TBA
Task 9 – Operational Monitoring and Modeling	TBA
Task 10 – Site Closure	TBA
Task 11 – Postinjection Monitoring and Modeling	TBA
Task 12 – Project Assessment	Stephanie Wolfe
Task 13 – Project Management	Ed Steadman



Figure 1. PCOR Partnership Phase III demonstration test sites.

SUMMARY OF SIGNIFICANT PHASE III ACCOMPLISHMENTS

Task 1 – Regional Characterization

The first PCOR Partnership Geologic Working Group meeting was organized and facilitated following the 2007 PCOR Partnership Annual Meeting. The group held a second meeting on April 17, 2008, in Minneapolis, Minnesota. Representatives from Missouri, Minnesota, Saskatchewan, and North Dakota attended.

The University of Minnesota/Minnesota Geological Survey has submitted a proposal to be a subcontractor in Phase III. The proposal is currently under review.

Task 2 – Public Outreach and Education

During this reporting period, the Phase III Outreach Action Plan (Deliverable D11) was approved by DOE, work proceeded on the Outreach Information System, a general Phase III fact sheet was completed and approved, a public outreach PowerPoint was developed and approved, a presentation was given to teachers at an education seminar, Web pages were initiated for the

Phase III demonstrations, and materials were completed for the Outreach Working Group (OWG).

Task 3 – Permitting and NEPA Compliance

During this reporting period, a review of EPA’s draft rules for regulating GHG emissions under the CAA was started, and a review of WRI’s Guidelines for Carbon Capture and Sequestration was completed. This information will facilitate conversations and dialogue with partners and others as to the ongoing regulatory and policy frameworks that are developing around carbon management.

Work continues on the NEPA document for the Williston Basin test.

Task 4 – Site Characterization and Modeling

During this quarter, there were no significant developments associated with either site activities that advance the state of the art with respect to CO₂ flood EOR operations, sequestration in brine-saturated formations, or the MMV of such projects.

Task 5 – Well Drilling and Completion

This task has not begun (Quarter 1 – Budget Period 3 [BP3], Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 6 – Infrastructure Development

There were no significant accomplishments on this task during the reporting period.

Task 7 – CO₂ Procurement

Numerous discussions with potential CO₂ suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

This task has not begun (Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 9 – Operational Monitoring and Modeling

This task has not begun (Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 10 – Site Closure

This task has not begun (Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 11 – Postinjection Monitoring and Modeling

This task has not begun (Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 12 – Project Assessment

This task has not begun (Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly and annual progress reports.

Task 13 – Project Management

Phase III of the PCOR Partnership started October 1, 2007. There are currently 24 partners specifically supporting Phase III activities in the reporting period January 1 – March 31, 2008. The membership, as of June 30, 2008, is listed in Table 2. Please note that Phase II members in good standing are automatically members of Phase III for the first budget period that overlaps with the last 2 years of Phase II (October 1, 2007 – October 1, 2009).

Activities in this reporting period include the following:

- The PCOR Partnership will be taking part in the 7th Annual Carbon Capture & Sequestration Conference in Pittsburgh, Pennsylvania, May 5–8, 2008.
 - The PCOR Partnership submitted two abstracts.
 - A booth (Phase II and III) will be on exhibit.
- On June 3, 2008, the PCOR Partnership sent out a press release on the storage project in British Columbia, Canada.
- Work has begun on the Risk Management Plan (RMP) outline. The draft outline will be submitted to DOE during BP3 for review. The RMP was originally laid out in the Project Management Plan (Deliverable D1) that was submitted in December 2007. The RMP is a living document, and more progress will be made as each Phase III demonstration project evolves.

Table 2. PCOR Partnership Team, Phase III

U.S. Department of Energy National Energy Technology Laboratory UND EERC ALLETE – Minnesota Power Basin Electric Power Cooperative BNI Coal, Ltd. British Columbia Ministry of Energy, Mines and Petroleum Resources Encore Acquisition Company Great Northern Power Development, LP Great River Energy Lignite Energy Council	Montana–Dakota Utilities Co. Melzer Consulting Minnkota Power Cooperative, Inc. Missouri Geological Survey Natural Resources Canada North American Coal Corporation North Dakota Industrial Commission Department of Mineral Resources, Oil and Gas Division North Dakota Industrial Commission Lignite Research, Development and Marketing Program	North Dakota Industrial Commission Oil and Gas Research Council Otter Tail Power Company Prairie Public Broadcasting Ramgen Power Systems, Inc. Spectra Energy Westmoreland Coal Company
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PHASE III PROGRESS OF WORK

Task 1 – Regional Characterization

The Regional Characterization task entails the review, characterization, and update of the PCOR Partnership region's CO₂ sinks and sources for inclusion in the DSS. Activities in this reporting period include the following:

- The conversion of the DSS site to a .NET framework continues. This development platform will allow for greater functionality and a more robust user experience in the GIS portion of the DSS.
- Information on reported cumulative oil and gas production from individual fields in Missouri was compiled and provided to the EERC via an Excel spreadsheet in April 2008. The scanning of over 2300 oil/gas geophysical logs from Missouri has been completed and was provided to the EERC in June 2008. GIS coverage of known oil/gas pools has been completed and will be provided to the EERC upon compilation of metadata.
- The Missouri Division of Geology and Land Survey (DGLS) began work on a bibliographic and literature review of historic and current reports on saline formations in Missouri. An assessment of Missouri water quality data has begun. These data include depth of well, casing amount, primary aquifer, geologic unit, and water quality. Parameters from these data being considered for the project include total dissolved solids, residue on evaporation, chloride, sulfate, calcium, sodium, pH, conductance, and temperature. Following the review and evaluation of data, an ACCESS database will be designed for data entry and then used to generate GIS layers.
- The DGLS has compiled structural information geologic and outcrop maps for the Missouri portions of the Dyersburg, Harrison, Joplin, and Poplar Bluff 1 × 2 quadrangles. Work was completed on the west half of the Springfield 1 × 2 quadrangle, as was begun on the east half. A total of 872 maps have been examined for structures. These maps contained 393 named structural features that comprise 1073 separate lines.

Task 2 – Public Outreach and Education

Task 2 will provide stakeholders and the general public with information on sequestration methods, opportunities, and developments, including updates on the demonstration projects. Activities in this reporting period include the following:

- The Phase III Outreach Action Plan (Deliverable D11) was submitted for review in March and was approved.
- A presentation was given at the North Dakota Petroleum Council teacher education workshop in Bismarck, North Dakota, on June 11. Feedback was obtained from the attendees regarding potential products.
- A general Phase III fact sheet (Deliverable D14) was completed and approved.
- A public outreach PowerPoint was prepared for the field demonstrations. The PowerPoint was submitted to NETL on schedule at the end of May and was approved.

