This document provides pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a **Minor, Industrial** permit. The discharge results from the operation of a groundwater remediation system. This permit action consists of updating the proposed effluent limits to reflect the current Virginia WQS, effective January 6, 2011 and updating permit language as applicable. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9VAC25-260-00 et seq.

1. Facility Name and Mailing Address:	International Business Machines Corp. 8976 Wellington Rd. Manassas, VA 20109	SIC Code:	4959
Facility Locations:	9100 Ashton Ave., Bldg. 500; 9600 Godwin Drive, Bldg. 401; 8944 Rolling Rd.; 8417 Sunset Drive-- Manassas, VA 20110	City: County:	City of Manassas Prince William County
Facility Contact Name:	Dean Chartrand/Program Manager	Telephone Number:	703-257-1960
2. Permit No.:	VA0085901	Expiration Date:	11/20/2011
Other VPDES Permits:	None		
Other Permits (RCRA Permits):	EPA ID Nos. VAR000518282, VAD064873575, VAR000518290, VAR0005188316		
E2/E3/E4 Status:	NA		
3. Owner Name:	International Business Machines Corporation		
Owner Contact/Title:	Mitchell E. Meyers Manager, Environmental Remediation Corporate Environmental Affairs	Telephone Number:	703-257-2587
4. Application Complete Date:	5/24/2011		
Permit Drafted By:	Anna Westernik	Date Drafted:	8/8/2011
Draft Permit Reviewed By:	Alison Thompson	Date Reviewed:	9/12/2011
WPM Review By:	Bryant Thomas	Date Reviewed:	9/22/2011
Public Comment Period :	Start Date: 10/29/2011	End Date:	12/12/2011
5. Receiving Waters Information:	See **Attachment 1** for the Flow Frequency Determination.		
Receiving Stream Name:	Outfalls 001/002 (Cannon Branch, UT) Outfalls 003/004 (Flat Branch, UT)	Stream Codes:	Outfalls 001/002: 1aXGO/1aXGN Outfalls 003/004: 1aXGP/1aXBE
Drainage Area at Outfall 001:	0.05 square miles	River Mile:	1.14
Drainage Area at Outfall 002:	0.22 square miles	River Mile:	0.28
Drainage Area at Outfall 003:	0.51 square miles	River Mile:	0.36
Drainage Area at Outfall 004:	1.45 square miles	River Mile:	0.25
Stream Basin:	Potomac River	Subbasin:	Potomac River
Section:	7a	Stream Class:	III
Special Standards:	g	Waterbody IDs:	VAN-A19R (Cannon Branch, UT) VAN-A21R (Flat Branch, UT)
7Q10 Low Flow:	0.0 MGD	7Q10 High Flow:	0.0 MGD
1Q10 Low Flow:	0.0 MGD	1Q10 High Flow:	0.0 MGD
30Q10 Low Flow:	0.0 MGD	30Q10 High Flow:	0.0 MGD
Harmonic Mean Flow:	0.0 MGD	30Q5 Flow:	0.0 MGD
303(d) Listed:	Yes (Broad Run; Bacteria/Bull Run; PCBs in Fish Tissue and Benthic Impairment)		
TMDL Approved:	Yes	Date TMDL Approved:	Broad Run 11/15/2006 (Bacteria) Bull Run 9/26/2006 (Aquatic Life Use Impairment)

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

✓	State Water Control Law		EPA Guidelines
✓	Clean Water Act	✓	Water Quality Standards
✓	VPDES Permit Regulation	✓	Other: (Limits of Technology)
✓	EPA NPDES Regulation		

7. Licensed Operator Requirements: NA

8. Reliability Class: NA

9. Permit Characterization:

✓	Private	✓	Effluent Limited		Possible Interstate Effect
	Federal	✓	Water Quality Limited		Compliance Schedule Required
	State	✓	Toxics Monitoring Program Required		Interim Limits in Permit
	POTW		Pretreatment Program Required		Interim Limits in Other Document
	TMDL				

10. Wastewater Sources and Treatment Description:

IBM operations at this facility are four groundwater remediation systems that prevent the migration of and remove volatile organic compounds (VOCs) present in groundwater. The VOCs in groundwater are related to manufacturing operations at the former IBM Manassas facility. The groundwater remediation is being conducted as part of an EPA approved corrective action program for the facility.

The former IBM Manassas facility is owned by several companies, including Lockheed Martin and Micron Technology. IBM's groundwater operations are independent of both companies. Outfall 001 is located on Lockheed Martin property, Outfall 002 is located on Micron Technology property, Outfall 003 is located on City of Manassas property, and Outfall 004 is located on Prince William County property.

Treatment at each location consists of a two-stage granular activated carbon adsorption system.

See **Attachment 2** for the NPDES Permit Rating Worksheet.
See **Attachment 3** for a facility schematic/diagram.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources	Treatment	Max 30-day Flow	Outfall Latitude/Longitude
001	Groundwater pump and treatment system	Two-stage granular activated carbon	0.047 MGD	**38° 45' 31.7"** N **77° 30' 5.6"** W
002	Groundwater pump and treatment system	Two-stage granular activated carbon	0.055 MGD	**38° 44' 57.5"** N **77° 30' 07.4"** W
003	Groundwater pump and treatment system	Two-stage granular activated carbon	0.059 MGD	**38° 45' 48.3"** N **77° 29' 39.1"** W
004	Groundwater pump and treatment system	Two-stage granular activated carbon	0.20 MGD	**38° 46' 24.2"** N **77° 29' 32.9"** W
See **Attachment 4** for (Manassas, DEQ #205C topographic map). The maximum 30-day flows were calculated by DEQ staff using data for the fourth quarter 2006 through the first quarter 2011. The latitude and longitude of each outfall was determined by DEQ staff during the July 8, 2011 site visit using a GPS device.				

11. Sludge Treatment and Disposal Methods:

No sewage sludge is generated by the groundwater pumping and treatment systems. The granular activated carbon is replaced as necessary. The spent carbon is taken off-site for treatment and disposal.

12. Discharges, Intakes, Monitoring Stations and Other Items in Vicinity of Discharge:

TABLE 2
INDIVIDUAL DISCHARGES AND MONITORING STATIONS – WATERBODY VAN-A19R

ID/Permit Number	Facility Name	Type	Receiving Stream
VA0087700	Atlantic Research—Gainesville	Industrial Storm Water Discharge	Rocky Branch, UT
VA0088510	Prince William County Balls Ford Yard Waste	Industrial Discharge	Broad Run, UT
VA0050181	Manassas City WTP	Industrial Discharge	Broad Run
VA0020460	Vint Hill Farms Station WWTP	Municipal Discharge	Kettle Run
1aBRU002.96	DEQ Monitoring Station	Fish Tissue/Sediment Monitoring	Broad Run
1aBRU001.59	DEQ Monitoring Station	Ambient Monitoring	Broad Run

TABLE 3
INDIVIDUAL DISCHARGES AND MONITORING STATIONS – WATERBODY VAN-A21R

ID/Permit Number	Facility Name	Type	Receiving Stream
VA0087891	Evergreen Country Club	Municipal Discharge	Chestnut Lick, UT
VA0087858	Sunoco Manassas Terminal	Industrial Discharge	Bull Run, UT
1aBUL009.61	DEQ Monitoring Station	Freshwater Probabilistic Monitoring	Bull Run
1aBUL010.28	DEQ Monitoring Station	Ambient, Biological, Fish Tissue/Sediment Station	Bull Run
1aBUL011.03	DEQ Monitoring Station	Ambient Monitoring	Bull Run
1aBUL011.12	DEQ Monitoring Station	Biological Monitoring	Bull Run
1aBUL013.40	DEQ Monitoring Station	Fish Tissue/Sediment Monitoring	Bull Run

