



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

October 13, 2010

Mr. Alan Pollock  
Virginia Department of Environmental Quality  
P.O. Box 1105  
Richmond, VA 23218

Dear Mr. Pollock:

The United States Environmental Protection Agency (EPA) has reviewed the Virginia Department of Environmental Quality's (DEQ's) request to amend the sediment Total Maximum Daily Load (TMDL) and waste load allocations (WLAs) for Dumps Creek, a tributary to the Clinch River. DEQ has identified five permitted point source facilities that were not included in the Dumps Creek sediment TMDL which was approved by EPA on June 6, 2004. DEQ is therefore requesting that the sediment TMDL and WLAs for Dumps Creek be modified to include allocations for these facilities.

The permitted point source facilities that were originally omitted from the Dumps Creek sediment TMDL include: AEP (VA0001015), Dickenson Russell Coal (VA0065951), Clinchfield Coal Company (VA0066991), Dickenson Russell Coal (VA0085278) and Breeding Residence STP (VAG400836). The addition of these facilities to the TMDL will increase the sum of the WLA by 5,711 kg/yr. This increase to the WLA is less than one percent of the sediment TMDL value. The allocations for these facilities will be taken from the LA portion of the TMDL, due to the fact that these facilities predate the original TMDL and would have otherwise been incorporated that way initially.

Based upon this information, EPA approves the requested modifications to the Dumps Creek sediment TMDL. If you have any questions or comments concerning this letter, please do not hesitate to call me at (215) 814-5796.

Sincerely,

A handwritten signature in cursive script that reads "Helene Drago".

Helene Drago, Manager  
TMDL Program

Enclosure





# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

Fax (804) 698-4500 TDD (804) 698-4021

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Douglas W. Domenech  
Secretary of Natural Resources

David K. Paylor  
Director

(804) 698-4000  
1-800-592-5482

October 4, 2010

Mr. Greg Voigt  
US EPA Region III TMDL Coordinator  
USEPA REGION 3 – 3WP12  
1650 Arch Street  
Philadelphia, PA 19103-2029

RE: Total Maximum Daily Load modification for the wasteload allocation in the benthic TMDL for Dumps Creek, a tributary to the Clinch River.

Dear Mr. Voigt,

This letter is to request approval of a modification to the wasteload allocation (WLA) table for the Total Maximum Daily Load (TMDL) for sediment developed for Dumps Creek in Russell County, Virginia. EPA Region III approved the sediment TMDL addressing a benthic impairment for Dumps Creek on June 6, 2004.

DEQ has received a registration statement from Dickenson Russell Coal (VA0065951 and VA0085278) for permit renewal. The petitioning facility, one other small sewage treatment facility, and three stormwater facilities were mistakenly omitted when the Dumps Creek TMDL was originally developed. DEQ is requesting a modification to the TMDL wasteload allocation to accommodate the preexisting DEQ discharge permits.

The facilities include AEP, Dickenson Russell Coal, Clinchfield Coal Company, Dickenson Russell Coal and Breeding Residence STP which are located in the Dumps Creek watershed, and respectively discharge to Dumps Creek. The sum of the increase in WLA is 5,711 kg/yr or less than one percent of the sediment TMDL. The addition of the WLA for these six facilities will be taken from the LA portion of the TMDL, due to the fact that these facilities predate the original TMDL development and would have otherwise been incorporated that way initially. The corrections to the WLA value represent a change to the original TMDL equation of 0.5 % (5,711 kg/yr WLA increase as a percent of 971,583 kg/yr), resulting in the need for a modification to the original TMDL.

DEQ therefore proposes to modify Table 5.2, and add Table C.3 in the General Standard Total Maximum Daily Load Development for Dumps Creek. The replacement pages including Tables and associated text are attached.

Updating the WLA table in the Dumps Creek benthic TMDL in accordance with this modification will not cause a water quality violation. Due to the changes to the TMDL equation, a modification to the TMDL will be required, and following public participation guidance, this public notice will be made for the changes, followed by a 30 day public comment period.