- Development of Web pages for the field demonstrations for the public Web site due in July began. These included updating the field tests page in the Web site and developing new geologic columns that better reflect the stratigraphy in the area of the field sites. The Web pages will be submitted in the coming quarter.
- Efforts continued to populate the Outreach Information System that will contain a record of outreach activities as well as provide a basis for assessing audience exposure to outreach activities. Activities focused on obtaining demographic information, school districts and contacts, and extension service contacts and meeting schedules.

In addition, members of the outreach team took part in the monthly conference calls and related activities of the OWG, including submitting materials for the field demonstration “baseball” cards for the GHGT-9 meeting and input on the video being prepared for that meeting. The outreach team was also represented at the national meeting in May.

Task 3 – Permitting and NEPA Compliance

The goal of Task 3 is to obtain all the permits and approvals that are needed to comply with state, provincial, and federal requirements. Activities for the reporting period included the following:

- Analysis of carbon market strategies continued.
- PCOR Partnership staff continued to follow legislative actions occurring in Congress.
- Review continued of recent publications relating to regulating CO₂ sequestration and MMV issues.
- Actions by the province of British Columbia are continually monitored for the effect they may have on the Fort Nelson demonstration project.

Task 4 – Site Characterization and Modeling

Task 4 is focused on evaluating the effectiveness of large-scale CO₂ sequestration in geological formations at two different sites. The first site will examine CO₂ sequestration in conjunction with EOR operations in a deep carbonate reservoir in the Williston Basin. The second will examine CO₂ sequestration in a carbonate brine-saturated formation basin in northwestern Canada.

Throughout this reporting period, characterization activities on the project have continued. A site near Fort Nelson, British Columbia, Canada, has been selected by Spectra Energy Transmission (SET), and the project was formally announced in late May by SET and the provincial government and in early June by DOE, SET, the Office of U.S. Senator Byron Dorgan, and the EERC. Geological and hydrogeological investigations of the study area continue. This work provides in-depth knowledge of the likely study region and will ultimately give insight into the long-term movement of fluids through this system.

No deliverables associated with this task were due during this quarter.

Task 5 – Well Drilling and Completion

Task 5 will develop the engineering designs for the installation of necessary injection, production, and monitoring wells. This task has not begun (Quarter 1 – BP3; Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 6 – Infrastructure Development

Task 6 will develop the infrastructure associated with the capture, dehydration, compression, and pipeline transportation required to move the CO₂ from the source to the oil field. Activities included the following:

- Ramgen Power Systems began work on its subcontracted activities. Work focused on improving the fidelity of a Ramgen-developed compression cost model. Ramgen's cost model is based upon the simplified DOE calculations for cost of electricity (COE), as referenced in a number of DOE publications. The model was validated through comparison of the cost penalties calculated by the model with the results of several pulverized coal studies with and without CCS capability. Ramgen then enhanced the model to differentiate the financial penalty of CCS between the contribution from capture and compression, and capital and operating costs. The results to date indicate that compression contributes one-third of the cost penalty and capture contributes the other two-thirds. The Ramgen model indicates that the COE penalty is evenly divided between capital and operating costs. Operating costs and efficiency are widely believed to drive COE more than capital outlay. The Ramgen model, however, shows capital costs to be a significant contributor to the COE. Ramgen is working to reconcile these differences.

Other work performed by Ramgen included:

- The offerings of competitive compressors sold by MANTurbo, a typically employed CO₂ compressor, were evaluated. The basis of the Ramgen cost advantage was reevaluated in the face of a recent bid request from Burns and MacDonald for a future Basin Electric plant in South Dakota. The Ramgen response was based on old pricing models and resulted in a bid that was similar in price to that of the competition. Since that time, Ramgen personnel have learned that the \$/hp metric can only be used to compare compressors with identical conditions as the results will be misleading when different conditions are evaluated. Ramgen has subsequently restructured its product pricing, improving the cost savings achieved by its technology when compared with the competition.
- Ramgen has also begun identifying the requirements and success criteria for demonstration at a coal-fired power plant. Because system integration and controls are very site- and condition-specific, the implications of a partial or total closed-loop test configuration are the focus of this effort. Other areas of investigation include heat exchanger limitations, seals, and demonstration requirements.

- A computer model animation of a notional demonstration unit was developed. The animation is intended to help explain the technology and identify critical features and installation requirements of the proposed demonstration unit.

Task 7 – CO₂ Procurement

This task involves the documentation of the procedures to procure CO₂ for EOR activities. Numerous discussions with potential CO₂ suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

This task will consist of monitoring and documenting commercial partner activities related to the CO₂ pipeline for leaks and corrosion, as well as performing inspections and security checks. This task has not begun (Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 9 – Operational Monitoring and Modeling

Task 9 will develop site characterization, modeling, and monitoring for the Williston Basin and the Fort Nelson test sites. This task has not begun (Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 10 – Site Closure

Task 10 will require research to be conducted with regard to those site closure practices and procedures that would be applicable for this type of operation. This task has not begun (Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 11 – Postinjection Monitoring and Modeling

Postinjection monitoring and modeling will use the data generated by the site characterization and monitoring activities to provide the technical basis for the formal establishment of carbon credits that are directly linked to the volume of CO₂ injected into the site and a third-party carbon-trading entity to validate and ultimately monetize the credits derived for the Phase III tests. This task has not begun (Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 12 – Project Assessment

This task has not begun (Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly and annual progress reports. The Project Assessment Annual Reports (D57) will summarize project progress, accomplishments, and goals. The first project assessment report is due December 31, 2008.

Task 13 – Project Management

Project management involves the development and distribution of required project reports, as well as overall project management duties. The project manager (PM) and task leaders meet on a monthly basis to report the progress of their tasks and discuss any issues and corrective actions necessary. Each task leader is also responsible to communicate and keep track of any subcontractors they may have in their respective tasks. Task leaders are also responsible to provide the PM with written weekly updates. These updates include highlights (including trip reports), issues (i.e., budget, staffing, technical issues, etc.), opportunities, and travel plans. The monthly updates can be found on the PCOR Partnership DSS homepage.

Preparations for the 2008, PCOR Partnership Annual Meeting continue. The dates will be September 16–18, 2008, in Minneapolis, Minnesota. The deliverable entitled “D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report” was submitted to DOE for approval on June 30, 2008.

PHASE III COST STATUS

The approved BP3 budget along with actual costs incurred and in-kind cost share reported are shown in Table 3. An expected spending plan by quarter of cash funds for BP3 is provided in Figure 2 and Table 4.

