STORMWATER MANAGEMENT

This narrative summarizes the stormwater management analysis conducted for the proposed DCP Terminal. The purpose of this narrative is to describe and quantify the pre- and post-development stormwater characteristics, and to demonstrate that construction of the project will comply with the applicable MDEP stormwater management requirements in Chapter 500 and 502. According to the Chapter 500 standards, this development must meet the Basic Standards, General Standards and Flooding Standards. The DCP Terminal will not be located in a "watershed most at risk from development" or an "urban impaired watershed."

A. Narrative

A.1 Development Location

The DCP Terminal would be located off U.S. Route 1 in the Town of Searsport, Waldo County, Maine. The parcel is bounded on the east by the Montreal, Maine and Atlantic Railroad and Long Cove, on the north by commercial development along U.S. Route 1, including a restaurant and motel, and to the west and south by commercial and sparse residential development along Station Avenue and the existing Mack Point Terminal.

DCP will be acquiring land parcels totaling approximately 23.6 acres for the proposed terminal. Most of this land is currently forested with some mixed scrub-shrub vegetation. Approximately 2.5 acres of the 23.6-acre parcel will be used for construction staging only, which will not result in new impervious surface or change the existing drainage pattern. In addition, DCP will be constructing a transfer pipe to carry LPG from ships docked at the existing Sprague pier to the bulk storage tank at the DCP Terminal. Only a portion the transfer pipeline will be installed within the 23.6-acre terminal site. The transfer pipe will continue off-site from the DCP Terminal entrance drive, cross Station Avenue onto land owned by Sprague Energy (Sprague Way Lane), and continue through the existing developed Sprague facility generally following existing pipe runs to the pier. The transfer pipe would be located underground from the Station Avenue crossing until it reaches the existing Sprague fence along Sprague Way Lane, then be installed predominantly aboveground to the pier. Where the pipe is above ground, it will be mounted on pipe or concrete and pipe pilings and will result in an insignificant amount of new impervious area.

DCP is also buying an additional approximately 20.1 acres of forested and tidal land on the east side of the railroad tracks, and an approximately 3.5-acre parcel of forested land with frontage on Station Avenue, but no development is planned on either of these parcels. The undeveloped 20.1-acre and 3.5-acre parcels, the 2.5-acre portion of the property that will be used only for construction staging, and the off-site portion of the transfer pipe route to the pier are not included in this stormwater analysis.

As a result, this stormwater runoff analysis targets 21.1 acres of land to be owned by DCP that will contain the new terminal. Within this 21.1-acre parcel, approximately 18.7 acres will be disturbed during construction. Following construction, approximately 5.5 acres will be revegetated with grass and the vegetation maintained at approximately one-foot tall. Approximately 13.2 acres will remain as permanently developed area containing the buildings, storage tanks and containment area, truck and rail loading facilities, propane fired heaters, coolers and other yard equipment, an emergency flare, associated roads and piping, and regularly maintained grass.

Based on aerial photography and field surveys, surrounding land use is characterized as commercial and residential development along U.S. Route 1, the existing Mack Point Terminal to the south, rural residential development sparsely scattered along Station Avenue, and undeveloped wooded land to the north and east.

A.2 Surface Water on or Abutting the Site

A stream flows from a culvert beneath U.S. Route 1 through the southerly portion of the site to a culvert beneath the railroad tracks and into Long Cove, which is a part of the Penobscot Bay. Approximately 325 feet of this stream will be placed within a culvert under the terminal truck loading area and other paved area. An additional approximately 640 feet of the stream will be relocated to the perimeter of the site.

A.3 Downstream Ponds and Lakes

The site is not located in a "watershed most at risk from development" or an "urban impaired stream," as defined in Chapter 502. The entire Project site is located in the West Penobscot Bay Costal watershed. The site drains through a series of existing culverts placed beneath the railroad right-of-way, and then drains to Long Cove and Penobscot Bay.

A.4 General Topography

The topography of the site varies, generally sloping from U.S. Route 1 in the northwest to the southeast towards Long Cove. Elevations across the site range from approximately 80 feet to approximately 10 feet above mean sea level. The two-foot contour information on the project site was surveyed by Coler & Colantonio Inc. in April 2011. USGS contour information was used for the outlying areas to supplement the watershed mapping.

