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January 7, 2016

Mr. Randy Bryant, Remedial Project Manager  
Superfund Remedial & Site Evaluation Branch  
United States Environmental Protection Agency  
Atlanta Federal Center  
61 Forsyth Street, S.W.  
Atlanta, GA 30303-3104

Subject: 2015 Annual Monitoring Report – Operable Unit No. 1 (OU-1), Former No. 1 Landfill  
Domtar Paper Company, LLC (Domtar), Martin County, North Carolina

Dear Mr. Bryant:

This letter report documents the 2015 annual inspection activities conducted at OU-1 – Former No. 1 Landfill area at the Domtar<sup>1</sup> (formerly Weyerhaeuser Company) mill in Plymouth, North Carolina.

## Background

A remedial investigation and feasibility study (RI/FS) was completed for the Former No. 1 Landfill area under a negotiated Administrative Order of Consent from 1998 to 2002 (Consent Decree). After issuance of a Record of Decision (ROD) for this area in June 2002, Weyerhaeuser Company (Weyerhaeuser) and the United States Environmental Protection Agency (USEPA) negotiated a Consent Decree [Civil Action 4:03-CV-90(H)(3)] that established remedial design (RD) and remedial action (RA) activities for this area. The *Prefinal/Final Design Report* (RMT, September 2004) was prepared and approved as the final design. The RA activities were completed during 2005 with the Final RA inspection being completed in December 2005. The Interim RA report was completed and approved by USEPA in 2006.

Initial performance monitoring activities for the Former No. 1 Landfill were conducted in accordance with the *Field Sampling and Analysis Plan* (FSAP; RMT, 2004) and the *Performance Standards Verification Plan* (PSVP) for Former Landfill No. 1 Area (RMT, 2004). Performance monitoring was initiated at the site in November 2005 and consists of

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<sup>1</sup> Domtar took ownership of the pulp and paper operations at the Plymouth Mill and assumed related environmental obligations from Weyerhaeuser on March 7, 2007. Previous required reports under the Administrative Order of Consent (Consent Decree) were submitted by Weyerhaeuser.

three tasks: cover monitoring, wetland monitoring, and groundwater monitoring. Cover monitoring was conducted on a quarterly basis to assure that the cover system components are maintained. Wetland soil monitoring was conducted on an annual basis from 2005 through 2009 to assess the natural recovery process. Mercury deposition monitoring was a component of the wetland monitoring to estimate wet deposition and litter fall deposition of mercury into wetlands adjacent to Former Landfill No. 1 Area. Groundwater monitoring was conducted annually from 2005 through 2009 to assess the effectiveness of the remedy in protecting groundwater quality.

In May 2010, USEPA issued the *First Five-Year Review Report* for the facility, which incorporated data collected from the Former No. 1 Landfill from remedy construction in 2005 through the December 2009 monitoring event. Based on the review of the data, USEPA recommended the following modifications to and/or continuations of aspects of the performance monitoring program.

- Reducing the frequency of wetland soil monitoring from annually to once per 5-year review period.
- Discontinuing the leaf litter sampling and analysis.
- Reducing the frequency of groundwater sampling from annually to biennially (every 2 years) and limiting it to sampling the shallow wells FL-01-1, FL-02-1, FL-03-1, FL-05-1, FL-07-1, and FL-09-1 every 2 years, plus sampling the intermediate depth wells (FL-01-2, FL-02-2, FL-03-2, FL-05-2, FL-07-2, and FL-09-2) at these locations at least once during the next 5-year cycle.
- Continue quarterly inspections of the landfill cover.

Domtar implemented USEPA's recommendations beginning in the 2010 monitoring year. Sampling of the shallow monitoring wells was completed in 2011 and 2013. The wetland soil monitoring and groundwater sampling of the intermediate monitoring wells were completed in 2013.

In June 2015, USEPA issued the *Second Five-Year Review Report* for OU-1, which incorporated data collected from the Former No. 1 Landfill from remedy construction in 2005 through the November 2014 monitoring event. Based on the review of the data, USEPA recommended the following modifications to the performance monitoring program for the Third Five-Year Review Period, 2015 through 2019.