**TMDL Revisions:**

- **Text in section 3.1 Assessment of Point Sources (page 3-30):**

'There are 80 point sources (Table C.1 and Table C.3 in Appendix C) permitted to discharge into Dumps Creek through the National Pollutant Discharge Elimination System (NPDES). Seventy-four of these point sources (Figure 3.1) are associated with a surface mine, deep mine or mixed use permit... Six of the discharges are permitted through the Virginia Department of Environmental Quality and include one single family home sewage treatment plan, one Prep Plant sewage treatment plant, one mine sewage treatment plant, and three stormwater discharges.'

- **Text in section 4.3.1.1 Permitted Point Discharges (page 4-4):**

'There are 80 point sources permitted to discharge into Dumps Creek; 43 of these are mining permits known (observed) to produce flow to the watershed (Figure 4.2). The NPDES discharges are listed in Appendix C (Table C.1 and Table C.3).'

A public notice containing the above information (see attachment) was published in the Lebanon News Newspaper on August 18 and August 25, 2010. The comment period ended on September 18, 2010. No comments were received on the TMDL modification during the comment period.

In accordance with EPA's August 2003 letter to VADEQ, VADEQ hereby requests EPA approval of the proposed modification. If you or your staff has any questions, please contact David Lazarus at (804) 698-4299.

Sincerely,



David S. Lazarus  
Watershed Program Manager  
Office of Water Quality Programs

**Attachments:**

Public Notice  
Modified Tables  
Replacement pages

cc: Charles Lunsford, VADCR  
Sandra Mueller, VADEQ  
Shelley Williams, SWRO TMDL coordinator  
File CO



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

### SOUTHWEST REGIONAL OFFICE

Doug Domenech  
Secretary of Natural Resources

355 Deadmore Street, PO Box 1688, Abingdon, Virginia 24212

Phone (276) 676-4800 Fax (276)676-4899

[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Dallas R. Sizemore  
Regional Director

August 12, 2010

### Public Notice - Environmental Permits

**PURPOSE OF NOTICE:** To seek public comment on two draft permit renewal actions and a proposed modification of the Dumps Creek Benthic Total Maximum Daily Load (TMDL) from the Department of Environmental that will allow the release of treated wastewater into water bodies in Russell County, Virginia.

**PUBLIC COMMENT PERIOD:** 30 days from (insert first date of publication).  
**PERMIT NAME:** Virginia Pollutant Discharge Elimination System Permit - Wastewater issued by DEQ, under the authority of the State Water Control Board.

**NAME, ADDRESS AND PERMIT NUMBERS OF APPLICANT:** Dickenson-Russell Coal Company, LLC, 7456 Gravel Lick Road, Cleveland, VA 24225; VA0065951 and VA0085278.

**NAME AND ADDRESS OF FACILITIES:** Moss No. 3 Preparation Plant STP, 1252 Sandy Ridge Road, Cleveland, VA 24225 and Laurel Mountain Mine STP, 6797 Gravel Lick Road, Cleveland, VA 24225.

**PROJECT DESCRIPTION:** Dickenson-Russell Coal Company has applied for reissuance of two permits; Moss No. 3 Preparation Plant Sewage Treatment Plant and Laurel Mountain Mine Sewage Treatment Plant in Russell County, Virginia. The applicant proposes to release treated sewage from each facility at a rate of 0.004 million gallons per day into a water body. The Moss No. 3 Preparation Plant facility proposes to release the treated sewage in the Dumps Creek and the Laurel Mountain Mine proposes to release the treated sewage in the Hurricane Fork of Dumps Creek in Russell County, Virginia, in the Clinch River watershed. A watershed is the land area drained by a river and its incoming streams. The removal of sludge from the treatment process will be accomplished by pumping the holding tanks as necessary by a licensed contractor and transporting the sludge in a truck-mounted watertight tank to the Town of Pound Wastewater Treatment Plant (VA0061913) for further treatment and final disposal. The permits will limit the following pollutants to amounts that protect water quality: pH, biochemical oxygen demand, total suspended solids and total residual chlorine.

