Slippery Rock Watershed Coalition

SR 114 B and D ANOXIC LIMESTONE DRAIN SYSTEM FACT SHEET

PA State Game Lands #95, Washington Township, Butler County, PA

FUNDING SOURCE:
Bond Forfeitures *Black Fox*

PROJECT PARTICIPANTS:
Hedin Environmental
CDS Associates, Inc.
PA Bureau of District Mining Operations(Knox)
Jesteadt Excavating
PA Game Commission

COMPLETION DATE:
Major construction completed September 1995
Water Quality Monitoring ongoing: PA DEP, Knox DMO and Slippery Rock University

MATERIALS USED FOR TREATMENT:
ALD B: 350 Tons, AASHTO #1, 90% $CaCO_3$, limestone aggregate
ALD D: 1100 Tons, AASHTO #1, 90% $CaCO_3$, limestone aggregate

WATER COLLECTION AND DISTRIBUTION:

Collection: ALD B: 120' anoxic collection system, 6" perforated CPP bedded in river gravel

ALD D: 125-gpm flow captured in innovative collection system including the vertical placement of an epoxy-coated, steel casing (12' length, 3' diameter)

Inlet: ALD B: captured flow distributed by a 4" perforated CPP manifold (23'L) extending along east end (width) of drain

ALD D: captured flow plumbed onto a 6" PVC pipe and distributed by a 6" perforated CPP manifold (33'L) extending along east end (width) of drain

Outlet: ALD B: 4" perforated CPP manifold (23'L) extending along west end (width) of drain and plumbed to a 6" PVC pipe, which discharges to rock-lined channel to Pond B

ALD D: 4" perforated CPP manifold (29"L) extending along south end of drain and plumbed onto a 6" PVC pipe, which extends 86' to Pond D1

SYSTEM DIMENSIONS (FEET):

	Length	Width	Depth	Size
Anoxic Limestone Drain B	60	30	5	350 T
Anoxic Limestone Drain D	60	30	2.9	1150 T
Settling Pond #B	71	85	4	6000 SF
Settling Pond #D1	137	36	2	5000 SF
Wetland #D2	134	52	3 ½	7000 SF
Wetland #D3	119	46	1	5500 SF
Wetland #D4	108	46	1/5	5000 SF

WATER QUALITY (representative):

	Flow (gpm)	pH	alkalinity (mg/l)	acidity (mg/l)	Fe (mg/l)	Mn (mg/l)	Al (mg/l)
Pre-construction B&D (raw)	180	5.5	30	50	40	1	<1
Post-construction B&D (final)	180	6.5	100	0	6 (diss.<2)	1	<1