- Increasing the frequency of wetland soil monitoring from once per 5-year review period to biennially for locations FLWS-01, FLWS-04, and FLWS-06. The remaining

wetland soils samples (FLWS-03 and FLWS-05) have been removed from the monitoring program.

- Reducing the frequency of groundwater sampling from biennially to once per 5-year period and limiting the shallow groundwater samples to FL-01-1, FL-02-1, FL-03-1, FL-05-1, FL-07-1, and FL-09-1 and intermediate groundwater samples to FL-01-2, FL-02-2, FL-03-2, FL-05-2, FL-07-2, and FL-09-2.
- Continue quarterly inspections of the landfill cover.

Domtar implemented USEPA's recommendations beginning in the 2015 monitoring year. Performance monitoring activities conducted in 2015 included quarterly inspections of the landfill cover, as discussed below.

### **Quarterly Inspections**

Representatives of Domtar inspected the Former No. 1 Landfill on March 10, May 6, September 24, and December 16, 2015. A site layout showing the locations of the Former No. 1 Landfill boundary, monitoring well locations, and leaf litter collection points is included in Attachment 1. Copies of the quarterly inspection reports are provided in Attachment 2. A photographic log is included in Attachment 3.

Standing water, subsidence, and rutting from vehicular traffic was observed on the landfill cover system beginning late 2013. The rutting was primarily due to Dominion Energy's (Dominion) service to the transmission lines which run across Former Landfill No. 1. Although Dominion used swamp mats to minimize damage to the cap, rutting was apparent along the eastern boundary of the grass-covered portion and along the transmission lines. Dominion completed the transmission line service in early 2015. Additionally, unrelated small depressions, most likely from erosion and subsidence, were observed in the center of the grass-covered portion of Former Landfill No. 1.

In May 2014, TRC contracted Spatial Data Consultants, Inc. to perform an aerial topographic survey of the Former Landfill No. 1 cover. TRC compared the baseline survey to the 2014 survey and created engineering drawings to identify areas of subsidence. Using these drawings, Domtar repaired the rutting and small depressions, and seeded the grass areas in June 2015. During the November inspection, TRC observed the repaired areas to be graded and covered with grass.

Mr. Randy Bryant, Remedial Project Manager  
United States Environmental Protection Agency  
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## Summary and Recommendations

Based on the November 2015 inspection, the grass and gravel-covered portions of the landfill meet the cover requirements. Following the recommendations in the *Second Five-Year Review Report* (USEPA, 2015), the following sampling plan is proposed for the Third Five-Year Review Period beginning in 2015 and ending in 2019:

- Wetland soil samples – FLWS-01, FLWS-04, and FLWS-06 will be sampled twice in the next 5-year period, proposed for years 2016 (Year 12) and 2018 (Year 14). Wetland soil samples will be analyzed for chromium and mercury.
- Shallow groundwater samples – monitoring wells FL-01-1, FL-02-1, FL-03-1, FL-05-1, FL-07-1, and FL-09-1 will be sampled once in the next 5-year period during 2018 (Year 14) for dioxin.
- Intermediate groundwater samples – monitoring wells FL-01-2, FL-02-2, FL-03-2, FL-05-2, FL-07-2, and FL-09-2 will continue on the 5-year sampling frequency for dioxin. Sampling of the intermediate wells will correspond with the collection of the shallow groundwater samples in 2018 (Year 14).
- Quarterly inspection of the Landfill No. 1 cover will continue in 2016 with the inspection reports submitted to USEPA on an annual basis.

Please feel free to contact Linda Belanger with Domtar or me with any questions on this 2015 Annual Monitoring Report for OU-1.

Sincerely,

TRC Environmental Corporation

Karen C. Saucier, Ph.D.  
Senior Client Service Manager

Attachments

cc: Linda Belanger, Sr. Manager, Soil Rehabilitation, Domtar Paper Company, LLC  
Diane Hardison, Environmental Manager, Domtar Paper Company, LLC  
Nile Testerman, North Carolina Dept. of Environmental Quality

