

TABLE 2.6-9

PRIMARY STUDY AREA GAGING STATION SITE SELECTION CRITERIA

No.	Criteria	Basis for Criteria	Source
1	Primary Study Area	Location of Primary Surface Water Study Area (Figure 2.6-1)	Golder 10/18/2007
2	Surface Property Ownership	South Heart Coal LLC (SHC) owned– 1 st choice* Publicly owned– 2 nd choice Privately owned – 3 rd choice * From ownership file dated 1/7/06 from SHC	SHC, Golder
3	Land use	Most of the existing land use is cropland and range land. Some gages were placed on road right-of-ways after consultation with the road owner. Gages on other land uses were avoided.	Golder
4	Accessibility	Close to a public road and accessible by truck.	Golder
5	Hydrologic Criteria	<p>Gaging station sites were chosen near the upstream and downstream Primary Study Area to characterize the site (or along the north boundary of the site, as in the Heart River).</p> <p>Comparison of the instantaneous flows at upstream and downstream sites, as well as with the existing gages downstream, is being completed to identify losing or gaining streams.</p> <p>Sites were selected to enhance correlation with existing and historic gages.</p> <p>The following sites are shown on Figure 2.6-6:</p> <ol style="list-style-type: none"> 1. The South Branch Heart River is the primary site drainage. Therefore, it is characterized both upstream and downstream of the property boundary with continuous reading stations fitted with a flume. 2. The Heart River, which borders the site on the north, and joins the South Branch Heart River just northeast of the site, is characterized upstream and downstream of the property boundary with continuous reading stations fitted with a flume. 3. One unnamed small tributary (West Tributary) to the South Branch Heart River that drains a large disturbance area is characterized near the center of the disturbance area and downstream of the disturbance area using a continuous reading station fitted with a flume. 4. A large unnamed tributary (South Tributary) to the South Branch Heart River is characterized upstream of the property boundary and at the confluence with the South Branch using a continuous reading station fitted with a flume. 	Golder

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No.	Criteria	Basis for Criteria	Source
6	Regulatory – Public Service Commission (PSC)	“The applicant shall determine the probable hydrologic consequences of the operation on the quality and quantity of surface and ground water under seasonal flow conditions for the property and adjacent areas. The probable hydrologic consequences determination must be based on baseline hydrologic, geologic, and other information collected for the application and, if appropriate, data statistically representative of the site.” North Dakota Administrative Code (69-05.2-08)	PSC
7	Hydraulics	Locations were selected using criteria similar to that described in Chapter 3 of “Measurement and Computation of Streamflow,” by the USGS (Rantz, 1982).	Golder

Golder = Golder Associates Inc.
SHC = South Heart Coal LLC
PSC = North Dakota Public Service Commission
USGS = United States Geological Survey