

***Cliffs Erie, LLC
NPDES Permit #MN0042536***

Hoyt Lakes Mine Area

***NPDES/SDS Permit Supplemental Information & Request
for Variance***

April 2012



Culvert outfall station SD012 is an active gravity discharge from the east end of Area 3 that flows toward Wyman Creek. This discharge location must continue to be permitted.

Mining Area 5S

Station SD030 is a former mine pit dewatering discharge point at the south end of Area 5SW. The current Permit describes SD030 as a channel outfall and a gravity outflow that is not authorized under the Permit. It is recommended that SD030 be a permitted and authorized discharge, and that discussions take place with the MPCA as to the appropriate location for sampling.

Mining Area 5N

Culvert outfall station SD033 is a currently permitted gravity discharge from the north end of Area 5NW that forms the headwaters of Spring Mine Creek, a tributary of the Embarrass River. This outfall must continue to be permitted.

Area 1 Shops and Railroad Panel Yard Area

Roof and yard runoff from the Area 1 Shops flows southward across the railroad tracks where it merges with runoff from the Panel Yard Area. Stormwater from these areas flows east then south through a culvert under the North Gate Road to unnamed wetlands tributary to Second Creek.

Hoyt Lakes Plant Area

Stormwater runoff from a portion of the inactive Concentrator and Pellet Plant areas flows south to unnamed wetlands tributary to Second Creek.

Hematite Wastewater Recovery System

The Hematite Wastewater Recovery System includes the Redwater Basin, which is currently used as a collection point and settling basin for stormwater that flows from the iron unit storage and transfer areas. Clarified water in the Redwater Basin is used for dust control purposes and no discharge occurs.

Second Creek Headwaters Area

Culvert outfall station SD026 receives groundwater seepage (originating in part from Cell 1E of the Hoyt Lakes Tailings Basin) and stormwater runoff from the various ponded areas in the headwaters upstream of SD026, Area 2 Shops area, former Knox Rail Refueling Area, and the N ½, Section 16,

T59N, R14W. Tanks and equipment located at the Knox Rail Refueling Area were removed in July 2007 as part of the remediation of MPCA Leaksite #6499; MPCA granted site closure in January 2012. **Approximately 75% of the seepage from Cell 1E that flows through the railroad embankment, which previously discharged to SD026 is currently recovered and pumped to Cell 1E of the Hoyt Lakes Tailings Basin. The remaining flow to SD026 is discharged and forms the headwaters of Second Creek.** This application includes a request to transfer SD026 to the Hoyt Lakes Tailings Basin Area's NPDES/SDS Permit MN0054089 (see Section 1.2.4) because SD026 receives seepage from the Hoyt Lakes Tailings Basin Area and discharges to areas that are covered by that permit.

Because the facility is inactive, permitted dust suppressant chemicals are not currently used at this facility. However, use of dust suppressant chemicals must continue to be permitted in case conditions require their use.

1.2 Requested Permit Modifications

The following provides a description of the permit modifications that are requested by CE. Justification and rationale for each permit modification is also provided.

1.2.1 Elimination of Monitoring Station WS001

The modified Permit included monitoring requirements at WS001 to monitor emergency discharges from an underground treatment system that was located at the former Knox Locomotive Refueling Area. These tanks were removed as part of remediation of this area as approved by MPCA staff (MPCA Site ID#: LEAK6499). A closure letter dated January 6, 2012 is provided in Attachment 3. CE is requesting elimination of this monitoring requirement.


1.2.2 Elimination of Monitoring Requirements at SD030

As discussed in the *SD030 Evaluation Report* (Barr, July 2010 - Attachment 4), CE is requesting that the current monitoring requirements relative to SD030 be eliminated and replaced with a 5-year monitoring study to confirm that water quality trends in the Area 5SW Pit are stable.

1.2.3 Modification of Temperature Monitoring Requirements at SD012

As discussed in the *SD012 Field Studies and Long Term Mitigation Plan* (Northeast Technical Services, August 2011 - Attachment 5), water management options exist to improve the temperature differential between SD012 and SW007. These include:

- Discharging water during colder winter months



**Variance Addendum
NPDES/SDS Permit Renewal
Permit No. MN0042536**

**Cliffs Erie Hoyt Lakes Mining Area
Surface Discharge Stations SD026 and SD033**

**Prepared for
Cliffs Erie LLC**

December 10, 2012

This variance document addresses the surface discharge station designated as SD026. Station SD026 is a culvert which conveys Second Creek under Dunka Road and is located approximately 1,500 feet downstream from the groundwater seep that forms the headwaters of Second Creek (in the southwest quarter of the southwest quarter of the northeast quarter of Section 16, Township 59 North, Range 14 West). The general site layout is shown on Figure 1. Second Creek is a tributary of the Partridge River within the Lake Superior watershed and is an unlisted water and as such, has the default beneficial use classifications of 2B, 3C, 4A, 4B, 5, and 6, as described in Minnesota Rule Chapter 7050.0430.

The water discharged through SD026 consists of both groundwater seepage and stormwater runoff. SD026 receives groundwater seepage which likely originates in part from Cell 1E of the Hoyt Lakes Tailings Basin. SD026 also receives a mixture of stormwater runoff from the area between the railroad embankment and Dunka Road, including the former Area 2 Shops Area and former reclaimed Knox Rail Refueling Area.

CE has been performing studies and implementing a series of corrective actions to achieve compliance with SD026 water quality effluent limits for the parameters of concern as soon as possible. As part of short-term mitigation, a seepage collection and pump-back system upstream of SD026 was constructed and placed into operation during the summer of 2011. Groundwater seepage is collected from a pond upstream of SD026 and pumped to Cell 1E of the Hoyt Lakes Tailings Basin. Due to this modification, the discharge through SD026 has significantly decreased in volume. The remainder of the flow continues to discharge as Second Creek.

1.1.4 Nature of the Variance Sought

D. The nature of the variance sought, including an identification of the applicable rules or standards from which a variance is sought, the period of time for which it is sought, and the reasons relied upon by the applicant in requesting the variance.

1.1.4.1 Parameters for which Variance is Requested

CE requests a variance from the SD026 water quality effluent limits (assumed to be the applicable water quality standards) for total dissolved solids (TDS), bicarbonates (alkalinity), total hardness, and specific conductance (parameters of concern) at SD026.

While the current Permit does not contain effluent limits for three of the four parameters of concern (TDS, bicarbonates, and total hardness), the water quality standards were assumed to be applicable