MODIFICATION OF DUMPS CREEK TMDL: DEQ developed a Total maximum daily load (TMDL) for sediment that addressed benthic impairments in Dumps Creek in the Clinch River watershed. This TMDL was approved by the Environmental Protection Agency on June 03, 2004 and may be found at the following website: <http://www.deq.virginia.gov/tmdl/apptmdls/tenbigrvr/dumps.pdf>. There was an error in the development of the TMDL. The final TMDL document did not include these discharges as well as four other VPDES permits in the watershed that pre-dated the TMDL. DEQ believes that the proposed modification of the TMDL for Dumps Creek to account for these six pre-existing facilities, results in an insignificant change (less than 1% of the total load for the watershed). Following the public comment period and response, the modified TMDL will be submitted to EPA for approval.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: (1) The reason why a public hearing is requested. (2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. (3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: Steve E. Artrip, Virginia Department of Environmental Quality, Southwest Regional Office, 355 Deadmore Street, PO Box 1688 Abingdon, VA 24212. Telephone No.: (276)676-4808, E-Mail Address: [steve.artrip@deq.virginia.gov](mailto:steve.artrip@deq.virginia.gov). The public may review the draft permits, applications and TMDL documents at the DEQ office named above by appointment.

A seasonal analysis of precipitation was conducted using the Moods Median Test (MINITAB, 1995). This test was used to compare median values of precipitation in each month. Significant differences between months within years were reported.

### 2.3.2.1 Precipitation

Total monthly precipitation measured in Wise, Virginia from May 1955 to August 2000, was analyzed, and no overall, long-term trend was found. Differences in mean monthly precipitation at Wise are indicated in Table 2.27. Precipitation values in months with the same median group letter are not significantly different from each other at the 95% significance level. For example, January, September, October, November and December are all in median group "A" and are not significantly different from each other. In general, precipitation in the spring-summer months tends to be higher than precipitation in the fall-winter months.

**Table 2.50 Summary of Moods Median Test on mean monthly precipitation at Wise, Virginia**

Month	Mean (in)	Minimum (in)	Maximum (in)	Median Groups <sup>1</sup>	
January	3.71	1.13	8.47	A	B
February	3.82	0.62	8.93		B
March	4.42	1.94	10.78		B C
April	4.07	1.00	9.59		B C
May	4.28	1.79	8.49		B C
June	3.91	0.72	11.61		B
July	5.17	1.05	11.07		C
August	3.92	0.33	7.96		B
September	3.49	0.87	7.52	A	B
October	2.84	0.03	6.58	A	
November	3.56	1.38	6.38	A	B
December	3.54	0.42	7.22	A	B

<sup>1</sup>Precipitation in months with the same median group letter is not significantly different from each other at the 95% level of significance.

### 3. SOURCE ASSESSMENT

The TMDL development described in this report included examination of all potential sources of identified stressors in the Dumps Creek Watershed. The source assessment was used as the basis of model development and ultimate analysis of TMDL allocation options. In evaluation of the sources, loads were characterized by the best available information, literature values, and measured data. This section documents the available information and interpretation for the analysis. The source assessment chapter is organized into point and nonpoint sections, point sources being those sources that can be spatially defined as having a single point of entry and a direct path to the stream and nonpoint sources being diffuse, hydrologically driven pollution sources. The representation of the following sources in the model is discussed in Section 4.

#### 3.1 Assessment of Point Sources

In watersheds with resource extraction activities, establishment and removal of permitted point sources is a dynamic process. During the time period modeled for this TMDL, there were 80 point sources (Table C.1 and Table C.3 in Appendix C) permitted to discharge into Dumps Creek through the National Pollutant Discharge Elimination System (NPDES). Seventy-four of these point sources (Figure 3.1) are associated with a surface mine, deep mine,