A.5 Flooding

Based on the Q3 Flood Data derived from the Federal Emergency Management Agency Flood Insurance Rate Map ("FEMA Map"), the only component of the proposed facilities that may occur within the 100-year flood zone is the portion of the transfer pipeline located beneath or adjacent to the pier. The proposed terminal site is not located within the 100-year flood zone.

A.6 Alterations to Natural Drainage Ways

Approximately 640 feet of a small, unnamed stream with limited biological functions and values will be relocated as part of the proposed terminal construction. An additional approximately 325 feet will be placed in a new culvert. In order to properly size the flow through this stream, a watershed model depicting the contributing area as well as time of concentration was used to analyze its runoff characteristics (refer to the drawings for further information). The contributing watersheds 1S, 2S, 2SA, and 2SB, which were modeled for sizing the culvert and relocated stream channel, total approximately 62.33 acres. The culvert that will initially carry the stream flow is designed for 22.04 cubic feet per second (cfs). Calculations to determine the size of the relocated stream cross section are available upon request. The stream cross section is designed to promote stability and to maintain the water velocity at near the existing condition where it leaves the site. Any runoff from areas that currently drain to the stream that will drain to other subwatersheds post construction will be collected in a vegetated soil filter area for treatment.

In addition to the stream modifications, there are some wetlands associated with the unnamed stream throughout and adjacent to much of the proposed terminal construction. The proposed terminal construction will also result in the filling of the wetlands within the construction area. Despite the relocation of the stream channel and associated wetland fill, the overall drainage pattern and direction will be similar to the existing condition.

A.7 Alterations to Land Cover

The proposed site is expected to consist of approximately 3.3 acres of impervious areas (pavement, buildings, tanks, and equipment areas and piping); 8.6 acres of crushed stone equipment pads, rip rap, or new rail bed; and approximately 6.8 acres of area to be revegetated with grass, approximately 1.3 acres of which will be mowed regularly. A summary of the watershed's pre- and post-development cover types is presented in Table 1.

Table 1

Watershed Cover Types

Cover Type	Pre-development Area, acres	Post-development Areas, Area, acres	Net Change, Area, acres
Buildings/Structures	0.82	2.02	1.20
Gravel Areas	2.58	2.38	-0.20
Crushed Stone/Rip Rap	0.00	7.87	7.87
Mowed Grass	10.15	11.46	1.31
Railbed	0.15	0.89	0.74
Paved	2.41	4.51	2.10
Tall Grass	3.10	8.56	5.46
Wooded (good)	73.85	55.37	-18.48
Total	**93.06**	**93.06**	**0.00**

A.8 Modeling Assumptions

The stormwater runoff was estimated using HydroCAD, Version 9.0. HydroCAD is based on methodologies developed by the U. S. Department of Agriculture Soil Conservation Service ("SCS"), namely TR-55 and TR-20, in combination with other hydraulic and hydrology calculations. Based on site specific information and rainfall data, the program estimates inflow and outflow hydrographs for a watershed. The SCS is now called the Natural Resources Conservation Service ("NRCS").

The pre- and post-development watershed boundaries and hydrologic flow lines used to determine the time of concentration are indicated on the Pre- and Post-Development Drainage Plans located in Appendix G. Within the areas proposed to be developed, the watershed boundaries were determined from the surveyed two-foot contours. Watershed boundaries outside the areas of proposed development were determined from contour information outside of the property extrapolated from USGS topographic mapping, in conjunction with a site visit. The times of concentration were determined from this same contour information.

The pre-development stormwater analysis consists of four separate subwatersheds totaling approximately 93.06 acres in size. The control points for the pre-development analysis describe the down slope intersection of the hydrologic flow line and the boundary line for each subwatershed.

The post-development watershed plan consists of five separate subwatersheds also totaling approximately 93.06 acres in size. The control points for the post-development analysis describe the down slope intersection of the hydrologic flow line and the property boundary line for each subwatershed.

Storm events modeled for the pre- and post-development analyses assumed precipitation events with a 24-hour duration having a type III distribution and rainfall amounts of 2.8, 4.3, 4.9, and 5.5 inches, with

return frequencies of 2-, 10-, 25-, and 50-years, respectively. The storm type and rainfall amounts are based on SCS County Rainfall Data for the State of Maine, Waldo County, "24 Hour Storm Duration Rainfalls for Various Return Periods" from the DEP *Stormwater Management for Maine: Best Management Practices*.