Table 3. Phase III Budget

Organization	Approved Budget	Actual Costs Incurred
DOE Share – Cash	\$5,300,000	\$918,324
Nonfederal Share – Cash	\$2,808,847	\$0
Nonfederal Share – In-Kind	\$5,577,212	\$0
Total	\$13,686,059	\$918,324

PHASE III SCHEDULE STATUS

Table 5 contains all the Phase III deliverables, milestones, and submission dates for the reporting period. Because negotiations are ongoing and still uncertain for our partners in the Williston Basin demonstration, various deliverable and milestone submission dates have been extended and are shown in Table 6.

See Table 7 for a listing of all deliverables and milestones by quarter, with completion dates, for the duration of the project. See Table 8 for a listing of deliverables and milestones by quarter for BP3.

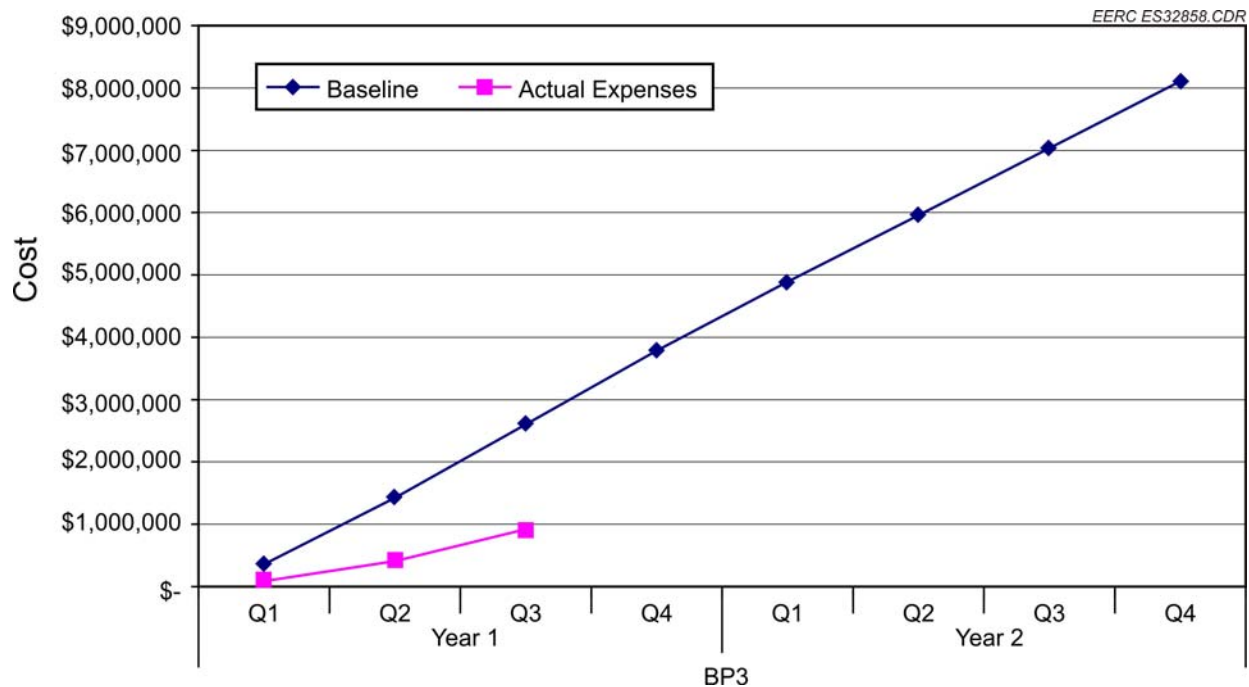


Figure 2. PCOR Partnership Phase III BP3 funding.

ACTUAL OR ANTICIPATED PHASE III PROBLEMS OR DELAYS

Task 1 – Regional Characterization

Nothing to note at this time.

Task 2 – Public Outreach and Education

As stated in the Schedule Status section of this report, the PCOR Partnership is still seeking a specific location for the Williston Basin demonstration site and is currently waiting for information from a participating partner.

Task 3 – Permitting and NEPA Compliance

As stated in the Schedule Status section of this report, because negotiations are ongoing and still uncertain for PCOR Partnership partners in the Williston Basin demonstration, it would be beneficial to submit the following deliverables and milestones at a later date:

- Milestone M3 (Start Environmental Questionnaire for Williston Basin Test Site) by June 30, 2008
- Deliverable D28 (Environmental Questionnaire – Williston Basin Test Site) by January 1, 2009.
- Deliverable D29 (Permitting Action Plan) by March 31, 2009.

Table 4. BP3 Spending Plan

Baseline Reporting Quarter	Year 1								Year 2							
	Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4	
	Q1	Cum. BP Total	Q2	Cum. BP Total	Q3	Cum. BP Total	Q4	Cum. BP Total	Q1	Cum. BP Total	Q2	Cum. BP Total	Q3	Cum. BP Total	Q4	Cum. BP Total
Baseline Cost Plan																
Federal Share	\$ 358,125	\$ 358,125	\$ 596,875	\$ 955,000	\$ 716,250	\$ 1,671,250	\$ 716,250	\$ 2,387,500	\$ 746,875	\$ 3,134,375	\$ 721,875	\$ 3,856,250	\$ 721,875	\$ 4,578,125	\$ 721,875	\$ 5,300,000
Nonfederal Share	\$ -	\$ -	\$ 467,179	\$ 467,179	\$ 467,180	\$ 934,359	\$ 467,180	\$ 1,401,539	\$ 351,827	\$ 1,753,366	\$ 351,827	\$ 2,105,193	\$ 351,827	\$ 2,457,020	\$ 351,827	\$ 2,808,847
Total Planned	\$ 358,125	\$ 358,125	\$ 1,064,054	\$ 1,422,179	\$ 1,183,430	\$ 2,605,609	\$ 1,183,430	\$ 3,789,039	\$ 1,098,702	\$ 4,887,741	\$ 1,073,702	\$ 5,961,443	\$ 1,073,702	\$ 7,035,145	\$ 1,073,702	\$ 8,108,847
Actual Incurred Cost																
Federal Share	\$ 88,728	\$ 88,728	\$ 318,976	\$ 407,704	\$ 510,620	\$ 918,324										
Nonfederal Share	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -										
Total Incurred Cost	\$ 88,728	\$ 88,728	\$ 318,976	\$ 407,704	\$ 510,620	\$ 918,324										
Variance																
Federal Share	\$ 269,397	\$ 269,397	\$ 277,899	\$ 547,296	\$ 205,630	\$ 752,926										
Nonfederal Share	\$ -	\$ -	\$ 467,179	\$ 467,179	\$ 467,180	\$ 934,359										
Total Variance	\$ 269,397	\$ 269,397	\$ 745,078	\$ 1,014,475	\$ 672,810	\$ 1,687,285										

