

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Sunday, June 1, 2008

From: David Andrews

Subject: Final POLREP

Ecusta Mill Davidson River Release

1 Ecusta Road, Pisgah Forest, NC

Latitude: 35.2767000

Longitude: -82.7058000

POLREP No.:	3	Site #:	A4/AK
Reporting Period:	Final	D.O. #:	
Start Date:	5/28/2008	Response Authority:	CERCLA
Mob Date:	5/28/2008	Response Type:	Emergency
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:	NCF003166675	Contract #	
RCRIS ID #:			

Site Description

Ecusta Mill is a Superfund redevelopment site, formerly, paper mill, located near Pisgah Forest, Transylvania County, North Carolina. The Site borders the Davidson River, a locally important recreational stream and a tributary to the French Broad River.

On May 27, 2008 personnel at the Ecusta Superfund Site began routing black liquor from a storage tank through a process sewer to an onsite stabilization basin for treatment.

At approximately 11:30 hrs on May 28, 2008, Personnel On-site were notified by a third party of a sulfur odor and fish kill on the Davidson River. Investigation revealed that a portion of the waste released to the process sewer had entered a storm drain, flowed to an on-site drainage ditch, and discharged to the River. At approximately 13:30 hrs a temporary containment dam was constructed in the drainage ditch. This temporary structure was reinforced with an earthen dam at approximately 17:30 hrs. Afterward, contractors began pumping contaminated storm water from the ditch. Remedial Project Manager (RPM) Jennifer Wendel was notified.

Following consultation with the the RPM and the EPA R4 Duty Officer, Shaw Environmental (the technical consultant for the project) notified the National Response Center of a release of 2,200 gallons of black liquor. RPM Wendel traveled to Ecusta to evaluate the situation. On 5/29/2008, OSC David Andrews was deployed to provide assistance.

Operations are being directed under a Unified Command consisting of the EPA, NCDHEC Superfund and Water Quality, Fish and Wildlife Service, State Division of Health, the County of Transylvania, and Shaw Environmental.

Current Activities

As of mid-afternoon on May 31, 2008, installation of diversion dam(s) and transfer pump system was completed to redirect storm-drain flow of the South and East drainage ditches. Additional analysis from samples collected from the source of the spill (Tank No. 135) indicated that Sodium Hydrosulfide (a component of Kraft pulping liquor) was the primary chemical in the spilled material. (See Key Issues).

Planned Removal Actions

No Removal Actions planned for this response. Only measures to prevent any further off-site migration of material from site drainage ditches.

Next Steps

The emergency response activities have ceased.

Key Issues

Investigation of this incident has led to the conclusion that there was an infrastructure collapse in proximity

of Bldgs 56 & 57 that allowed material in the process drain to cross over into the storm drain line and into the South drainage ditch. As a result of this incident, site drains will no longer be used for the purpose of transfer of material to the waste-water treatment system/aeration-sedimentation basin (ASB). Early in the response there were issues over identification of the released material. This, in part, was due to simultaneous transfer operations that took place prior to May 29th that utilized different floor drains in the building. The "black-liquor" operation flowed north and successfully made the transfer to the ASB whereas the contents of Tank No. 135, originally reported as "Anthroquinone", transferred into the floor drain that flowed south and ultimately to the failed intersection of the process & storm drain(s). Historic use of Tank No. 135 was for anthroquinone which is a catalyst used in the Kraft pulping process. During the final years of plant operations the tank was reutilized for other chemical storage. The chemical involved in this incident, and found inside Tank #135, was a translucent green liquid with a strong sulfide odor. The floor and process drains are "gravity-flow" systems. The material recovered from the South Drainage Ditch was an opaque deep indigo-blue liquid with a strong sulfide odor, thus indicating a comingling of materials within the drain(s) prior to the outfall into the drainage ditch. Laboratory analysis for anthroquinone is very complex (see "Documents") and the analysis conducted during this response did not detect anthroquinone in the samples collected. However, field test indicated a strong response for hydrogen sulfide and pH=11.5-12. Samples high in sulfide have a tendency to cause extreme matrix interference for laboratory analysis and require multi-stage complex sample preparation for other analytes. However, the data collected indicated sodium at close to 15% and comparably high sulfate levels - thus supporting the conclusion that Sodium Hydrodisulfide was the primary chemical (of concern) in the spill and contributor to the chemical-oxygen demand (COD) in the Davidson River resulting in the fish kill.

response.epa.gov/EcustaMill