Additional assumptions made to complete the pre- and post-development runoff analysis are provided in Section C: Runoff Analysis.

A.9 Water Quantity Control

A comprehensive analysis of the pre- and post-development peak runoff flow rates is provided in Section C. The impact of the proposed development on flooding is discussed in Section D: Flooding Standard Submissions.

A.10 Water Quality Treatment

A discussion of the measures and practices that will be used on site to reduce the impact of site runoff on downstream water quality is provided in Section E: Stormwater Quality Treatment Plan. The measures to be utilized include the Basic Stabilization Standards and the General Standards.

A.11 Off-Site Credits

Off-site credits for total suspended solids ("TSS") or phosphorus are not needed for the proposed terminal site. The site is not located in a lake watershed; therefore phosphorus control is not required.

A.12 Compensation Fees

Compensation fees to offset phosphorus removal are not needed for the proposed development.

A.13 Development Impacts

As described in more detail in the following sections, construction and operation of the proposed terminal site will have an insignificant effect on receiving waters, adjacent and downstream properties, and downstream culverts.

B. Drainage Plans

The Pre-Development Drainage Plan and the Post-Development Drainage Plan for the proposed terminal are provided in Appendix G. The pre-development plan includes existing two-foot contours, cover types, soils groups, subwatershed boundaries and analysis points, hydrologic flow lines, time of concentration flow lines, existing features, and drainage ways where applicable. The Post-Development Drainage Plan includes the locations of the proposed tanks, buildings, roads and other above ground structures, and post-development contours at a two-foot interval, post-development subwatershed boundaries and locations and sizes of the underdrained soil filters.

C. Runoff Analysis

The pre- and post-development stormwater analysis calculations included computations for determining the curve numbers for the pre-development watersheds and the HydroCAD output, which includes time of concentration calculations, travel time calculations, peak discharge calculations for the 24-hour storms of the 2-, 10-, and 25-year frequencies, and routing calculations.

The pre– and post-development peak runoff at the control points is provided in Tables 2, 3 and 4.

Table 2

Pre-Development Peak Outflow by Watershed

Storm Frequency	Discharge Rates, cfs		
	Boundary Node 1R	Boundary Node 2R	Boundary Node 3R
2-Year	9.16	2.77	4.10
10-Year	26.05	7.44	10.38
25-Year	33.93	9.55	13.18

Table 3

Post-Development Peak Outflow by Watershed

Storm Frequency	Discharge Rates, cfs		
	Boundary Node 1R	Boundary Node 2R	Boundary Node 3R
2-Year	9.10	2.01	3.73
10-Year	26.35	5.95	9.73
25-Year	33.86	9.39	12.44

Table 4

Net Change in Peak Outflow by Watershed

Storm Frequency	Discharge Rates, cfs		
	Boundary Node 1R	Boundary Node 2R	Boundary Node 3R
2-Year	-0.06	-0.76	-0.37
10-Year	0.30	-0.49	-0.65
25-Year	-0.07	-0.16	-0.74

C.1 Summary of Results

The calculations show a net decrease of approximately 2 percent in the total peak outflow from the developed site following a 25-year, 24-hour storm event.

Node 1R

Boundary Node 1R is the southern-most boundary node describing the runoff entering an existing 36-inch CMP culvert under the railroad bed. This analysis point includes the runoff from subwatersheds 2S, 2SA, 2SB. The results show a small increase in runoff from the 10-year storm event but a decrease in the 2- and 25-year events. The existing culvert is adequately sized to convey the occasional, small increase in flow without concern for ponding or overtopping of the culvert, railroad bed or rails. Per the drainage agreement with the railroad, design, construction, implementation and regular maintenance of the proposed stormwater management system, which is based on DEP's stormwater management Best Management Practices (BMPs), and ongoing compliance with the DEP erosion and sedimentation control BMPs, will control the volume and velocity of runoff to the existing culverts, prevent the development of erosive flows and prevent damage to the existing culverts, rail bed and tracks. As a result, the small increase in flow from the 10-year storm event at Boundary Node 1R will have a minimal effect on the existing culvert.

Node 2R

Boundary Node 2R is the boundary node describing the runoff entering an existing 24-inch CMP culvert under the railroad bed. This analysis point includes the runoff from subwatersheds 3S, 3SA, 3SB. The results show a small decrease in runoff from the 2-, 10-, and 25-year storm events.