Table 5. Phase III Deliverables and Milestones for April 1 – June 30, 2008

Product	Date Submitted
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/08
D14: Task 2 – General Phase III Fact Sheet	4/30/08
D17: Task 2 – General Phase III Information PowerPoint Presentation	5/30/08
M3: Task 3 – Start Environmental Questionnaire for Williston Basin Test Site	6/27/08
M6: Task 4 – Williston Basin Test Site Geochemical Work Initiated	6/30/08
M7: Task 4 – Williston Basin Test Site Geological Characterization Data Collection Initiated	6/30/08

Table 6. Revised Due Dates for Selected Phase III Deliverables and Milestones

Title/Description	Original Due Date	Revision Requested April '08	Revision Requested June '08
M3: Task 3 – Start Environmental Questionnaire for Williston Basin Test Site	3/31/08	6/30/08	
M4: Task 4 – Williston Basin Test Site Selected	3/31/08	6/30/08	12/31/08
D28: Task 3 – Environmental Questionnaire – Williston Basin Test Site	6/30/08	7/31/08	1/30/09
D12: Task 2 – Demonstration Web Pages on the Public Site	6/30/08	7/31/08	
D31: Task 4 – Williston Basin Test Site – Geological Characterization Experimental Design Package	6/30/08	8/29/08	2/28/09
M8: Task 4 – Williston Basin Test Site Wellbore Leakage Data Collection Initiated	9/30/08	11/28/08	5/29/09
M5: Task 4 – Data Collection Initiated for Williston Basin Site	6/30/08		12/31/08
D29: Task 3 – Permitting Action Plan	9/30/08		3/31/09
D66: Task 4 – Williston Basin Test Site – Simulation Report	3/31/09		6/30/09
M9: Task 4 – Williston Basin Test Site Baseline Hydro Data Collection Completed	6/30/09		9/30/09
M10: Task 10 – Williston Basin Test Site Wellbore Leakage Data Collection Completed	6/30/09		9/30/09
Task 5 Initiated	10/01/08		1/1/09