TABLE 4
GENERAL PERMITS WITHIN WATERBODIES VAN-A19R AND VAN-A21R

Permit No	Facility	Receiving Stream
Non-Metallic Mineral Mining -- Waterbody VAN-A19R		
Permit No	**Facility**	**Receiving Stream**
VAG840075	Glen Gery Corporation - Capital Plant	Cannon Branch, UT
VAG840092	Vulcan Construction Materials - Manassas	Flat Branch, UT
VAG840075	Glen Gery Corporation - Capital Plant	Cannon Branch, UT
VAG840092	Vulcan Construction Materials - Manassas	Cannon Branch, UT
Non-Metallic Mineral Mining -- Waterbody VAN-A21R		
Permit No	**Facility**	**Receiving Stream**
VAG840089	Luck Stone - Bull Run	Bull Run, UT
Single Family Homes -- Waterbody VAN-A19R		
Permit No	**Facility**	**Receiving Stream**
VAG406225	Mulatz Mary Residence	Broad Run, UT
VAG406431	Capone Constance Residence	Kettle Run, UT
VAG406473	Gagnon Raymond Residence	Broad Run, UT
VAG406260	Gooding Daniel W - Residence	Lake Manassas, UT
VAG406071	Nossaman Judith D Residence	Broad Run, UT
VAG406505	Hastings Quentin Residence	Kettle Run, UT
VAG406488	Buckland Mill Road Residence	Broad Run, UT
VAG406221	7 Eleven 20412	Chesnut Lick, UT
VAG406447	Sandberg Brian Residence	Kettle Run, UT
VAG406476	Buckland Village	Broad Run, UT
VAG406134	Virginia Gateway Plaza Auto	South Run, UT
VAG406233	PWCPS - Transportation Area	Kettle Run, UT
VAG406040	Wrights Facility	Little Bull Run, UT
VAG406314	Bull Run Mountains Conservancy, Inc.	Broad Run
Single Family Homes -- Waterbody VAN-A21R		
Permit No	**Facility**	**Receiving Stream**
VAG406435	Chong Su Bong Residence	Little Bull Run
VAG406065	Katsaris Richard Residence	Little Bull Run, UT
VAG406300	Pumphrey W Gavin Residence	Bull Run, UT
VAG406209	Evergreen Center - Residence	Chesnut Lick, UT
VAG406242	Lake Jackson Drive Community Residences	Cabin Branch, UT
VAG406157	Thaggard David H Residence	Broad Run, UT
VAG406009	Carrington Charles M Residence	Chestnut Lick, UT
VAG406367	Nason Noah - Residence	Youngs Branch, UT
VAG406240	Evergreen Volunteer Fire Department and Rescue Squad	Chesnut Lick, UT
VAG406315	Shaw Robert Residence	Black Branch, UT
VAG406109	Sudley United Methodist Church	Little Bull Run
VAG406133	Leet Christopher J Residence	Little Bull Run, UT
VAG406481	Sudley Nursery and Garden Center	Bull Run
VAG406099	Cole James C Residence	Bull Run, UT
VAG406475	Siddiqui Assadullah Residence	Bull Run Creek
VAG406078	Mullins Lisa A Residence	Occoquan River, UT
Concrete -- Waterbody VAN-A19R		
Permit No	**Facility**	**Receiving Stream**
VAG110313	Hanson Pipe and Precast Incorporated	Broad Run, UT
VAG110111	Ennstone Incorporated - Manassas	Broad Run, UT
VAG110312	Betco Supreme Incorporated	Dawkins Branch

TABLE 4
GENERAL PERMITS WITHIN WATERBODIES VAN-A19R AND VAN-A21R

Concrete -- Waterbody VAN-A21R

Permit No	Facility	Receiving Stream
VAG110070	Aggregate Industries - MAR - Manassas	Youngs Branch
VAG110100	Virginia Concrete Company Inc - Gainesville	Rocky Branch, UT
VAG110074	Titan Virginia Ready Mix LLC - Centreville	Bull Run, UT

Storm Water Industrial -- Waterbody VAN-A19R

Permit No	Facility	Receiving Stream
VAR051298	Sams Junk Recycle Scrap and Materials Services	North Fork
VAR051639	Potomac Disposal Services of Virginia, LLC	Broad Run
VAR051043	Lockheed Martin - Manassas	Cannon Branch, UT
VAR051117	Alliant Atlantic Food Service	Dawkins Branch, UT
VAR051526	Flightworks Incorporated	Cannon Branch
VAR050907	Micron Technology Incorporated	Cannon Branch, UT
VAR051290	Henrys Wrecker Service - Manassas	Broad Run, UT
VAR050985	Manassas Regional Airport	Cannon Branch
VAR050859	Glen Gery Corporation - Capital Plant	Cannon Branch, UT
VAR051094	Norfolk Southern Railway - Manassas Yard	UT, Cannon Branch
VAR051030	UPS Freight - Bristow	UT to Rocky Branch
VAR051911	Asphalt Emulsion Inc	Cannon Branch, UT
VAR051992	Virginia Scrap Corp	UT to Broad Run
VAR050901	Superior Paving Corporation - Manassas Plant	Cannon Branch
VAR051919	Chantilly Air Incorporated	Cannon Branch
VAR051927	Dulles Aviation Incorporated	Broad Run
VAR050908	Branscome Paving Company - Manassas	Dawkins Branch, UT
VAR051476	Old Dominion Freight Line Incorporated - Bristow	Broad Run, UT
VAR051043	Lockheed Martin - Manassas	Cannon Branch, UT
VAR051085	Quarles Petroleum - Manassas Bulk Plant	Broad Run, UT
VAR052008	Prince William Metal	Dawkins Branch
VAR051886	Virginia Railway Express - Broad Run Yard	Broad Run
VAR051294	FedEx Freight East Incorporated - Manassas	Cannon Branch
VAR051949	Chemung Contracting Corporation - Gainesville	Broad Run, UT

Storm Water Industrial -- Waterbody VAN-A21R

Permit No	Facility	Receiving Stream
VAR051744	Colonial Pipeline - Bull Run	Bull Run, UT
VAR051084	MIFCO - Manassas Ice and Fuel Company	Flat Branch, UT
VAR050995	Manassas City - Department of Public Works	Flat Branch, UT
VAR051033	YRC Incorporated	Cannon Branch, UT
VAR051011	Superior Paving Corporation - Centreville Plant	Bull Run, UT

13. Material Storage:
There are no materials stored on-site at the groundwater pumping and treatment system locations.

14. Site Inspection:
Performed by Anna Westernik and Doug Frasier on July 8, 2011 (see **Attachment 5**).

15. Receiving Stream Water Quality and Water Quality Standards:

a. Ambient Water Quality Data
Outfalls 001 and 002 discharge into two unnamed tributaries of Cannon Branch, which are located in the VAN-A19R Waterbody. The Department of Environmental Quality (DEQ) does not monitor the receiving streams. Monitoring is conducted downstream on Broad Run (see Table 2).