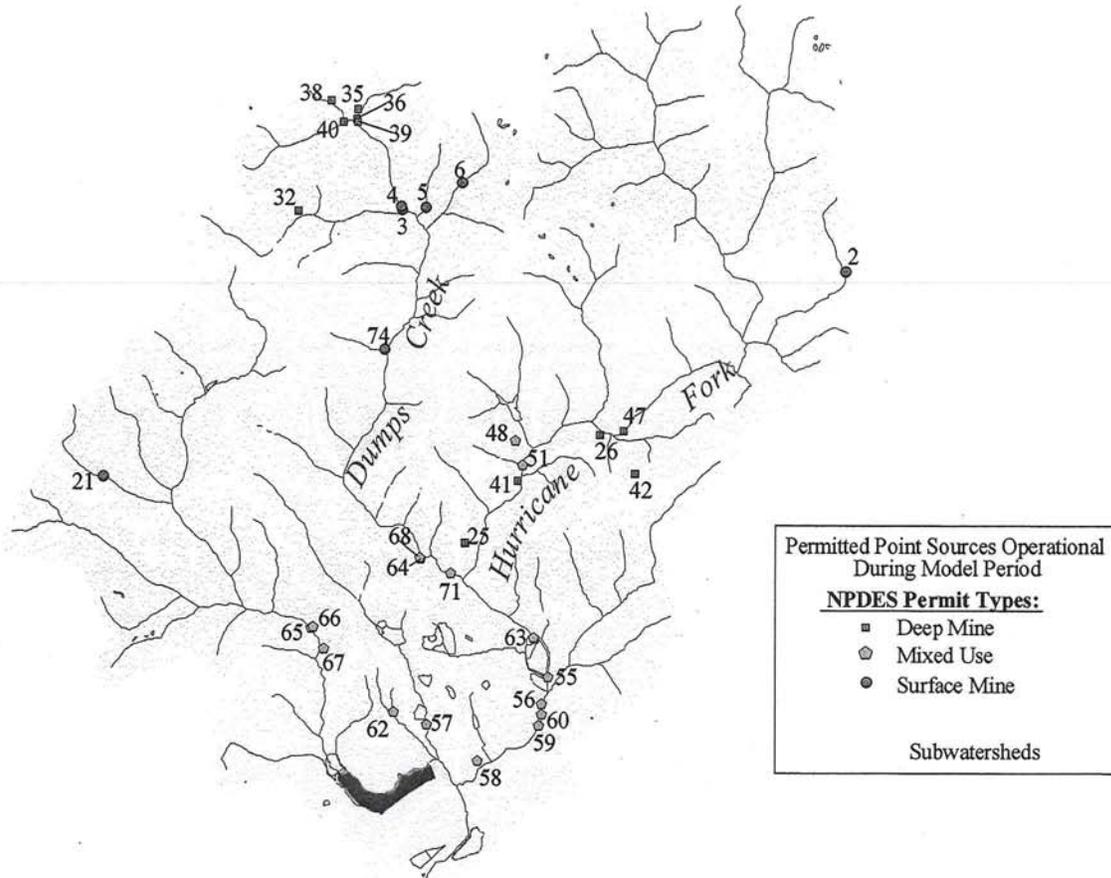
or mixed use permit. All of the point sources in figure 3.1 are identified with a MapTech ID, assigned to improve the readability of the map. Table C.1, Appendix C, relates the MapTech to MPIDs, company Ids, and permit numbers for each station. Six of the discharges are permitted through the Virginia Department of Environmental Quality and include one single family home sewage treatment plan, one Prep Plant sewage treatment plant, one mine sewage treatment plant, and three stormwater discharges. Sixty-two of the point sources collect and discharge surface runoff from disturbed areas. Nine of the point sources collect and discharge water pumped from deep mines. The remaining three point sources collect and discharge water from comingled sources (*i.e.*, both surface runoff and mine discharge). Thirty-one of the points discharged no flow during the monitored period. Summaries of monitoring conducted to support permit compliance efforts (Table 3.1 through 3.43) show that the levels of stressors in the permitted discharges are typically less than those measured in the stream (Section 2.3).

is time-dependent (e.g. existence of control structures). Depending on the timeframe of the simulation being run, the model was varied appropriately. The hydrologic landscape of the watershed was relatively stable during the modeled periods (i.e., 1995-1997 and 1998-1999). Data representing this period were used to develop the model used in this study.

#### 4.3.1 Point Sources

##### 4.3.1.1 Permitted Point Discharges

There were eighty point sources permitted to discharge in the watershed during the modeled period, of these, 43 are mining which are known (observed) to produce flow to the watershed (Figure 4.2). These NPDES discharges are listed in Appendix C (Table C.1 and Table C.3). Discharge volumes from control structures that collected surface runoff were calibrated using data collected in support of permit compliance. Through this calibration process, the hydraulic response of the structure was modeled. As such, minimum volumes of runoff in the ponds were required before discharge would occur. Evaporation from the ponds was dependent on surface area, which varied with depth. Pollutant loadings from the modeled ponds were dependent on the land use areas draining to the pond and the residence time in the pond. Discharges from control structures that collect and discharge water pumped from deep mines or comingled sources (i.e., both surface runoff and mine discharge) were modeled as a time series of flow and water quality constituent loads. These time series were developed based on monitored data and inserted into the appropriate subwatershed to represent the spatial distribution of the loadings along the stream channels.