Table 7. Phase III Milestones and Deliverables

Title/Description	Due Date	Actual Completion Date
Year 1 – Quarter 1 (October–December 2007)		
M17: Task 4 – Fort Nelson Test Site Selected	12/31/07	12/28/07
D37: Task 4 – Fort Nelson Test Site – Site Geological Characterization Experimental Design Package	12/31/07	12/28/07
D63: Task 13 – Project Management Plan	12/31/07	12/28/07
Year 1 – Quarter 2 (January–March 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/08	1/31/08
D38: Task 4 – Fort Nelson Test Site – Geomechanical Experimental Design Package	1/31/08	1/31/08
M1: Task 1 – Three Target Areas Selected for Detailed Characterization	3/31/08	3/20/08
M18: Task 4 – Fort Nelson Test Site Geochemical Work Initiated	3/31/08	3/19/08
D11: Task 2 – Outreach Plan	3/31/08	3/31/08
D30: Task 4 – Williston Basin Test Site – Geomechanical Experimental Design Package	3/31/08	3/31/08
D27: Task 3 – Environmental Questionnaire – Fort Nelson Test Site	3/31/08	4/2/08
Year 1 – Quarter 3 (April–June 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/08	4/30/08
D14: Task 2 – General Phase III Fact Sheet	4/30/08	4/30/08
D17: Task 2 – General Phase III Information PowerPoint Presentation	5/30/08	5/30/08
M3: Task 3 – Start Environmental Questionnaire for Williston Basin Test Site	6/30/08	6/27/08
M6: Task 4 – Williston Basin Test Site Geochemical Work Initiated	6/30/08	6/30/08
M7: Task 4 – Williston Basin Test Site Geological Characterization Data Collection Initiated	6/30/08	6/30/08
Year 1 – Quarter 4 (July–September 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/08	
D12: Task 2 – Demonstration Web Pages on the Public Site	7/31/08	
M2: Task 1 – Demonstration Project Reporting System (DPRS) Prototype Completed	9/30/08	
D1: Task 1 – Review of Source Attributes	9/30/08	
D67: Task 4 – Fort Nelson Test Site – Simulation Report	9/30/08	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 2 – Quarter 1 (October–December 2008)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/08	
M4: Task 4 – Williston Basin Test Site Selected	12/31/08	
M5: Task 4 – Data Collection Initiated for Williston Basin Test Site	12/31/08	
D20: Task 2 – Documentary Support to PowerPoint and Web Site	12/31/08	
D57: Task 12 – Project Assessment Annual Report	12/31/08	
Year 2 – Quarter 2 (January–March 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/09	
D28: Task 3 – Environmental Questionnaire – Williston Basin Test Site	1/31/09	
D31: Task 4 – Williston Basin Test Site – Geological Characterization Experimental Design Package	2/28/09	
D15: Task 2 – Williston Basin Test Site Fact Sheet	2/28/09	
D2: Task 2 – First Target Area Completed	3/31/09	
D24: Task 2 – PCOR Partnership Region Sequestration General Poster	3/31/09	
D29: Task 3 – Permitting Action Plan	3/31/09	
Year 2 – Quarter 3 (April–June 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/09	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	4/30/09	
M8: Task 4 – Williston Basin Test Site Wellbore Leakage Data Collection Initiated	5/29/09	
D16: Task 2 – Fort Nelson Test Site Fact Sheet	5/29/09	
D66: Task 4 – Williston Basin Test Site – Simulation Report	6/30/09	
Year 2 – Quarter 4 (July–September 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/09	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	7/31/09	
D40: Task 4 – Fort Nelson Test Site – Geomechanical Final Report	7/31/09	
D42: Task 5 – Williston Basin Test Site – Injection Experimental Design Package	8/31/09	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 2 – Quarter 4 (July–September 2009), continued		
M9: Task 4 – Williston Basin Test Site B – Version Geological Model Development Initiated	9/30/09	
M10: Task 4 – Williston Basin Test Site Wellbore Leakage Data Collection Completed	9/30/09	
M11: Task 4 – Williston Basin Test Site Baseline Hydro Data Collection Completed	9/30/09	
M12: Task 4 – Williston Basin Test Site Geochemical Work Completed	9/30/09	
M19: Task 6 – Capture, Dehydration, and Compression Technology Selected	9/30/09	
D9: Task 1 – Updated DSS	9/30/09	
D1: Task 1 – Review of Source Attributes	9/30/09	
D3: Task 1 – Permitting Review – One State and One Province	9/30/09	
D43: Task 5 – Williston Basin Test Site – Monitoring Experimental Design Package	9/30/09	
D47: Task 6 – Topical Report on the Preliminary Design of Advanced Compression Technology	9/30/09	
D60: Task 13 – Site Development, Operations, and Closure Plan	9/30/09	
D61: Task 13 – Site Commercialization Plan	9/30/09	
D64: Task 4 – Williston Basin Test Site – Site Characterization Report	9/30/09	
D65: Task 4 – Fort Nelson Test Site – Site Characterization Report	9/30/09	
Year 3 – Quarter 1 (October–December 2009)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/09	
M13: Task 4 – Williston Basin Test Site B – Version Geological Model Development Completed	12/31/09	
M14: Task 4 – Williston Basin Test Site Geological Characterization Data Collection Completed	12/31/09	
M15: Task 4 – Williston Basin Test Site Baseline Hydro B – Model Completed	12/31/09	
D41: Task 4 – Fort Nelson Test Site – Geochemical Final Report	12/31/09	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/09	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/09	
D57: Task 12 – Project Assessment Annual Report	12/31/09	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 3 – Quarter 2 (January–March 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/10	
D11: Task 2 – Outreach Plan	3/31/10	
D32: Task 4 – Williston Basin Test Site – Geomechanical Final Report	3/31/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/10	
Year 3 – Quarter 3 (April–June 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/10	
D13: Task 2 – Public Site Updates	6/30/10	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/10	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/10	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/10	
D25: Task 2 – Williston Basin Test Site Poster	6/30/10	
D33: Task 4 – Williston Basin Test Site – Geochemical Final Report	6/30/10	
D34: Task 4 – Williston Basin Test Site – Baseline Hydrogeological Final Report	6/30/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/10	
Year 3 – Quarter 4 (July–September 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/10	
D70: Task 4 – Fort Nelson Test Site – Best Practices Manual – Simulation Report	8/31/10	
M16: Task 4 – Williston Basin Test Site Final Geological Model Development Completed	9/30/10	
D1: Task 1 – Review of Source Attributes	9/30/10	
D10: Task 1 – Demonstration Project Reporting System Update	9/30/10	
D26: Task 2 – Fort Nelson Test Site Poster	9/30/10	
D35: Task 4 – Williston Basin Test Site – Best Practices Manual – Site Characterization	9/30/10	
D36: Task 4 – Williston Basin Test Site – Wellbore Leakage Final Report	9/30/10	
D48: Task 7 – Procurement Plan and Agreement Report	9/30/10	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 3 – Quarter 4 (July–September 2010), continued		
D50: Task 9 – Williston Basin Test Site – Site Characterization, Modeling, and Monitoring Plan	9/30/10	
D52: Task 9 – Fort Nelson Test Site – Site Characterization, Modeling, and Monitoring Plan	9/30/10	
D68: Task 4 – Fort Nelson Test Site – Best Practices Manual – Site Characterization	9/30/10	
D69: Task 4 – Williston Basin Test Site – Best Practices Manual – Simulation Report	9/30/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/10	
Year 4 – Quarter 1 (October–December 2010)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/10	
M20: Task 6 – Capture, Dehydration, and Compression Technology Design Completed	10/31/10	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/10	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/10	
D57: Task 12 – Project Assessment Annual Report	12/31/10	
Year 4 – Quarter 2 (January–March 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/11	
Year 4 – Quarter 3 (April–June 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/11	
D21: Task 2 – Williston Basin Test Site 15-minute Documentary	6/30/11	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/11	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/11	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/11	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 4 – Quarter 4 (July–September 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/11	
D1: Task 1 – Review of Source Attributes	9/30/11	
D4: Task 1 – Permitting Review – Two Additional States	9/30/11	
D9: Task 1 – Updated DSS	9/30/11	
D45: Task 6 – Topical Report on the Integrated Capture Plant and Its Shakedown	9/30/11	
D46: Task 6 – Topical Report on Pipeline Route Selection, Design, and Construction	9/30/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/11	
Year 5 – Quarter 1 (October–December 2011)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/11	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/11	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/11	
D57: Task 12 – Project Assessment Annual Report	12/31/11	
Year 5 – Quarter 2 (January–March 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/12	
D5: Task 1 – Second Target Area Completed	3/31/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/12	
Year 5 – Quarter 3 (April–June 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/12	
D13: Task 2 – Public Site Updates	6/30/12	
D22: Task 2 – Fort Nelson Test Site 15-minute Documentary	6/30/12	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/12	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/12	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/12	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 5 – Quarter 4 (July–September 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/12	
D1: Task 1 – Review of Source Attributes	9/30/12	
D10: Task 1 – DPRS Update	9/30/12	
D44: Task 5 – Williston Basin Test Site – Drilling and Completion Activities Final Report	9/30/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/12	
Year 6 – Quarter 1 (October–December 2012)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/12	
D14: Task 2 – General Phase III Fact Sheet	12/31/12	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/12	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/12	
D57: Task 12 – Project Assessment Annual Report	12/31/12	
Year 6 – Quarter 2 (January–March 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/13	
D15: Task 2 – Williston Basin Test Site Fact Sheet	3/31/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/13	
Year 6 – Quarter 3 (April–June 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/13	
D16: Task 2 – Fort Nelson Test Site Fact Sheet	6/30/13	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/13	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/13	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/13	
Year 6 – Quarter 4 (July–September 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/30/13	
D1: Task 1 – Review of Source Attributes	9/30/13	
D6: Task 1 – Permitting Review – Three States and Two Provinces	9/30/13	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 6– Quarter 4 (July–September 2013), continued		
D9: Task 1 – Updated DSS	9/30/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/13	
Year 7 – Quarter 1 (October–December 2013)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/13	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/13	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/13	
D57: Task 12 – Project Assessment Annual Report	12/31/13	
Year 7 – Quarter 2 (January–March 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/14	
D24: Task 2 – PCOR Partnership Region Sequestration General Poster	3/31/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/14	
Year 7 – Quarter 3 (April–June 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/14	
D13: Task 2 – Public Site Updates	6/30/14	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/14	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/14	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/14	
Year 7 – Quarter 4 (July–September 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/14	
D1: Task 1 – Review of Source Attributes	9/30/14	
D7: Task 1 – Third Target Area Completed	9/30/14	
D10: Task 1 – Demonstration Project Reporting System Update	9/30/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/14	

Continued...