The aquatic life and fish consumption uses at Monitoring Station 1aBRU002.96 are considered fully supporting. *E. coli* monitoring finds a bacteria impairment at Monitoring Station 1aBRUU001.59. The aquatic life and wildlife uses are considered fully supporting. A Total Maximum Daily Load (TMDL) addressing the recreation use impairment was completed in 2006.

Outfalls 003 and 004 discharge into two unnamed tributaries of Flat Branch, which are located in the VAN-A21R Waterbody. The Department of Environmental Quality (DEQ) does not monitor the receiving streams. Monitoring is conducted downstream on Bull Run (see Table 3).

Biological monitoring events at Monitoring Station 1aBUL009.61 finds a benthic macoinvertebrate impairment, resulting in an impaired classification for the aquatic life use. A TMDL addressing the benthic impairment was completed in 2006.

PCBs, heptachlor epoxide, and chlordane were found in catfish at Monitoring Station 1aBUL010.28. The fish consumption use is categorized as impaired due the presence of PCBs in fish tissue.

The full planning statement is found in **Attachment 6** provides more detailed ambient water quality information.

b. Receiving Stream Water Quality Criteria
Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving streams (Cannon Branch, UT and Flat Branch, UT) are located within Section 7a of the Potomac River Basin and designated as Class III waters.

Class III waters must maintain a dissolved oxygen (D.O.) concentration of 4.0 mg/L or greater at all times, a daily average D.O. concentration of 5.0 mg/L or greater, a temperature that does not exceed 32° C, and a pH of 6.0-9.0 standard units (S.U.).

Ammonia:
It is staff's best professional judgment that this is not a pollutant of concern since there are no sources on site in appreciable quantities and monitoring results provided with the VPDES permit application support the conclusion that there is no reasonable potential for ammonia to be a pollutant of concern from these discharge points.

Metals Criteria:
The 7Q10 of the receiving streams is zero and no ambient data is available; therefore, the effluent data for hardness can be used to determine the metals criteria. The hardness-dependent metals criteria for Outfall 004, the largest volume discharger, in **Attachment 7** are based on an effluent value hardness value of 360 mg/L (collected on October 12, 2005). The metals criteria for Outfall 004 are representative of all other outfalls at this location because the characteristics of the groundwater being treated and the treatment process used at Outfall 004 are similar to that found at Outfalls 001, 002, and 003.

Bacteria Criteria:
The Virginia Water Quality Standards 9VAC25-260-170.A state that the following criteria shall apply to protect primary recreational uses in surface waters:

E. coli bacteria per 100 mL of water shall not exceed a monthly geometric mean of the following:

	Geometric Mean[1]
Freshwater *E. coli* (N/100 mL)	126

[1]For a minimum of four weekly samples taken during any calendar month

It is staff's best professional judgment that *E. coli* bacteria is not expected to be present in this groundwater remediation discharge; therefore, limitations are not applicable to this facility.

Attachment 7 details other water quality criteria applicable to the receiving stream.

c Receiving Stream Special Standards
The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving streams, Cannon Branch, UT and Flat Branch, UT, are located within Section 7a of the Potomac River Basin. This section has been designated with a special standard of g.

Special Standard "g" refers to the Occoquan Watershed policy (9VAC25-410). The regulation sets stringent treatment and discharge requirements in order to improve and protect water quality, particularly since the waters are an important water supply for Northern Virginia. The regulation generally prohibits new STPs and only allows minor industrial discharges.

d Threatened or Endangered Species
The Virginia DGIF Fish and Wildlife Information System Database was searched on August 2, 2011 for records to determine if there are threatened or endangered species in the vicinity of the discharge.

The following threatened or endangered species were identified within a 2-mile radius of the discharge: Brook Floater, Wood Turtle, Upland Sandpiper, Loggerhead Shrike, Henslow's Sparrow, the Grizzled Appalachian Skipper, the Bald Eagle, and the Loggerhead Migrant Shrike. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and protect the threatened and endangered species found near the discharge.

16. Antidegradation (9VAC25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the Waterbody and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving streams have been classified as Tier 1 based on an evaluation of the critical stream flows. The critical stream flows are either 0.00 MGD or undeterminable. At times, the streams may be comprised entirely of effluent. It is staff's best professional opinion that instream waste concentrations are 100% during critical stream flows, and the water quality of the streams will mirror that of the effluent. Permit limits proposed have been established by determining wasteload allocations that will result in attaining and/or maintaining all water quality criteria applicable to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLAs) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLAs are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the

chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a. Effluent Screening

Effluent data obtained from Outfall 004 Attachment A monitoring submitted with the permit application for the November 21, 2006 permit reissuance, has been reviewed and determined to be suitable for evaluation. A review of the Attachment A data shows that chlorides, fluoride, heptachlor, nitrate, selenium, sulfate, total residual chlorine, and zinc are present in the effluent above quantifiable levels. See Table 5 below for a monitoring summary.

Staff derived wasteload allocations where parameters are reasonably expected to be present in an effluent and where effluent data indicate the pollutant is present in the discharge above quantifiable levels. Acute and chronic criteria are present for chlorides, heptachlor, selenium, total residual chlorine, and zinc. A wasteload allocation analysis was performed for these pollutants. **Attachment 7** details the WLA derivations for these pollutants.

TABLE 5
POLLUTANTS FOUND IN EFFLUENT DISCHARGE FROM OUTFALL 004

Pollutant	Monitoring Date	Monitoring Result (µg/L)	Quantification Level (µg/L)
Chlorides	10/5/2005	39,000	20,000
Flouride	10/5/2005	0.13	0.10
Heptachlor	10/10/2005	<QL	0.021
Heptachlor	10/10/2005	0.041	0.021
Heptachlor	8/3/2006	<QL	0.020
Heptachlor	8/3/2006	<QL	0.020
Heptachlor	8/3/2006	<QL	0.020
Nitrate	10/5/2005	1.5	0.10
Selenium	11/15/2005	3.4	2.5
Selenium	8/3/2006	4.0	2.5
Selenium	8/3/2006	4.4	2.5
Selenium	8/3/2006	4.1	2.5
Selenium	8/3/2006	4.1	2.5
Sulfate	10/5/2005	180,000	20,000
Total Residual Chlorine	10/5/2005	90	20
Zinc	11/15/2005	65	5

b. Effluent Limitations – Toxic Pollutants

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9VAC25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1). Total Residual Chlorine:
Although TRC is not used at this facility, it was found to be present above the laboratory's quantification level in 2005 Attachment A testing. Based upon this information, staff calculated WLAs for TRC using current critical flows. It was determined that a monthly average and daily maximum limitation of 16 µg/L be imposed (see **Attachment 8**). However, since TRC is not routinely used at this facility, it is staff's best professional judgment that a limit is not needed. In lieu of a limit, semiannual monitoring shall be conducted at representative Outfall 004. If the data show that a limit may be needed, the permit may be reopened to include one.

2). Metals/Organics:
A wasteload allocation analysis was performed on chlorides, heptachlor, selenium, and zinc. It was determined that a monthly average and daily maximum limitation of 0.0056 µg/L be imposed for heptachlor and a monthly average and daily maximum limitation of 7.3 µg/L be imposed for selenium (see **Attachment 8**). However, since heptachlor and selenium are not routinely used at this facility and VOCs are the identified pollutants of concern being discharged, it is staff's best professional judgment that limits are not needed. In lieu of limits, semiannual monitoring shall be conducted at representative Outfall 004. If the data show that limits may be needed, the permit may be reopened to include them.