Node 3R

Boundary Node 4R is the northern most boundary node describing the runoff entering an existing 18-inch CMP culvert under the railroad bed. This analysis point includes the runoff from subwatersheds 4S. The results show a small decrease in runoff from the 2-, 10- and 25-year storm events.

C.2 Curve Number Computations

Cover types for the affected area were determined from the topographic field survey and a site visit and are indicated on the Pre- and Post-Development Drainage Plans.

The soils and hydrologic soil groups within the area to be developed are based on the medium intensity soil survey mapping obtained from the SCS *Soil Survey of Waldo County, Maine*. The soils and hydrologic soil groups within the watershed analysis areas are shown on the Pre- and Post-Development Drainage Plans.

The runoff curve numbers ("CN values") were developed from Appendix D-13: "Runoff Curve Numbers for use in TR-55 and TR-20" of the DEP *Stormwater Management for Maine: Best Management Practices* and HydroCAD, based on the observed cover types and hydrologic soil groups ("HSGs"). Included in the appendix is the curve number developed for the crushed stone surfaces. The weighted curve number calculations for the subwatersheds are included within the HydroCAD output.

An engineering study was conducted by TRC Environmental Corporation (TRC), detailing the "typical" cross section and surface materials of a switchyard/substation covered with gravel and crushed stone to calculate its permeability rate. The study was reviewed by John Simon, a USDA-NRCS engineer in Maine. The conclusions of this report were used as the basis of an agreement between Central Maine Power Company and MDEP that a CN value of 55 may be used for switchyards and substations that are mapped as HSG "A", "B", "C"; and a CN value of 60 must be used when the area is mapped as HSG "D". For this project, the approximately 2,700-square foot gravel area around the emergency flare will be constructed based on the materials provided by this typical cross section, (4" of crushed stone topping and 18" MDOT 703.06 gravel fill material). As a result, the runoff from this area is considered to be treated and no additional water quality treatment for this area is proposed.

C.3 Time of Concentration Calculations

Time of concentration was calculated using NRCS TR-55 methodologies for each watershed considering the hydrologic flow lengths, slope, vegetative cover, surface roughness, and each stage-storage relationship. The type and length of each hydrologic flow line for determining time of concentration and travel times in the area to be developed are indicated on the Pre- and Post-Development Drainage Plans. The maximum sheet flow length used for this analysis was 150 feet. Flow lengths beyond 150 feet were assumed to be shallow concentrated flows. Shallow concentrated flow lengths varied for each watershed and were extended until they reached the end of the watershed or until it reached a concentrated flow channel.

C.4 Travel Time Calculations

The travel time for each subwatershed was calculated using a spreadsheet based on equations prepared by the NRCS. These times were then inputted directly into HydroCAD.

C.5 Peak Discharge Calculations

Peak discharge calculations are included in the HydroCAD output. A summary comparison of pre- and post development peak discharge calculations for each subwatershed affected by the proposed development is presented in Section C, above.

C.6 Reservoir Routing Calculations

Reservoir routing calculations are included in the HydroCAD output. The "storage-indication+ translation" method was used in the analyses. This method first performs a storage-indication routing, and then translates the resulting hydrograph by the travel time.

D. Flooding Standard Submissions

D.1 Variance Submissions

This project directly discharges to the ocean, through culverts under the rail road tracks, thus a waiver is available based on the Chapter 500 requirements. A hydraulic analysis was completed to verify that the existing culverts are adequate to handle the flow from the proposed development without creating erosive flows or potential damage to the existing railroad bed and rails (see Section C.1).

D.2 Sizing of Storm Drains and Culverts

The proposed culverts, conveyance swales and other discharge structures are designed and sized to handle the anticipated runoff from the proposed development without creating erosive flows. Detail drawings for potential on-site conveyance structures, including vegetated and stone-lined drainage swales, culverts with inlet and outlet protection, underground pipes, etc. are shown on the Construction and Erosion Control Detail drawings located in Appendix G. Stabilization methods will be designed, constructed and maintained in accordance with the *Maine Erosion and Sedimentation Control BMPs*, dated March 2003. Please refer to Appendix E: Erosions and Sedimentation Control Plan Narrative for a detailed description of the site-specific erosion control measures and practices to be utilized during construction and operation of the DCP Terminal.