Table 7. Phase III Milestones and Deliverables (continued)

Title/Description	Due Date	Actual Completion Date
Year 8 – Quarter 1 (October–December 2014)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/14	
D75: Task 3 – Updated Permitting Action Plan	10/30/14	
D25: Task 2 – Williston Basin Test Site Poster	12/31/14	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	12/31/14	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	12/31/14	
D57: Task 12 – Project Assessment Annual Report	12/31/14	
Year 8 – Quarter 2 (January–March 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/15	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	3/31/15	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	3/31/15	
Year 8 – Quarter 3 (April–June 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/15	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/15	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/15	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/15	
D26: Task 2 – Fort Nelson Test Site Poster	6/30/15	
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	6/30/15	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	6/30/15	
Year 8 – Quarter 4 (July–September 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/15	
D1: Task 1 – Review of Source Attributes	9/30/15	
D8: Task 1 – Permitting Review – Three States and One Province	9/30/15	
D9: Task 1 – Updated DSS	9/30/15	
D49: Task 8 – Transportation and Injection Operations Final Report	9/30/15	
D51: Task 9 – Williston Basin Test Site – Monitoring for CO ₂ , EOR, and Sequestration Best Practices Manual	9/30/15	
D53: Task 9 – Fort Nelson Test Site – Monitoring for CO ₂ Sequestration in a Brine Formation Best Practices Manual	9/30/15	

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Table 7. Phase III Milestones and Deliverables (continued)

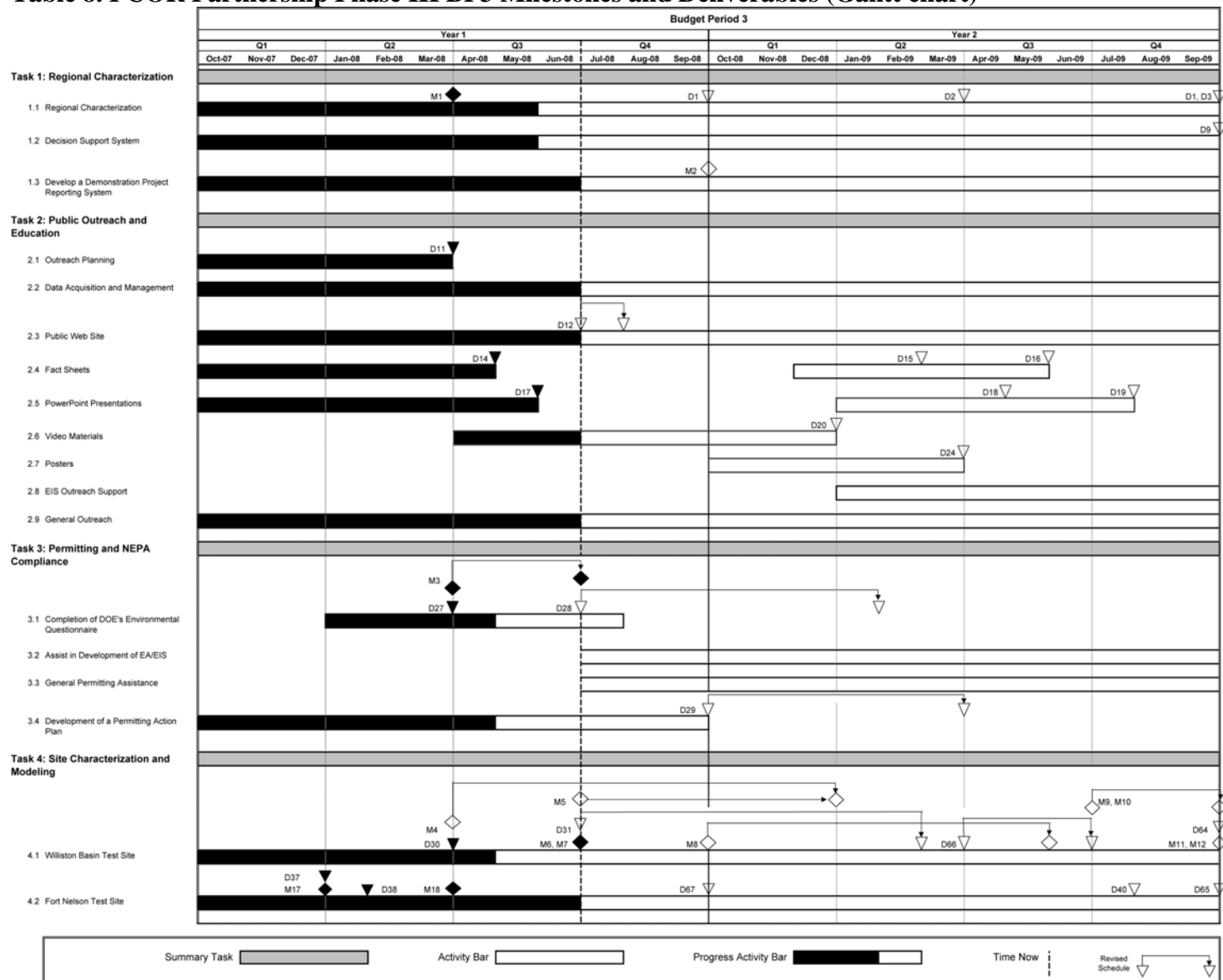
Title/Description	Due Date	Actual Completion Date
Year 8 – Quarter 4 (July–September 2015), continued		
D71: Task 9 – Williston Basin Test Site – Quarterly Summary of Operations	9/30/15	
D72: Task 9 – Fort Nelson Test Site – Quarterly Summary of Operations	9/30/15	
Year 9 – Quarter 1 (October–December 2015)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/15	
D14: Task 2 – General Phase III Fact Sheet	12/31/15	
D23: Task 2 – Sequestration in Carbon Management – 30-minute Documentary	12/31/15	
D57: Task 12 – Project Assessment Annual Report	12/31/15	
Year 9 – Quarter 2 (January–March 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/16	
D11: Task 2 – Outreach Plan	3/31/16	
D15: Task 2 – Williston Basin Test Site Fact Sheet	3/31/16	
D55: Task 11 – Report on Cost-Effective Long-Term Monitoring Strategies for the Williston Basin Test Site	3/31/16	
D56: Task 11 – Report on Cost-Effective Long-Term Monitoring Strategies for the Fort Nelson Test Site	3/31/16	
Year 9 – Quarter 3 (April–June 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/16	
D13: Task 2 – Public Site Updates	6/30/16	
D16: Task 2 – Fort Nelson Test Site Fact Sheet	6/30/16	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/16	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/16	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/16	
Year 9 – Quarter 4 (July–September 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/16	
D1: Task 1 – Review of Source Attributes	9/30/16	
D10: Task 1 – Demonstration Project Reporting System Update	9/30/16	

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Table 7. Phase III Milestones and Deliverables (continued)