Federal effluent guidelines do not apply to this discharge. The effluent limitations for tetrachloroethylene, trichloroethylene, trans 1,2-dichloroethylene, and 1,1,1-trichloroethane at Outfalls 001, 002, 003, and 004 have been established based on the capability of the chosen treatment technology.

Effluent Limitations and Monitoring Summary
The effluent limitations are presented in the following tables (19a – 19c of this fact sheet). Limits were established for pH, tetrachloroethylene, trichloroethylene, trans 1,2-dichloroethylene, and 1,1,1-trichloroethane. Monitoring for TRC, heptachlor, and selenium shall be conducted at Outfall 004. The pH limit is based upon water quality criteria and the limits for tetrachloroethylene, trichloroethylene, trans 1,2-dichloroethylene, and 1,1,1-trichloroethane are based on treatment technology.

18. Antibacksliding:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

19.a Effluent Limitations/Monitoring Requirements – Outfalls 001 and 002 :

Maximum Industrial Flows from Outfalls 001 and 002 are 0.047 MGD and 0.055 MGD, respectively.
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	Continuous	TIRE
pH (S.U.)	1	NA	NA	6.0	9.0	1/3M[(a)]	Grab
Tetrachloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[(a)]	Grab
Trichloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[(a)]	Grab
Trans 1,2-Dichloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[(a)]	Grab
1,1,1-Trichloroethane (µg/L)	2	NA	NA	NA	1.0	1/3M[(a)]	Grab

The basis for the limitations codes are:

1. Water Quality Standards
2. Best Professional Judgment (Limits of Technology)

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
TIRE = Totalizing, indicating and recording equipment.
S.U. = Standard units.
1/3M = Once every three months.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

(a) The quarterly monitoring periods shall be January through March, April through June, July through September, and October through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

19.b Effluent Limitations/Monitoring Requirements – Outfall 003:

Maximum Industrial Flow from Outfall 003 is 0.059 MGD.
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	Continuous	TIRE
pH (S.U.)	3	NA	NA	6.0	9.0	1/3M[a]	Grab
Tetrachloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
Trichloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
Trans 1,2-Dichloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
1,1,1-Trichloroethane (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
Chronic Toxicity -- *C. dubia* (TU_c)	NA	NA	NA	NA	NL	1/5YR[b]	8-HC
Chronic Toxicity -- *P. promelas* (TU_c)	NA	NA	NA	NA	NL	1/5YR[b]	8-HC

The basis for the limitations codes are:

1. Water Quality Standards
2. Best Professional Judgment (Limits of Technology)

MGD = Million gallons per day.
NA = Not applicable.
NL = No limit; monitor and report.
TIRE = Totalizing, indicating and recording equipment.
S.U. = Standard units.

1/3M = Once every three months.
1/5YR = Once every five years.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of eight (8) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of eight (8) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by 10% or more during the monitored discharge.

(a) The quarterly monitoring periods shall be January through March, April through June, July through September, and October through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.
(b) The monitoring period shall be January 1, 2012 – December 31, 2015. The DMR shall be submitted no later than the 10th day of the month following the monitoring period (January 10, 2016).

19.c Effluent Limitations/Monitoring Requirements – Outfall 004:

Maximum Industrial Flow from Outfall 004 is 0.20 MGD.
Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Daily Maximum	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	Continuous	TIRE
pH (S.U.)	1	NA	NA	6.0	9.0	1/3M[a]	Grab
Tetrachloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
Trichloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
Trans 1,2-Dichloroethylene (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
1,1,1-Trichloroethane (µg/L)	2	NA	NA	NA	1.0	1/3M[a]	Grab
Total Residual Chlorine (mg/L)	1, 3	NA	NA	NA	NL	1/6M[b]	Grab
Heptachlor (µg/L)	1, 3	NA	NA	NA	NL	1/6M[b]	Grab
Selenium (µg/L)	1, 3	NA	NA	NA	NL	1/6M[b]	Grab

The basis for the limitations codes are:

1. Water Quality Standards
2. Best Professional Judgment (Limits of Technology)
3. Best Professional Judgment

MGD =Million gallons per day.
NA =Not applicable.
NL =No limit; monitor and report.
TIRE =Totalizing, indicating and recording equipment.
S.U. =Standard units.

1/3M = Once every three months.
1/6M= Once every six months.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

(a) The quarterly monitoring periods shall be January through March, April through June, July through September, and October through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.
(b) The semiannual monitoring periods shall be January through June and July through December. The DMR shall be submitted no later than the 10th day of the month following the monitoring period.

20. Other Permit Requirements:

a. Permit Section Part I.B. contains quantification levels and compliance reporting instructions. 9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

b. Permit Section Part I.C. details the requirements for the Whole Effluent Toxicity Program. The VPDES Permit Regulation at 9VAC25-31-210 requires monitoring and 9VAC25-31-220.I, requires limitations in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. A toxics management program (TMP) is imposed for municipal facilities with a design rate >1.0 MGD; municipal facilities with an approved pretreatment program or required to develop a pretreatment program; or municipal or industrial facilities determined by the Board to need a TMP based on effluent variability, compliance history, instream waste concentration, and receiving stream characteristics.

There is a potential for toxicity in the discharge from the groundwater remediation system installed by IBM to remove VOCs present in the groundwater, and the instream waste concentration is greater than 33%. The characteristics of the groundwater being treated and the treatment process used at Outfall 003 are similar to that at Outfalls 001, 002 and 004. The permittee is required to perform WET testing at Outfall 003 once during this permit cycle. The results of testing performed at Outfall 003 is considered to be representative of Outfalls 001, 002, and 004. Although Outfall 004 discharges a greater quantity of wastewater and is thus considered the representative outfall, Outfall 003 is used for WET testing since permanent sampling equipment was installed at this location during a previous permit issuance when Outfall 004 was offline.

21. Other Special Conditions:

a. O&M Manual Requirement. Required by the VPDES Permit Regulation, 9 VAC 25-31-190.E. The permittee shall submit for approval an Operations and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO) by March 12, 2012. Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.

b. Notification Levels. The permittee shall notify the Department as soon as they know or have reason to believe:

1). That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

a) One hundred micrograms per liter;

b) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;

c) Five times the maximum concentration value reported for that pollutant in the permit application; or

d) The level established by the Board.

2). That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

a) Five hundred micrograms per liter;

b) One milligram per liter for antimony;

c) Ten times the maximum concentration value reported for that pollutant in the permit application; or

d) The level established by the Board.

c. Water Quality Criteria Reopener. The VPDES Permit Regulation at 9VAC25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

d. Materials Handling/Storage. 9VAC25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.

e. Submittal of Certificate of Analysis for Volatile Organic Compounds. The permittee is required to submit a copy of the results of the VOCs analyses with the Discharge Monitoring Reports. The purpose of this permit special condition is to allow staff to identify any VOCs not detected to date.

f. TMDL Reopener. This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL that may be developed and approved for the receiving stream.

22. Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

a. Special Conditions:
   1) The TMDL Reopener Special Condition has been added.

b. Monitoring and Effluent Limitations:
   1) Design flow values have been replaced with maximum 30-day flow values.
   2) The TMP sample type has been changed from 24-HC to 8-HC.
   3) The TMP monitoring frequency has changed from once every year to once every five years.
   4) Semiannual monitoring for heptachlor, selenium, and total residual chlorine has been added for Outfall 004.

c. Other:
   1) The following modifications have been made to change the NPDES Permit Rating Worksheet score from 25 to 40.
      a) In Factor 1, the Industrial Subcategory Code has changed from a 1 to a 2.
      b) In Factor 2, the flow has been changed to Type I/III to Type II.
   2) The rivermiles have been updated using updated coordinates that were determined on site using GPS.