D.3 Stormwater Ponds and Basins

No stormwater ponds are proposed for the project. The stormwater system will use vegetated and/or stone-lined swales, and possibly plunge pools, in conjunction with underdrain soil filters to collect and treat the stormwater runoff from the buildings, access roads and the equipment yard areas. The site is broken up into subwatersheds to collect and treat the impervious areas.

D.4 Infiltration Systems

No infiltration systems are proposed.

D.5 Drainage Easement Declarations

A drainage easement from the Montreal, Maine and Atlantic Railroad is provided at the back of this appendix that documents the railroads concurrence with the use of existing culverts under their tracks to carry runoff from the terminal site to Long Cove.

E. Stormwater Quality Treatment Plan

E.1 Basic Stabilization Submissions

The proposed project will be disturbing more than one acre of land, approximately 19.7 acres of total disturbance within DCP property and an additional disturbance of up to approximately 4.4 acres to install the transfer pipeline across the existing Mack Point Terminal. Therefore the Basic Stabilization Standards must be met. Appendix E: Erosion and Sedimentation Control Narrative addresses the Basic Stabilization Standards; i.e., erosion and sedimentation control, inspection and maintenance, and housekeeping, respectively. In accordance with the Basic Stabilization Standards, stormwater conveyance structures will be designed, constructed, and stabilized using erosion and sedimentation BMPs and receive adequate routine maintenance to ensure their continued function. The site will be maintained to prevent or correct erosion problems. The basic strategy of the site-specific erosion and sedimentation control measures is to prevent erosion from occurring, rather than correcting problems. Appendix E contains the details and specifications for stabilization measures to be used during construction and operation of the terminal. These measures will be used to protect exposed soils during construction and throughout the service life of the project.

Stabilization measures for the site will include temporary and permanent erosion and sedimentation controls, periodic mulching or seeding, appropriate design of swales and culverts with inlet and outlet protection, evaluation of slope stability and erosion protection for earthen cut and fill slopes, revegetation or other stabilization of disturbed areas, and provisions for future maintenance of the site. These treatment practices will be used to reduce the impacts of site runoff on downstream water quality. Detailed drawings showing proposed construction and stabilization techniques are provided in Appendix G.

E.2 General Standard Submissions

As mentioned previously, the construction of the terminal site is expected to result in approximately 13.2 acres of new permanently developed area consisting of approximately 3.3 acres of new impervious areas (storage tanks, containment area, pavement and roads, buildings, truck and rail car loading facilities and other equipment and structures), 8.6 acres of crushed stone equipment pads and/or rip rap, and approximately 1.3 acres of regularly mowed grass.

E.2.1 Runoff Treatment Measures

The drainage design of the DCP Terminal will consist of vegetated or stone-lined conveyance swales that will collect and direct runoff to adjacent underdrained vegetated soil filters. The measures will be designed per the January 2006 MDEP manual *Design of Stormwater Best Management Practices* (the "Stormwater BMP Manual"). Because of site constraints, buffers are not available immediately adjacent to the proposed development so the use of conveyance swales and underdrained soil filters are incorporated into the stormwater management design to collect and treat the surface runoff from impervious areas, areas covered with crushed stone and grass that is mowed regularly. Areas of vegetation that will be maintained at approximately one-foot tall by infrequent mowing are not considered to require treatment.

Treatment measures for the precipitation that falls within the bulk LPG storage tank containment area will consist of collecting the first one-inch or more of rainfall (the first flush) in a concrete sump, visual examination of the collected runoff for signs of petroleum or other contaminants, then manually activating a pump to discharge the water at a controlled rate to a stabilized, rip rapped pad outside the impoundment area. The discharge will then enter a catch basin and be directed to an extension of an existing culvert under the railroad tracks. Removal of the collected runoff from storm events that result in less than one inch of rain will not occur until approximately 24 hours after the precipitation has stopped. If runoff shows signs of the presence of petroleum or other contaminants, it will be removed from the containment area for proper disposal by a licensed waste transporter. A cross section through the containment area runoff collection and discharge area is provided in the LPG Tank Area Grading, Sections and Details drawing in Appendix A (DWG. 2004-01).

E.3 Phosphorus Control Plan

The proposed terminal site is not located in a lake watershed. Therefore a Phosphorus Control Plan is not required.

E.4 Control Plan for Thermal Impacts to Coldwater Fisheries

There will be no thermal impacts due to the use of vegetated conveyance swales in conjunction with the undertrained vegetated soil filters as the stormwater BMP's choice of treatment. In addition, the runoff will discharge directly to tidal waters.