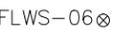
# **Attachment 1**

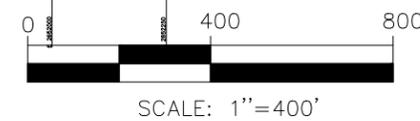
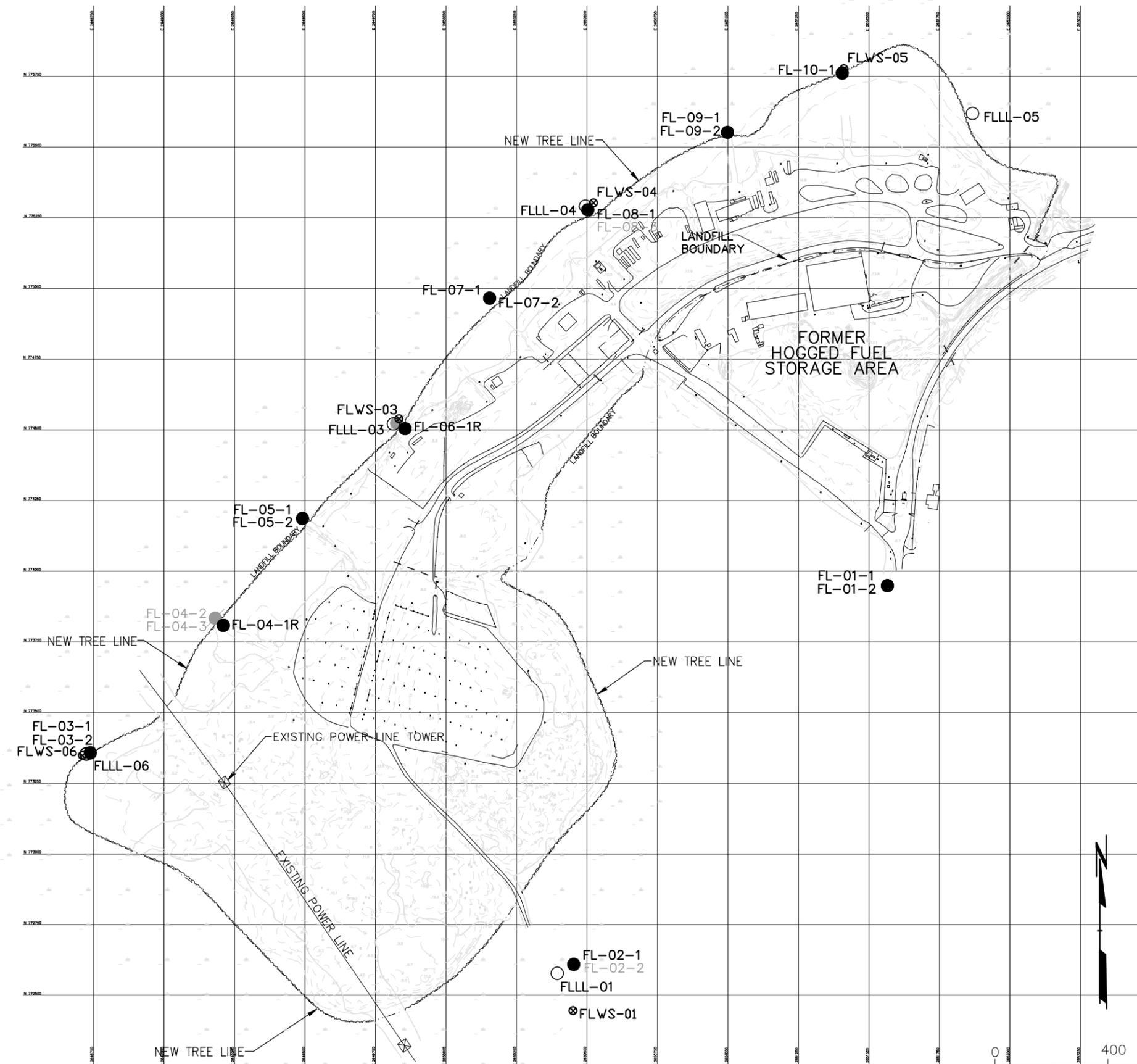
## **Site Layout**

## GENERAL NOTES

1. ALL COORDINATES ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NAD 83.
2. EXISTING PLANIMETRIC AND TOPOGRAPHIC INFORMATION OF LANDFILL No. 1 WAS TAKEN FROM A SURVEY PREPARED BY McKIM & CREED ENGINEERING, INC., CAREY, NORTH CAROLINA DATED DECEMBER, 2003.
3. THE SITE IS LOCATED IN MARTIN COUNTY, WEST OF THE CITY OF PLYMOUTH, NORTH CAROLINA.