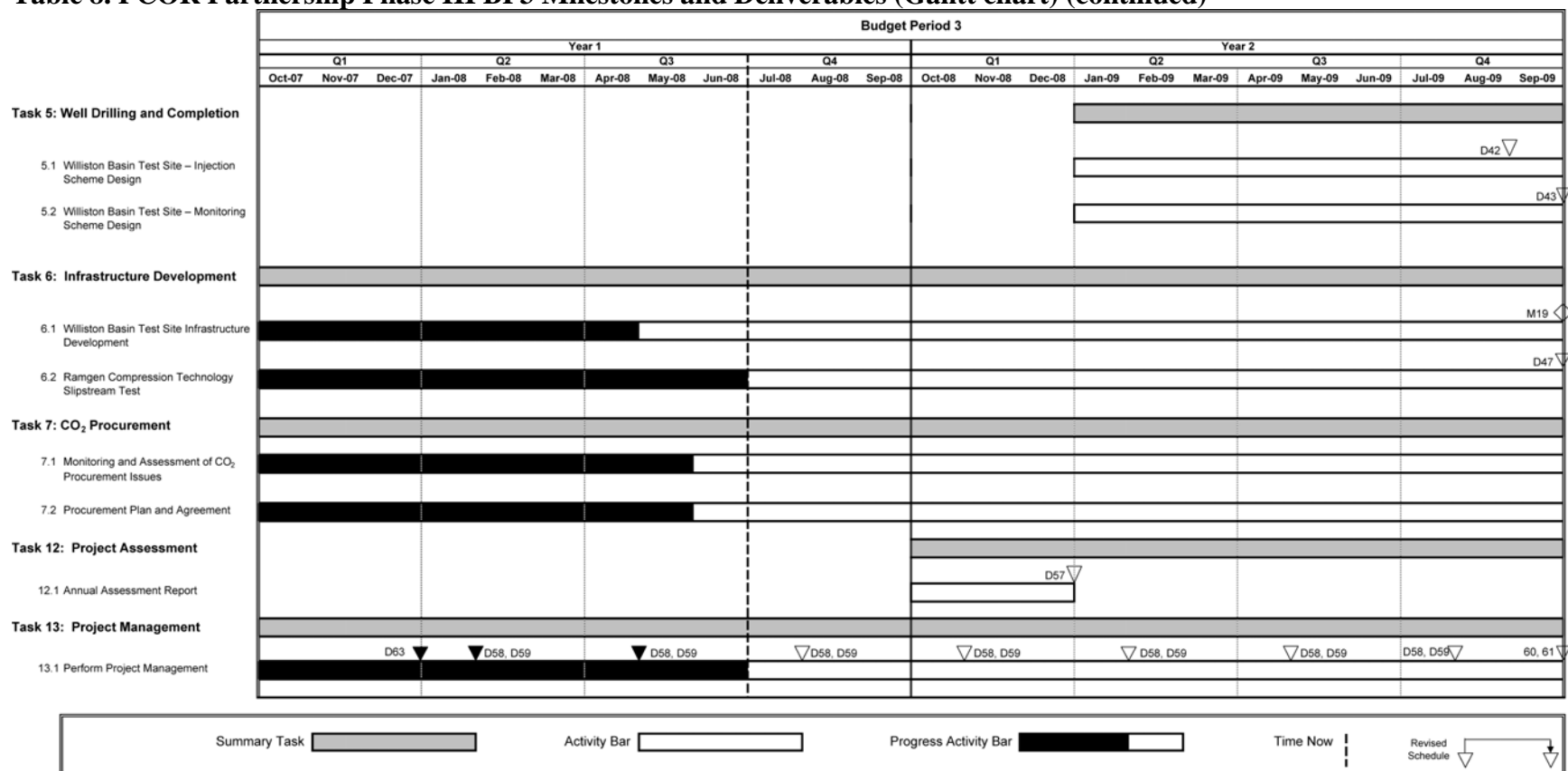
Title/Description	Due Date	Actual Completion Date
Year 9 – Quarter 4 (July–September 2016), continued		
D73: Task 11 – Williston Basin Test Site – Progress Report on Monitoring and Modeling Fate of CO ₂	9/30/16	
D74: Task 11 – Fort Nelson Test Site – Progress Report on Monitoring and Modeling Fate of CO ₂	9/30/16	
Year 10 – Quarter 1 (October–December 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/16	
D57: Task 12 – Project Assessment Annual Report	12/31/16	
Year 10 – Quarter 2 (January–March 2016)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	1/31/17	
Year 10 – Quarter 3 (April–June 2017)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	4/30/17	
D17: Task 2 – General Phase III Information PowerPoint Presentation	6/30/17	
D18: Task 2 – Williston Basin Test Site PowerPoint Presentation	6/30/17	
D19: Task 2 – Fort Nelson Test Site PowerPoint Presentation	6/30/17	
Year 10 – Quarter 4 (July–September 2017)		
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	7/31/17	
D54: Task 10 – Site Closure Report	9/30/17	
D73: Task 11 – Williston Basin Test Site – Progress Report on Monitoring and Modeling Fate of CO ₂	9/30/17	
D74: Task 11 – Fort Nelson Test Site – Progress Report on Monitoring and Modeling Fate of CO ₂	9/30/16	
D76: Task 3 – Best Practices Manual – Permitting	9/30/17	
D62: Task 13 – Final Report	9/30/17	
D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report	10/31/17	

Table 8. PCOR Partnership Phase III BP3 Milestones and Deliverables (Gantt chart)



Continued...

Table 8. PCOR Partnership Phase III BP3 Milestones and Deliverables (Gantt chart) (continued)



Key for Phase III Deliverables (D) ▼		Key for Phase III Milestone (M) ◆	
D1 Review of Source Attributes	D30 WB Test Site – Geomechanical Experimental Design Package	M1 Three Target Areas Selected	
D2 First Target Area Completed	D31 WB Test Site – Site Geological Characterization Experimental Design Package	M2 DPRS Prototype	
D3 Permitting Review – One State and One Province	D37 FN Test Site – Site Geological Characterization Experimental Design Package	M3 Start Environmental Questionnaire for WB Test Site	
D9 Updated DSS	D38 FN Test Site – Geomechanical Experimental Design Package	M4 WB Test Site Selected	
D11 Outreach Plan	D40 FN Test Site – Geomechanical Final Report	M5 Data Collection Initiated for WB Test Site	
D12 Demonstration Web Pages on the Public Site	D42 WB Test Site – Injection Experimental Design Package	M6 WB Test Site Geochemical Work Initiated	
D14 General Phase III Fact Sheet	D43 WB Test Site – Monitoring Experimental Design Package	M7 WB Test Site Geological Characterization Data Collection	
D15 Williston Basin (WB) Test Site Fact Sheet	D47 Topical Report on the Preliminary Design of Advanced Compression Technology	M8 WB Test Site Wellbore Leakage Data Collection Initiated	
D16 Fort Nelson Test Site Fact Sheet	D57 Project Assessment Annual Report	M9 WB Test Site B-Version Geological Model Development Initiated	
D17 General Phase III Information PowerPoint Presentation	D58 Quarterly Progress Report	M10 WB Test Site Wellbore Leakage Data Collection Completed	
D18 WB Test Site PowerPoint Presentation	D59 Milestone Quarterly Report	M11 WB Test Site Baseline Hydro Data Collection Completed	
D19 Fort Nelson (FN) Test Site PowerPoint Presentation	D60 Site Development, Operations, and Closure Plan	M12 WB Test Site Geochemical Work Completed	
D20 Video Support to PowerPoint and Web Site	D61 Site Commercialization Plan	M17 FN Test Site Selected	
D24 PCOR Region Sequestration General Poster	D63 Project Management Plan	M18 FN Test Site Geochemical Work Initiated	
D27 FN Test Site – Environmental Questionnaire	D64 WB Test Site – Site Characterization Report	M19 Capture, Dehydration, and Compression Technology Selected	
D28 WB Test Site – Environmental Questionnaire	D65 FN Test Site – Site Characterization Report		
D29 Permitting Action Plan	D66 WB Test Site – Simulation Report		
	D67 FN Test Site – Simulation Report		

Task 4 – Site Characterization and Modeling

The selection of a site for the Williston Basin Phase III demonstration has been delayed for two quarters. This will also cause delays in other site-specific activities, such as the development of a NEPA document, site-specific characterization activities, site-specific MMV planning, and site-specific public outreach activities.