E.5 Control Plan for Other Pollutants

A control plan for other pollutants in stormwater runoff is not required.

E.6 Engineering Inspection of Stormwater Management Facilities

DCP will ensure that a qualified design engineer will inspect the construction site weekly during periods when stormwater conveyance, control and treatment structures are being constructed to verify that construction is in accordance with the plans and specifications shown on the design drawings in Appendix G and functioning properly. Additional inspections of the site during and after construction to evaluate and maintain the condition and effectiveness of erosion and sedimentation control measures will be conducted as described in Section F of this appendix and Appendix E of this application.

F. Components of the DCP Terminal Stormwater Maintenance Plan

The DCP Terminal will be solely-owned, operated and maintained by DCP Searsport, LLC.

F.1 Facilities to be Maintained

The stormwater management facilities to be maintained at the DCP Terminal include:

- Drainage conveyance swales, associated with the access road and yard areas;
- Catch basins, plunge pools and culverts with inlet and outlet protection, as applicable; and
- Vegetated underdrained soil filter fields.

A sample maintenance and inspection log is provided at the end of this narrative.

F.2 General Inspection and Maintenance Requirements

At a minimum, DCP will inspect stormwater conveyance, control and treatment structures at the Searsport Terminal on a quarterly basis. Additional inspections will occur immediately following a 25-year or more severe storm event, and more frequently, as needed, depending on the results of routine inspections and site conditions. A DCP Terminal employee responsible for environmental compliance will be present at the semi-annual inspections, which will include a detailed visual inspection of all features of the site identified on the "Stormwater Management System Monitoring Inspection Log". More frequent inspections will be made, as needed, by on-site personnel under the direction of the terminal compliance coordinator. Maintenance will be performed on an as-needed basis, in accordance with recommendations made by the site inspector. Routine maintenance will include the immediate repair of newly-formed channels or gullies; reseeding or sodding of bare ground; removal of trash, leaves and sediment; and control of woody vegetation.

Maintenance issues associated with specific areas and facilities at the terminal are identified in the following paragraphs.

F.2.1 Drainage Conveyance Systems

Conveyance swales (vegetated and rip rapped), catch basins, and culverts are to be inspected on a quarterly basis. Any signs of existing or developing blockage of flow, trash, erosion, channeling or excessive build up of sediment will be removed/repaired, as needed. Vegetated swales will be mowed or otherwise maintained to control the growth of woody vegetation within the channel, but generally no more than twice per year.

F.2.2 Roadways, Parking Surfaces and Equipment Yard Area

The roadways, parking surfaces, and crushed stone yard surfaces will typically require little on-going maintenance, owing to the limited use by heavy vehicles in all areas except those traveled by the trucks involved with LPG distribution. These areas will be inspected quarterly, and signs of existing or developing erosion, rutting, trash or unwanted vegetation will be removed/repaired as needed. Any accumulation of sand from winter maintenance will be removed promptly in the spring. The grass areas immediately adjacent to facility roads and behind the administration building will be maintained by frequent mowing during the growing season. Other revegetated surfaces are to be maintained at approximately one-foot tall, provided facility safety/security requirements are met. Yard areas are to be kept free of trash and any non-functional equipment at all times.

F.2.3 Underdrain Soil Filter Field

The underdrain soil filter beds will be inspected on a quarterly basis. Any signs of existing or developing blockage of flow (pooling of water), trash, or build up of sediment will be removed/repaired, as needed. The vegetation on top of the filter bed will be mowed or otherwise maintained to prevent the growth of woody vegetation, as is done for the other areas of maintained vegetation at the terminal.