## LEGEND

EXISTING BUILDING/STRUCTURE	
LANDFILL BOUNDARY	
WETLAND SOIL	
LEAF LITTER	
EXISTING MONITORING WELL	
MONITORING WELL ABANDONED AND REPLACED	
EXISTING MONITORING WELL INCLUDED IN MONITORING PROGRAM	
WETLANDS	





**Domtar**

PROJECT: DOMTAR PAPER COMPANY, LLC MARTIN COUNTY, NORTH CAROLINA FORMER LANDFILL No. 1 AREA - OU-1			
SHEET TITLE: MONITORING WELLS, WETLAND SOIL AND LEAF LITTER SAMPLE LOCATIONS			
DRAWN BY: AMF	SCALE: AS NOTED	PROJ. NO. 228189.0.0	
CHECKED BY: MAH	DATED PRINTED:	FILE NO. WELLSOILSAMPLELDCS_20151208.DWG	
APPROVED BY: RSW		FIGURE 1	
DATE: DECEMBER 2015			



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# **Attachment 2**

## **Quarterly Inspection Reports**

1st Qtr  
2015

Quarterly Maintenance and Inspection Checklist

3/10/15	<b>Fencing and other Barriers:</b> - Inspect for damage allowing access to landfill	OK	K Cahoon	
	<b>Fence Locks:</b> - Check for proper operation and replace damaged locks	OK	K Cahoon	
	<b>Cover Erosion:</b> - Inspect for rills in cover, regrade with clean fill, and reseed/gravel as necessary	needs repair	K Cahoon	waiting for dry weather to make repairs from Down Power work
	<b>Vegetative Cover:</b> - Inspect grass and reseed barren areas - Remove any trees or brushy growth.	needs repair	K Cahoon	I have a quote & Down will pay for repairs Eng Study done by TRC.
	<b>Gravel Cover:</b> - Inspect gravel surface and fill or recover as necessary	OK	K Cahoon	added gravel & graded Oct/Nov 2014
	<b>South Perimeter Stormwater Ditch:</b> - Inspect ditch for erosion and repair with clean fill and reseed as necessary	OK	K Cahoon	
	<b>Groundwater Monitoring Well Maintenance:</b> - Inspect well casings for damage or rust - Inspect locks for damage, rust, and proper operation - Inspect area surrounding each monitoring well. Cut grass, brush, and trees as necessary.	OK	K Cahoon	

MAY 5, 2015

2<sup>nd</sup> Quarter 2015

**Quarterly Maintenance and Inspection Checklist**

5/6/15	<b>Fencing and other Barriers:</b> - Inspect for damage allowing access to landfill	OK	KC	
5/6/15	<b>Fence Locks:</b> - Check for proper operation and replace damaged locks	OK	KC	
5/6/15	<b>Cover Erosion:</b> - Inspect for rills in cover, regrade with clean fill, and reseed/gravel as necessary	repairs in progress	KC	work in progress repairs, GRI
5/6/15	<b>Vegetative Cover:</b> - Inspect grass and reseed barren areas - Remove any trees or brushy growth.	repairs in progress	KC	
5/6/15	<b>Gravel Cover:</b> - Inspect gravel surface and fill or recover as necessary	OK	KC	
5/6/15	<b>South Perimeter Stormwater Ditch:</b> - Inspect ditch for erosion and repair with clean fill and reseed as necessary	OK	KC	
5/6/15	<b>Groundwater Monitoring Well Maintenance:</b> - Inspect well casings for damage or rust - Inspect locks for damage, rust, and proper operation - Inspect area surrounding each monitoring well. Cut grass, brush, and trees as necessary.	OK	Kari Cahoon (KC)	