As stated in the Schedule Status section of this report, because negotiations are ongoing and still uncertain for our partners in the Williston Basin demonstration, it would be beneficial to submit the following deliverables and milestones at a later date:

- Deliverable D31 (Williston Basin Test Site – Geological Characterization Experimental Design Package) by February 28, 2009
- Milestone M4 (Williston Basin Test Site Selected) by December 31, 2008.
- Milestone M8 (Williston Basin Test Site Wellbore Leakage Data Collection Initiated) by May 29, 2008.
- Milestone M5 (Data Collection Initiated for Williston Basin Site) by December 31, 2008.
- Deliverable D66 (Williston Basin Test Site – Simulation Report) by June 30, 2009.
- Milestone M9 (Williston Basin Test Site Baseline Hydro Data Collection Completed) by September 30, 2009.
- Milestone M10 (Williston Basin Test Site Wellbore Leakage Data Collection Completed) by September 30, 2009.

Task 5 – Well Drilling and Completion

As stated in the Schedule Status section of this report, because of delays in the Williston Basin demonstration, it would be beneficial to initiate Task 5 activities on January 1, 2009 (original start date was October 1, 2008).

Task 6 – Infrastructure Development

Work on this task has been delayed while the plans for the CO₂ capture and geologic sequestration for the demonstration projects are finalized. Once the specific carbon capture and sequestration strategy for the demonstration project has been finalized, planned task activities related to CO₂ capture, compression, and pipeline design and routing can begin. In the interim, activities are being undertaken in support of the planned actions.

Task 7 – CO₂ Procurement

Nothing to note at this time.

Task 8 – Transportation and Injection Operations

Nothing to note at this time.

Task 9 – Operational Monitoring and Modeling

Nothing to note at this time.

Task 10 – Site Closure

Nothing to note at this time.

Task 11 – Postinjection Monitoring and Modeling

Nothing to note at this time.

Task 12 – Project Assessment

Nothing to note at this time.

Task 13 – Project Management

Nothing to note at this time.

PHASE III PRODUCTS OR TECHNOLOGY TRANSFER ACTIVITIES

Task 1 – Regional Characterization

- DGLS staff attended a meeting hosted by EPA Region 7 and attended by state UIC coordinators. Discussion was held concerning a project to potential geologically sequester carbon dioxide near Springfield, Missouri. Additional information was provided by EPA staff concerning potential UIC regulations of sequestration wells.
- DGLS staff facilitated a meeting with regional EPA staff and representatives of City Utilities of Springfield, Missouri, to discuss the utility's proposed geologic sequestration project and proposed EPA regulations.
- The first PCOR Partnership Geologic Working Group meeting was organized and facilitated following the 2007 PCOR Partnership Annual Meeting. The group held a second meeting on April 17, 2008, in Minneapolis, Minnesota. Representatives from Missouri, Minnesota, Saskatchewan, and North Dakota attended.

Task 2 – Public Outreach and Education

- A presentation was given June 11, 2008, to educators at the North Dakota Petroleum Council Teacher Education Seminar at Bismarck State College in Bismarck, North Dakota.
- A general Phase III fact sheet (Deliverable D14) was completed and approved.
- Public outreach PowerPoint (Deliverable D17) was completed and approved.

Task 3 – Permitting and NEPA Compliance

Development of a permitting flowchart was completed for the PCOR Partnership Phase II field validation tests. The flowcharts are being finalized and will be incorporated into the DSS system.

Task 4 – Site Characterization and Modeling

No deliverables were due for Task 4 during this quarter.

Task 5 – Well Drilling and Completion

This task has not begun (Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 6 – Infrastructure Development

A capture and transportation workshop will be held in conjunction with the PCOR Partnership Annual Meeting. Suggested workshop topics were solicited during an e-mail survey sent to PCOR Partnership members. Based on the responses, an agenda was developed and guest speakers identified.

Task 7 – CO₂ Procurement

Numerous discussions with potential CO₂ suppliers have taken place. Because of the sensitive nature of negotiations, specifics cannot be shared at the present time.

Task 8 – Transportation and Injection Operations

This task has not begun (Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 9 – Operational Monitoring and Modeling

This task has not begun (Quarter 1 – BP4, Year 3). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 10 – Site Closure

This task has not begun (Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 11 – Postinjection Monitoring and Modeling

This task has not begun (Quarter 1 – BP5, Year 9). Once activities are initiated, the information will be communicated and detailed in the quarterly progress report.

Task 12 – Project Assessment

This task has not begun (Quarter 1 – BP3, Year 2). Once activities are initiated, the information will be communicated and detailed in the quarterly and annual progress reports.

Task 13 – Project Management

The deliverable entitled “D58/D59: Task 13 – Quarterly Progress Report/Milestone Quarterly Report” was submitted to DOE for approval on June 30, 2008.

MEETINGS/TRAVEL

Representatives from the PCOR Partnership participated in and/or presented at the following meetings and conferences in this reporting period:

- April 17, 2008: Attend the Geologic Characterization Meeting in Minneapolis, Minnesota
- April 20–24, 2008: AAPG Convention & Exhibition in San Antonio, Texas
- April 27–29, 2008: 16th Williston Basin Petroleum Conference & Expo in Minot, North Dakota
- May 5–8, 2008: 7th Annual Carbon Capture & Sequestration Conference in Pittsburgh, Pennsylvania
- June 4–6, 2008: Carbon Finance North America 2008 – Risk and Opportunities in Emissions Markets in New York, New York
- June 9–12, 2008: teachers seminar in Bismarck, North Dakota
- June 10, 2008: SharePoint Seminar in Fargo, North Dakota
- June 15–20, 2008: documentary filming in New Mexico and Texas
- June 18–19, 2008: Western Canadian Sedimentary Basin Geologic Working Group in Winnipeg, Manitoba

Materials presented at these meetings are available to partners on the PCOR Partnership DSS Web site (<http://gis.undeerc.org/website/pcorp/>).

REFERENCES

None.