24. Variances/Alternate Limits or Conditions: None

Public Notice Information:

First Public Notice Date: 11/10/2011 Second Public Notice Date: 11/17/2011

Public Notice Information is required by 9VAC25-31-280 B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193; Telephone No. (703) 583-3837; anna.westernik@deq.virginia.gov. See **Attachment 9** for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action and may request a public hearing during the comment period. Comments shall include the name, address and telephone number of the writer and of all persons represented by the commenter/requester and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a 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 requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads:

Outfalls 001 and 002
Discharges from the unnamed tributaries of Cannon Branch flow to Cannon Branch and then Broad Run. The 2010 Integrated Assessment reports that *E. coli* monitoring finds a bacteria impairment, resulting in an impaired classification for the recreation use. A bacteria TMDL for the Broad Run Watershed has been completed and approved on November 15, 2006. The discharge from this permit is a groundwater remediation operation, and it is staff's best professional opinion that it neither causes nor contributes to the bacteria levels in the stream.

Outfall 003 and 004
The discharge from unnamed tributaries of Flat Branch flow into Flat Branch and then Bull Run. The 2010 Integrated Assessment reports a PCB fish consumption advisory and an exceedance of the water quality criterion based tissue value of 20 ppb for PCBs in three species of fish at DEQ Monitoring Station 1aBUL010.28. Additionally, an exceedance of the fish tissue value of 12 ppb for heptachlor expoxide in flathead catfish in 2001 and an observed effect for an exceedance of the fish tissue value of 100 ppb for total chlordane in carp in 2004 was observed at DEQ Monitoring Station 1aBUL010.28. Sampling from IBM Outfall 004 on October 5, 2005 found a heptachlor concentration of 0.041 µg/L. The Bull Run PCB TMDL is due by 2018. Since the main pollutants of concern in these discharges are VOCs and PCBs were not detected in monitoring from the outfalls, PCB monitoring is not recommended at this time. Semiannually monitoring for heptachlor will be conducted during this permit cycle.

Biological monitoring at DEQ Monitoring Station 1aBUL009.61 finds a benthic macroinvertebrate impairment, resulting in an impaired classification for the aquatic life use. A sediment TMDL for Bull Run was approved on September 26, 2006. The discharge from this permit is an industrial ground water remediation operation. It is staff's best professional opinion that it neither causes nor contributes to the sediment levels in the stream.

See **Attachment 6**, Planning Statement.

25. Additional Comments:

Previous Board Action(s):	None
Staff Comments:	None.
Public Comment:	No comments were received during the public notice period.
EPA Checklist:	The checklist can be found in **Attachment 10**.

Attachments to Fact Sheet for VPDES Permit No. VA0085901

Attachment 1	Flow Frequency Determination
Attachment 2	NPDES Permit Rating Worksheet
Attachment 3	Facility Schematic/Diagram
Attachment 4	Manassas -- 205C Topographic Map
Attachment 5	Site Inspection
Attachment 6	Planning Statement
Attachment 7	Water Quality Criteria/Wasteload Allocation Analysis
Attachment 8	Effluent Limitations Determination
Attachment 9	Public Notice
Attachment 10	EPA Checklist

To: Kenneth H. Bi[illegible]ett@WDBRG@DEQ
From: Paul E. He[illegible] [illegible]QA@DEQ
Cc:
Subject: IBM - VA0085901
Attachment:
Date: 11/20/2000 3:42 PM

Kenneth,

I have reviewed the flow frequency request form submitted for the subject VPDES permit. All four outfalls listed on the request form discharge streams depicted as intermittent on the USGS topographic quadrangles. The flow frequencies for intermittent streams are 0.0 cfs for the 1Q10, 7Q10, 30Q5, high flow 1Q10, high flow 7Q10, and harmonic mean. If you have any questions or require flow frequency data for perennial reaches for modeling purposes, please let me know.

Attachment 1

NPDES PERMIT RATING WORK SHEET

- [ ] Regular Addition
- [ ] Discretionary Addition
- [X] Score change, but no status Change
- [ ] Deletion

VPDES NO. : VA0085901

Facility Name: International Business Machines Corporation
City / County: Manassas
Receiving Water: Cannon Branch, UT; Flat Branch, UT
Reach Number:

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power Plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rater

[ ] Yes; score is 600 (stop here) [X] NO; (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

[ ] YES; score is 700 (stop here)
[X] NO; (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: _____ Primary Sic Code: 4959 Other Sic Codes: _____ _____ _____

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
[ ] No process waste streams	0	0	[ ] 3.	3	15	[ ] 7.	7	35
[ ] 1.	1	5	[ ] 4.	4	20	[ ] 8.	8	40
[X] 2.	2	10	[ ] 5.	5	25	[ ] 9.	9	45
			[ ] 6.	6	30	[ ] 10.	10	50

Code Number Checked: 2
Total Points Factor 1: 10

FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)			Code	Points
Type I:	Flow < 5 MGD	[ ]	11	0
	Flow 5 to 10 MGD	[ ]	12	10
	Flow > 10 to 50 MGD	[ ]	13	20
	Flow > 50 MGD	[ ]	14	30
Type II:	Flow < 1 MGD	[ ]	21	10
	Flow 1 to 5 MGD	[ ]	22	20
	Flow > 5 to 10 MGD	[ ]	23	30
	Flow > 10 MGD	[ ]	24	50
Type III:	Flow < 1 MGD	[ ]	31	0
	Flow 1 to 5 MGD	[ ]	32	10
	Flow > 5 to 10 MGD	[ ]	33	20
	Flow > 10 MGD	[ ]	34	30

Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow		Code	Points
Type I/III:	< 10 %	[ ]	41	0
	10 % to < 50 %	[ ]	42	10
	> 50%	[ ]	43	20
Type II:	< 10 %	[ ]	51	0
	10 % to < 50 %	[ ]	52	20
	> 50 %	[X]	53	30

Code Checked from Section A or B: 53
Total Points Factor 2: 30

Attachment 2

NPDES PERMIT RATING WORK SHEET

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☐ Other: VOC

Permit Limits: (check one)

		Code	Points
X	< 100 lbs/day	1	0
	100 to 1000 lbs/day	2	5
	> 1000 to 3000 lbs/day	3	15
	> 3000 lbs/day	4	20

Code Number Checked: 1

Points Scored: 0

B. Total Suspended Solids (TSS): N/A

Permit Limits: (check one)

		Code	Points
	< 100 lbs/day	1	0
	100 to 1000 lbs/day	2	5
	> 1000 to 5000 lbs/day	3	15
	> 5000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

C. Nitrogen Pollutants: (check one): N/A ☐ Ammonia ☐ Other:

Permit Limits: (check one)

	Nitrogen Equivalent	Code	Points
	< 300 lbs/day	1	0
	300 to 1000 lbs/day	2	5
	> 1000 to 3000 lbs/day	3	15
	> 3000 lbs/day	4	20

Code Number Checked: NA

Points Scored: 0

Total Points Factor 3: 0

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

X YES; (If yes, check toxicity potential number below)