**Figure 4.2** Permitted point sources, operational during the modeled period.

#### 4.3.2 Nonpoint Sources

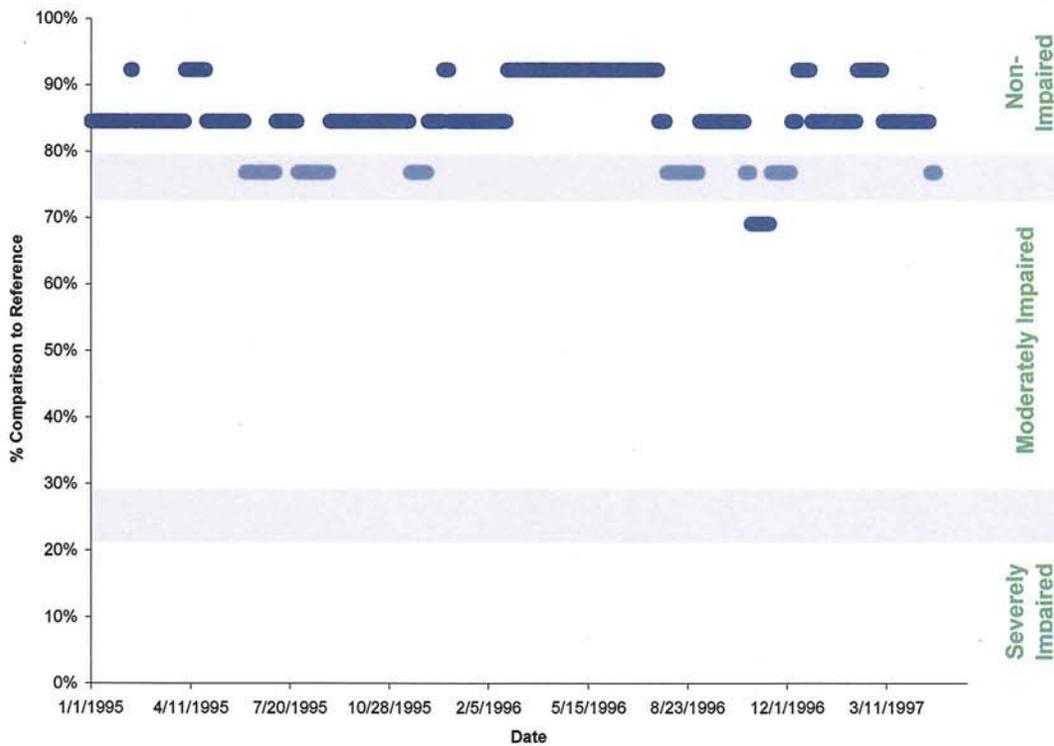
Nonpoint source contributions from the eleven landuse categories (Table 4.1) were assumed to be delivered to the stream flow system in surface runoff, interflow and groundwater. The HSPF model was used to link pollutants from nonpoint sources with downstream water quality. Based on the sensitivity analysis (Section 5.1), the pollutants modeled included four of the benthic stressors identified in the multi-parameter statistical model discussed in Chapter 2. These included Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Sulfate, and Alkalinity. The remaining seven stressors (i.e., Total and Dissolved Manganese (Mn), Total and Dissolved Iron (Fe), Specific Conductivity, Acidity, and pH) were held at the average monitored value for calculating modeled biometrics.

#### 4.4 Stream Characteristics

HSPF requires that each stream reach be represented by constant characteristics (e.g. stream geometry and resistance to flow). In order to determine a representative stream profile for each stream reach, cross-sections were surveyed at locations that were representative of the stream for the modeled subwatersheds (Figure 4.3). Where reaches varied widely, multiple cross-sections were measured and average values were used to describe the reach.