# 2015 3rd Qtr Inspection

## Quarterly Maintenance and Inspection Checklist

9/24/15	<b>Fencing and other Barriers:</b> - Inspect for damage allowing access to landfill	OK	KC & JL	
9/24/15	<b>Fence Locks:</b> - Check for proper operation and replace damaged locks	OK	KC & JL	
9/24/15	<b>Cover Erosion:</b> - Inspect for rills in cover, regrade with clean fill, and reseed/gravel as necessary	OK	KC & JL	
9/24/15	<b>Vegetative Cover:</b> - Inspect grass and reseed barren areas - Remove any trees or brushy growth.	See note	KC & JL	few spots need seed, needs mowing
9/24/15	<b>Gravel Cover:</b> - Inspect gravel surface and fill or recover as necessary	OK	KC & JL	
9/24/15	<b>South Perimeter Stormwater Ditch:</b> - Inspect ditch for erosion and repair with clean fill and reseed as necessary	OK	KC & JL	
9/24/15	<b>Groundwater Monitoring Well Maintenance:</b> - Inspect well casings for damage or rust - Inspect locks for damage, rust, and proper operation - Inspect area surrounding each monitoring well. Cut grass, brush, and trees as necessary.	OK	KC & JL	

# 2015 4<sup>th</sup> Qtr Inspection

## Quarterly Maintenance and Inspection Checklist

12/16	<b>Fencing and other Barriers:</b> Inspect for damage allowing access to landfill	OK	JL	
12/16	<b>Fence Locks:</b> Check for proper operation and replace damaged locks	OK	JL	
12/16	<b>Cover Erosion:</b> Inspect for rills in cover, regrade with clean fill, and reseed/gravel as necessary	OK	JL	
12/16	<b>Vegetative Cover:</b> Inspect grass and reseed barren areas Remove any trees or brushy growth.	see note	JL	few spots need seed
12/16	<b>Gravel Cover:</b> Inspect gravel surface and fill or recover as necessary	OK	JL	
12/16	<b>South Perimeter Stormwater Ditch:</b> Inspect ditch for erosion and repair with clean fill and reseed as necessary	OK	JL	
12/16	<b>Groundwater Monitoring Well Maintenance:</b> Inspect well casings for damage or rust Inspect locks for damage, rust, and proper operation Inspect area surrounding each monitoring well. Cut grass, brush, and trees as necessary.	OK	JL	

# **Attachment 3**

## **Photographic Log**

## Photographic Log

<b>Client Name:</b> Domtar Paper Company, LLC		<b>Site Location:</b> Plymouth, North Carolina	<b>Project No.:</b> 228189.0000.0000
<b>Photo No.</b> 1	<b>Date</b> 6/24/15		
<b>Description</b> Central portion of landfill; looking southwest. Area recently filled and seeded (June 2015).			

<b>Photo No.</b> 2	<b>Date</b> 6/24/15		
<b>Description</b> Trail/road restoration in June 2015; looking northeast			

## Photographic Log

<b>Client Name:</b> Domtar Paper Company, LLC		<b>Site Location:</b> Plymouth, North Carolina	<b>Project No.:</b> 228189.0000.0000
<b>Photo No.</b> 3	<b>Date</b> 11/04/15	 <p style="text-align: right; color: orange;">11/04/2015 11:55</p>	
<b>Description</b> Signage in front of gravel-covered portion of landfill.			

<b>Photo No.</b> 4	<b>Date</b> 11/04/15	 <p style="text-align: right; color: orange;">11/04/2015 12:18</p>	
<b>Description</b> Signage in front of grass-covered portion of landfill.			

## Photographic Log

<b>Client Name:</b> Domtar Paper Company, LLC		<b>Site Location:</b> Plymouth, North Carolina	<b>Project No.:</b> 228189.0000.0000
<b>Photo No.</b> 5	<b>Date</b> 11/04/15		
<b>Description</b> Central portion of landfill following seeding in June; looking northwest. Reference Photograph No. 1 for comparison.			

<b>Photo No.</b> 6	<b>Date</b> 11/04/15		
<b>Description</b> Trail/road restoration in June 2015; looking southwest. Reference Photograph No. 2 for comparison.			

## Photographic Log

<b>Client Name:</b> Domtar Paper Company, LLC		<b>Site Location:</b> Plymouth, North Carolina	<b>Project No.:</b> 228189.0000.0000
<b>Photo No.</b> 7	<b>Date</b> 11/04/15		
<b>Description</b> Newly constructed drain to outfall in order to prevent road wash out.			

<b>Photo No.</b> 8	<b>Date</b> 11/04/15		
<b>Description</b> Gravel portion of the landfill; looking northeast.			