☐ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

	Toxicity Group	Code	Points		Toxicity Group	Code	Points		Toxicity Group	Code	Points
	No process waste streams	0	0		3.	3	0		7.	7	15
	1.	1	0		4.	4	0		8.	8	20
X	2.	2	0		5.	5	5		9.	9	25
					6.	6	10		10.	10	30

Code Number Checked: 2

Total Points Factor 4: 0

NPDES PERMIT RATING WORK SHEET

FACTOR 5: Water Quality Factors

A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been assigned to the discharge*

		Code	Points
[ ]	YES	1	10
[X]	NO	2	0

B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

		Code	Points
[X]	YES	1	0
[ ]	NO	2	5

C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

		Code	Points
[ ]	YES	1	10
[X]	NO	2	0

Code Number Checked: A 2 B 1 C 2

Points Factor 5: A 0 + B 0 + C 0 = **0**

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from factor 2) 53

Check appropriate facility HPRI code (from PCS):

	HPRI#	Code	HPRI Score
[ ]	1	1	20
[ ]	2	2	0
[ ]	3	3	30
[X]	4	4	0
[ ]	5	5	20

Enter the multiplication factor that corresponds to the flow code: 0.60

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.60 = 0

B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

	Code	Points
[ ]	1	10
[ ]	2	0

C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

	Code	Points
[ ]	1	10
[ ]	2	0

Code Number Checked: A 4 B _____ C _____

Points Factor 6: A 0 + B _____ + C _____ = **0**

NPDES PERMIT RATING WORK SHEET

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	10
2	Flows / Streamflow Volume	30
3	Conventional Pollutants	0
4	Public Health Impacts	0
5	Water Quality Factors	0
6	Proximity to Near Coastal Waters	0
	TOTAL (Factors 1 through 6)	40

S1. Is the total score equal to or grater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason: _____