**Table 5.1 Average bioassessment score for various allocation scenarios in the Dumps Creek impairment.**

Scenario Description	Average Bioassessment
Existing conditions	73%
Scenario A: 50% of TSS from nonpoint sources	80%
Scenario B: 50% of TSS from nonpoint sources 20% of TDS from nonpoint sources	85%
Scenario C: 40% of TSS from nonpoint sources 34% of TDS from nonpoint sources	85%



**Figure 5.12 Allocation conditions at Subwatershed DC-6 (i.e., DEQ assessment station for Dumps Creek).**

**Table 5.2 TMDL allocations chosen for the Dumps Creek general quality impairment. (shaded cells indicate permits not originally represented as WLAs)**

		TSS (kg/year)	TDS (kg/year)
<b>Waste Load Allocation</b>			
NPDES 0081399	MPID 3970218	322,234	1,631,575
NPDES 0081132	MPID 5170002	12	62
NPDES 0080483	MPID 5183662	3	15
NPDES 0080483	MPID 5183655	104,336	538,374
NPDES 0080483	MPID 5470215	676	3,488
NPDES 0081309	MPID 0003867	2,180	11,249
NPDES 0080481	MPID 3985052	72	372
NPDES 0080480	MPID 3985030	14	72
NPDES 0080481	MPID 3985053	33,729	174,042
NPDES 0080481	MPID 3985054	4	21
NPDES 0080481	MPID 3985054	7,203	37,167
VA0001015	AEP	2,536	
VA0065951	Dickenson Russell Coal	249	
VA0066991	Clinchfield Coal Co.	249	
VA0066991	Clinchfield Coal Co.	2,386	
VA0085278	Dickenson Russell Coal	249	
VAG400836	Breeding Res. STP	42	
<b>Transient Waste Load <sup>1</sup></b>			
NPDES 0081478	MPID 0000984	1,792	
NPDES 0081758	MPID 0001178	5,370	
NPDES 0081607	MPID 0002608	8,844	
NPDES 0081607	MPID 0002609	80,903	
NPDES 0081607	MPID 0002612	594	
NPDES 0081607	MPID 0002613	1,258	
NPDES 0081681	MPID 0003251	5,523	
NPDES 0081681	MPID 0003252	1,289	
NPDES 0081681	MPID 0003253	2,193	
NPDES 0081758	MPID 0003905	3,237	
NPDES 0081758	MPID 0003906	2,199	
NPDES 0081758	MPID 0003907	1,700	
NPDES 0081398	MPID 3970178	4,654	
NPDES 0080071	MPID 3982946	16	
NPDES 0080255	MPID 3983285	38	
NPDES 0080363	MPID 3983540	78	
NPDES 0080480	MPID 3985028	8,049	866,713 <sup>2</sup>
NPDES 0080480	MPID 3985033	12	
NPDES 0080481	MPID 3985044	7,676	
NPDES 0080481	MPID 3985045	71	
NPDES 0080481	MPID 3985046	20,469	
NPDES 0080481	MPID 3985047	7,393	
NPDES 0080481	MPID 3985048	353	
NPDES 0080481	MPID 3985049	2,974	
NPDES 0080481	MPID 3985050	923	
NPDES 0080481	MPID 3985051	22	
NPDES 0080481	MPID 3985055	21	
NPDES 0080481	MPID 3985056	269	
NPDES 0080481	MPID 3985059	2	
NPDES 0081132	MPID 5170001	185	
NPDES 0080483	MPID 5183658	115	
NPDES 0080483	MPID 5183660	72	
<b>Load Allocation</b>			
<b>TMDL</b>		<b>649,349</b>	<b>3,384,104</b>
		<b>971,583</b>	<b>5,015,679</b>

<sup>1</sup> The transient waste load represents the waste load from runoff-controlling BMPs (i.e. ponds) that are likely to be removed upon completion of current mining operations.

<sup>2</sup> TDS from transient waste loads are presented as a combined load from all transient sources.

**Table C.3 Summary of VPDES permitted point sources from DEQ**

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<b>Permit</b>	<b>Facility Name</b>
VA0001015	AEP
VA0065951	Dickenson Russell Coal
VA0066991	Clinchfield Coal Co.
VA0066991	Clinchfield Coal Co.
VA0085278	Dickenson Russell Coal
VAG400836	Single Family Home STP

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