DCP Searsport, LLC, Searsport, Maine					
Quarterly Stormwater Management System Monitoring, Inspection, & Maintenance Log					
Inspection Date:	**Inspector Name:**			**Inspector or Supervisor Signature:**	**Date of Signature:**
	Yes	**No**	**NA**	**Inspector Comments**	**Corrective Action**
Vegetated Areas: Inspect all vegetated areas, including slopes and embankments					
Is there any evidence of erosion damage					
Are there bare areas or areas with sparse growth					
Drainage Conveyance Systems: Inspect ditches and swales for evidence of erosion, debris, woody growth, and excessive sediment					
Are there any obstructions and accumulated sediments or debris					
Is there any vegetated growth and woody vegetation					
Is there any evidence of erosion of the ditch lining					
Is the vegetation in the ditches more than 1 foot tall					
Is there any woody vegetation growing through riprap					
Are any of the side slopes slumping					
Culverts: Inspect culvert and inlet/outlet structure					
Is there any accumulated sediments and debris at the inlet, at the outlet, and within the conduit					
Is there any evidence of erosion damage at the culvert's inlet and outlet					

DCP Searsport Propane Terminal, Searsport, Maine					
Stormwater Management System Monitoring Inspection & Maintenance Log					
	Yes	**No**	**NA**	**Inspector Comments**	**Corrective Action**
Roadway Surfaces: Inspect Road Surfaces and Shoulders					
Is there any excess sand on the roads					
Is there any evidence of erosion of the gravel roads and gravel shoulders.					
Do roads or shoulders need grading					
Catch Basin Systems: Inspect Catch Basins					
Is there any accumulation of sediments and/or debris in the bottom of the basin					
Is there any accumulation of sediments and/or debris in the inflow channels to the basin or in the pipes between basins					
Are the inlet grates in good shape and free of debris					
Is there any evidence of oils or other chemicals					
Vegetated Underdrain Soil Filter Field:					
Inspect field for existing or developing blockage of flow (pooling of water), trash, or build up of sediment.					
Clean out excessive sediment and other debris that accumulates within the filtration field.					
Replace topsoil and reseed where underlying filter fabric or underdrain gravel is showing.					
Mow vegetation on top of the field and interior embankment slopes.					
If infiltration basin fails to drain within 72 hours after a storm event, the floor of the basin must be tilled and revegetated or the material excavated, replaced, and revegetated.					
Additional Remarks (*Use back of page if more space is necessary*):					

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June 17, 2011

Mr. Thomas Tardif
Director of Real Estate and Environmental Affairs
Montreal, Maine & Atlantic Railway Ltd.
15 Iron Road
Hermon, Maine 04401-9621

RE: DCP Midstream Project, Searsport, Maine

Mr. Tardif,

In support of Permitting Efforts associated with the above reference project, DCP Midstream ("DCP") requires approval from Montreal, Maine & Atlantic Railway, Ltd. ("MM&A") for use of storm water runoff through existing culverts under the MM&A rail spur that enters the Mack Point Terminal. Please review the following verbiage indicating that the MM&A will allow the use of these existing culverts and setting forth the terms and conditions of such use:

The MM&A understands that the storm water runoff from the land on which DCP proposes to construct and operate their LPG terminal ("the Terminal") at Mack Point in Searsport currently flows through existing culverts under the MM&A rail spur that enters the Mack Point Terminal, and that this will continue to be the case once the Terminal is built. MM&A's agreement to allow the runoff from the developed site to cross MM&A's land is required as part of the Maine Department of Environmental Protection's permitting process for the Terminal. MM&A will agree to allow DCP to direct the storm water runoff from their developed site to the existing culverts provided that (1) DCP ensures that the volume and velocity of the flow through the culverts will be managed and controlled in a manner to prevent erosion and damage to the railroad bed, rails and existing culverts, (2) DCP agrees that they, or any future property owner, shall be responsible for all costs associated with any modifications to existing culverts or installation of additional culverts or other drainage structures that may be required in the future to handle additional storm water runoff that is caused by development of the land to be purchased by DCP, as determined by accepted hydrologic modeling such as TR-55 or TR-20 or any local, state or federal regulatory agency and (3) DCP and MM&A enter into an agreement memorializing the understanding set forth in this paragraph.

505 Country Club Drive
South Portland, ME 04106

Tel: 207-771-0206
Fax: 207-771-2003
www.col-col.com

COLER & COLANTONIO INC
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Please provide your signature below in the space provided, indicating MM&A's consent to the understanding set forth above, and return via email to ssawyer@col-col.com or via fax to my attention at 207-771-2003. If you have any questions please feel free to contact me at 207-229-0378.

Sincerely,
COLER & COLANTONIO, INC.

Steven C. Sawyer
Associate, Energy Infrastructure

Approved By:

Steve Sawyer, Associate
Energy Infrastructure, Operations Manager

Date: 6/17/11

Approved By:

Thomas Tardif
Director of Real Estate and Environmental Affairs

Date: 6/17/11

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