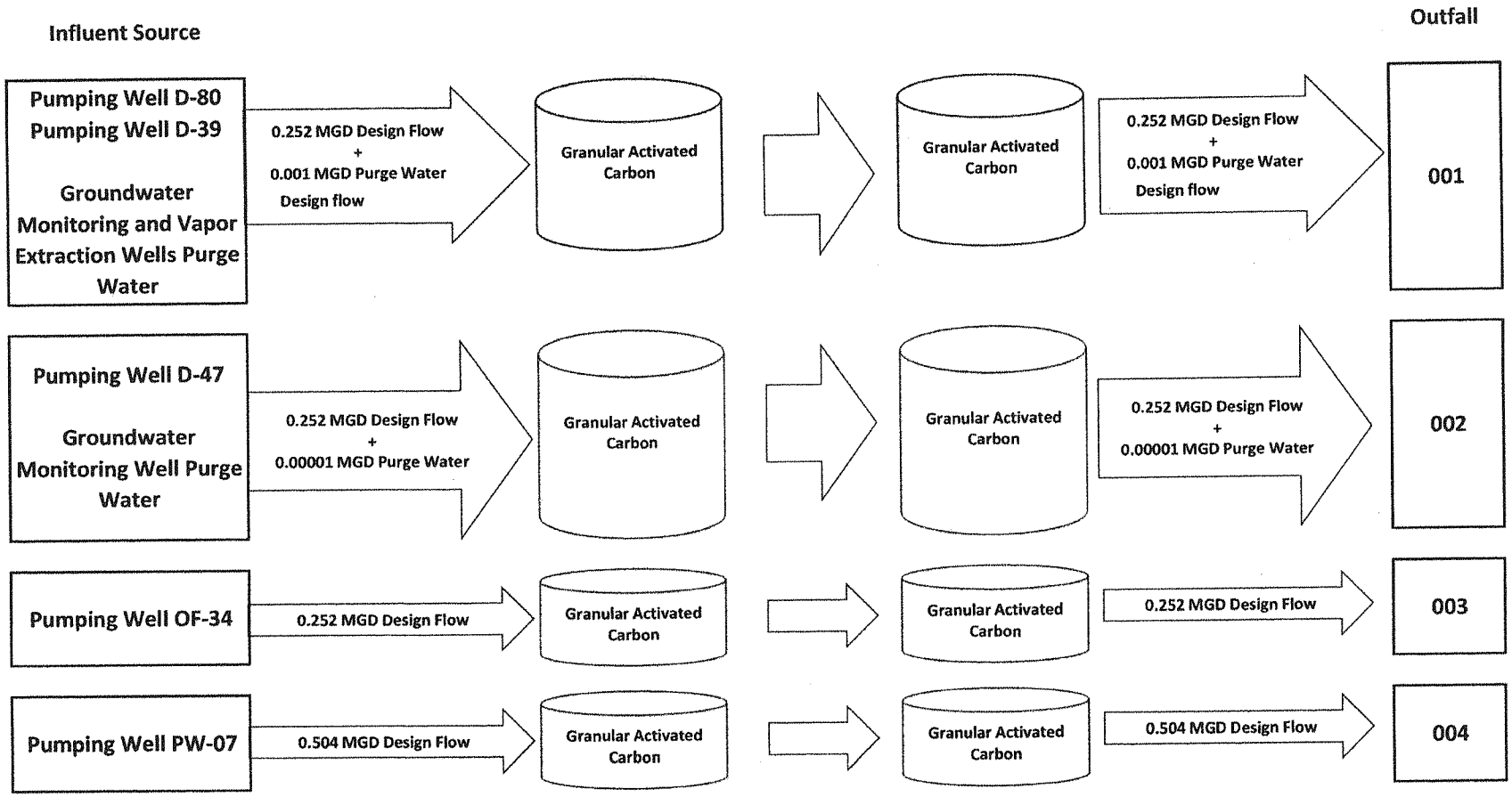
NEW SCORE : 40

OLD SCORE : 25

Permit Reviewer's Name : Anna Westernik

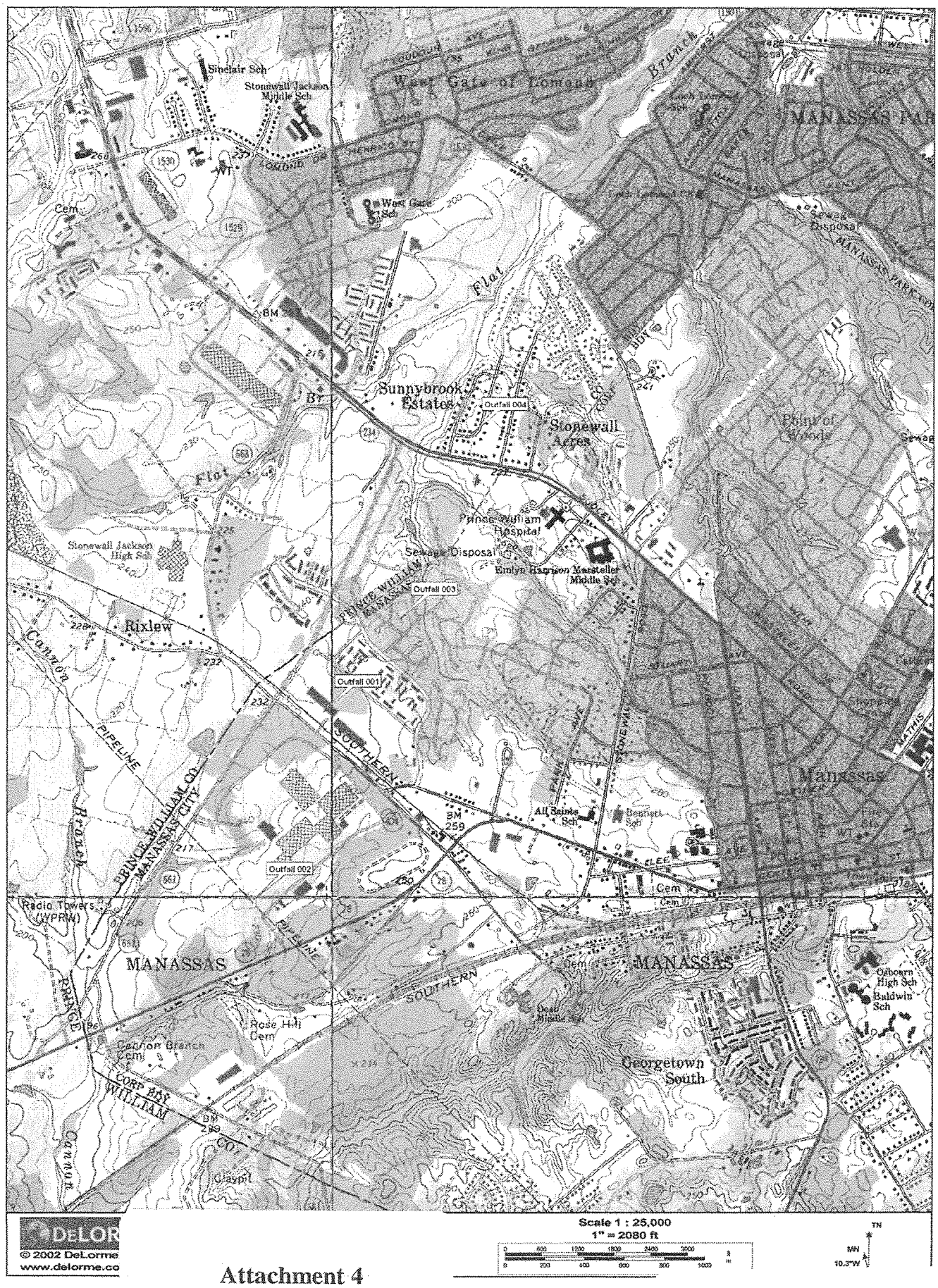
Phone Number: (703)583-3837

Date: July 29, 2011



Line Drawing of Existing IBM Groundwater Treatment System

Attachment 3



Attachment 4

Attachment 4

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

MEMORANDUM

Northern Regional Office

TO: File

FROM: Anna Westernik, Water Permit Writer

DATE: July 15, 2011

SUBJECT: July 8, 2011 Site Visit to the IBM Groundwater Remediation Facility - VA0085901

A visit to the abovementioned facility was conducted on July 8, 2011 to gather information for the permit reissuance. Anna Westernik and Doug Frasier toured the remediation facility and discharge outfalls with Dean Chartrand, Environmental Engineer with IBM. .

IBM operates four groundwater remediation systems in the western portion of Prince William County and the City of Manassas. The former IBM manufacturing facility, the origin of the volatile organic compound (VOC) contamination in the groundwater, is now owned by Lockheed Martin and Micron Technology. IBM's groundwater operations are independent of both companies. Outfall 001 is located on Lockheed Martin property, Outfall 002 is located on Micron Technology property, Outfall 003 is located on City of Manassas property, and Outfall 004 is located on Prince William County property. The groundwater remediation systems that are described in this memorandum are part of an EPA approved corrective action program to prevent the migration and to remove VOCs present in the groundwater related to former IBM manufacturing operations.

Outfall 001

The groundwater treatment system for Wells D39 and D80, located in the north parking lot of the Lockheed Martin Building 101, consist of two 10,000 pound carbon vessels that operate in series. When the vessel carbon must be changed, a truck removes the carbon slurry with suction hoses and then pumps in new carbon. Outfall 001 representative samples are collected from sample sink taps within the well house. Flow is measured by a magnetic flow meter connected to the discharge pipe and is recorded in a data logger. The treated groundwater is discharged to the Lockheed Martin storm water sewer system adjacent to the well house which "daylights" in a wooded area adjacent to the Building 102 south parking lot.. Outfall 001 discharges to an unnamed tributary Cannon Branch. The outfall was observed. However, the stream was not visible on this date due to extensive brush.

Outfall 002

The Well D47 groundwater treatment system that discharges to Outfall 002 houses two 10,000 pound carbon vessels that operate in series. A sump in the floor pumps the groundwater to the carbon treatment system. A dehumidifier is located in the building to reduce the condensation. When the vessel carbon must be changed, a truck removes the carbon slurry with suction hoses and then pumps in new carbon. This process takes less than 8 hours and is done approximately every 2 years. Outfall 002 representative samples are collected from sample sink taps within the well house. Flow is measured by a magnetic flow meter connected to the discharge pipe and is recorded in a data logger. Outfall 002 discharges at a concrete headwall lined with riprap that leads to an unnamed tributary of Cannon Branch. The stream was clear and free flowing on this date.

Outfall 003

The Well OF34 groundwater treatment system appurtenances and their operation are similar to that for Well D47 that discharges to Outfall 002. The treated groundwater is piped through a manhole and outlet pipe before discharge to a riprap channel leading to an unnamed tributary of Flat Branch. On this date, the receiving stream was clear and free flowing. This property is leased from the City of Manassas. This outfall was chosen as the representative location to test the plume for Whole Effluent Toxicity (WET). A permanent sampling device has been installed in the well house for this purpose.

Outfall 004

The Well PW07 groundwater treatment system that discharges to Outfall 004 has two vessels, each with a 20,000 pound carbon capacity. The carbon is replaced approximately every three years. This treatment system was originally a supply well operated by the Prince William County Service Authority. IBM has a 20-year property lease with an option to pursue another 20-year lease. The building has a floor sump and a dehumidifier that drains to the floor sump. This building has no sampling sink. Sampling is done directly from the pipe. The effluent is piped to a manhole on the outside of the building, ties into a Prince William County storm water system catch basin near the curb, crosses under the street to a second catch basin, and discharges to a storm sewer easement on the next block that empties into an unnamed tributary of Flat Branch. The contribution of this discharge to stream flow is significant. The area upstream of the outfall had minimal flow, whereas the area downstream of the discharge had a moderate volume of clear flow.

Carbon treatment systems are generally low maintenance; carbon replacement in the units ranges from every 18 months to every 3 years. Units are generally taken offline for electrical issues or if pump malfunction. Systems are monitored and accessed remotely; however, IBM staff will physically examine systems about once or twice a week.

To:	Anna Westernik
From:	Katie Conaway
Date:	July 12, 2011
Subject:	Planning Statement for IBM
Permit Number:	VA0085901

Discharge Type: Industrial

Outfall 001:

Discharge Flow: 0.252 MGD
Receiving Stream: Canon Branch, UT
Latitude / Longitude: 38°45'31" / -77°30'5.6"
Streamcode: 1aXGO
Waterbody: VAN-A19R
Water Quality Standards: Class III, Section 7a. Special Standards: g
Rivermile: 001.14

Outfall 002

Discharge Flow: 0.252 MGD
Receiving Stream: Canon Branch, UT
Latitude / Longitude: 38°44'57.5" / -77°30' 7.4"
Streamcode: 1aXGN
Waterbody: VAN-A19R
Water Quality Standards: Class III, Section 7a. Special Standards: g
Rivermile: 000.28

Outfall 003

Discharge Flow: 0.252 MGD
Receiving Stream: Flat Branch, UT
Latitude / Longitude: 38°45'48.3" / -77°29'39.1"
Streamcode: 1aXGP
Waterbody: VAN-A21R
Water Quality Standards: Class III, Section 7a. Special Standards: g
Rivermile: 000.36

Outfall 004

Discharge Flow: 0.504 MGD
Receiving Stream: Flat Branch, UT
Latitude / Longitude: 38°46'24.2" / -77°29'32.9"
Streamcode: 1aXBE
Waterbody: VAN-A21R
Water Quality Standards: Class III, Section 7a. Special Standards: g
Rivermile: 000.25

1. Is there monitoring data for the receiving stream?

There are no monitoring data for any of the four receiving streams.

- If yes, please attach latest summary.
- If no, where is the nearest downstream monitoring station.

Outfalls 001 and 002:

Outfalls 001 and 002 discharge to two different unnamed tributaries to Cannon Branch. Cannon Branch flows into Broad Run. The nearest downstream DEQ monitoring stations are both found on Broad Run: (1) Fish Tissue and Sediment Station 1aBRU002.96, located just downstream from the Manassas Airport; and (2) Ambient Station 1aBRU001.59, located at the Route 692 Bridge Crossing. Station 1aBRU002.96 is located approximately 4.8 rivermiles downstream from Outfall 001 and approximately 4.3 rivermiles downstream from Outfall 002. 1aBRU001.59 is located approximately 5.9 rivermiles downstream from Outfall 001 and approximately 5.7 rivermiles downstream from Outfall 002. The following are monitoring summaries for each of the two stations, as taken from the 2010 Integrated Assessment:

Station 1aBRU002.96:

Class III, Section 7a, special stds. g.

DEQ fish tissue/sediment monitoring station 1aBRU002.96, downstream from the Manassas Airport.

The aquatic life and fish consumption uses are considered fully supporting. The recreation and wildlife uses were not assessed.

Station 1aBRU001.59:

Class III, Section 7a, special stds. g.

DEQ ambient water quality monitoring station 1aBRU011.48 at Sudley Manor Road.

Historical Note: This segment was included in Attachment C (Plaintiff's list of waters that were added to the 303(d) list in 2002) for fecal coliform.

Historical Note: In 2004, the assessment unit ID was changed from VAN-A19R_BRU01A00 to account for monitoring downstream on Broad Run.

Historical Note: In 2010, station 1aBRU011.24 was combined with station 1aBRU011.48 to reflect the correct river mile notation for the station location (both stations were located on Sudley Manor Road).

E. coli monitoring finds a bacteria impairment, resulting in an impaired classification for the recreation use. A bacteria TMDL for the Broad Run watershed has been completed and approved. The aquatic life and wildlife uses are considered fully supporting. The fish consumption use was not assessed.

Outfalls 003 and 004:

Outfalls 003 and 004 discharge to two different unnamed tributaries to Flat Branch. Flat Branch flows into Bull Run. The nearest downstream DEQ monitoring station is Station 1aBUL011.12, located on Bull Run just upstream from the Route 616 bridge crossing. Station 1aBUL011.12 is located approximately 3.4 rivermiles downstream from Outfall 003 and approximately 2.8 rivermiles downstream from Outfall 004. The following is a monitoring summary for Station 1aBUL011.12 as taken from the 2010 Integrated Assessment:

> *Class III, Section 7a, special stds. g.*
>
> *DEQ freshwater probabilistic monitoring station 1aBUL009.61, downstream from Route 28, ambient, biological, and fish tissue/sediment station 1aBUL010.28, at Route 28, ambient monitoring station 1aBUL011.03, at Route 616 (Old Centerville Road), and biological station 1aBUL011.12, at upstream of Route 616.*
>
> *The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory and fish tissue monitoring. Additionally, an exceedance of the fish tissue value (TV) of 12 ppb for heptachlor epoxide that occurred in one specie (flathead catfish) in 2001 at monitoring station 1aBUL010.28, noted by an observed effect. An observed effect is also noted for an exceedance of the fish tissue value (TV) of 110 ppb for total chlordane that occurred in one specie (carp) in 2004.*
>
> *Biological monitoring finds a benthic macroinvertebrate impairment, resulting in an impaired classification for the aquatic life use. A benthic TMDL for the Bull Run watershed has been completed and approved. The recreation and wildlife uses are considered fully supporting.*

2. Is the receiving stream on the current 303(d) list?

No, none of the receiving streams are listed as impaired.

- If yes, what is the impairment?

N/A

- Has the TMDL been prepared?

N/A

- If yes, what is the WLA for the discharge?

N/A

- If no, what is the schedule for the TMDL?

N/A

3. If the answer to (2) above is no, is there a downstream 303(d) listed impairment?

Yes. Both Broad Run (downstream from Outfalls 001 and 002) and Bull Run (downstream from Outfalls 003 and 004) are listed as impaired.

- If yes, what is the impairment?

Broad Run Impairments:

Recreational Use Impairment: Sufficient excursions from the maximum *E. coli* bacteria criterion (8 of 33 samples - 24.2%) were recorded at DEQ's ambient water quality monitoring station (1aBRU001.59) at the Route 692 crossing to assess this stream segment as not supporting the recreation use goal for the 2010 water quality assessment.

Bull Run Impairments:

Aquatic Life Use Impairment: Two biological monitoring events in 2005 (1aBUL009.61), two biological monitoring events in 2004 and one biological monitoring event in 2005 (1aBUL010.28), and two biological events in 2005 (1aBUL011.12) each resulted in a VSCI score which indicates an impaired macroinvertebrate community.

Fish Consumption use Impairment: The fish consumption use is categorized as impaired due to a Virginia Department of Health, Division of Health Hazards Control, PCB fish consumption advisory. The advisory, dated 12/13/04 and modified 07/27/05, limits consumption of carp and channel catfish to no more than two meals per month. The affected area includes Bull Run near Manassas Park from the I-66 bridge downstream approximately fourteen miles to the Route 612 (Yates Ford Road) bridge. Additionally. fish tissue data revealed excursions of the water quality criterion based tissue value (TV) of 20 parts per billion (ppb) for polychlorinated biphenyls (PCBs) in three species of fish (carp, channel catfish and flathead catfish) in 2004 at monitoring station 1aBUL010.28.

- Has a TMDL been prepared?

  - Broad Run Recreational Use Impairment: Yes. EPA approved on 11/15/2006.

  - Bull Run Aquatic Life Use Impairment: Yes. EPA Approved on 9/26/2006.

  - Bull Run PCBs in Fish Tissue Impairment: No.

- Will the TMDL include the receiving stream?

The TMDLs did not/will not specifically include the receiving streams. However, TMDLs will consider all relevant upstream point source discharges.

- Is there a WLA for the discharge?

Broad Run Recreational Use TMDL – NO

Bull Run Benthic TMDL – The Bull Run Benthic TMDL determined that sediment was the key stressor impacting the benthic community. This facility was given a WLA of 1.62 tons/year of sediment in the TMDL; however, this loading is actually associated with the stormwater runoff

from the Micron Technologies General Industrial Stormwater Permit (VAR050907) located on the same site as the old IBM facility. There is no expected sediment discharge from the IBM facility and no WLA should be assigned for this permit.

- What is the schedule for the TMDL?

  Bull Run PCB TMDL – Due by 2018.

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

   A. Two of this facility's outfalls are located within the Bull Run watershed, which has a PCB impairment (TMDL due by 2018). According to PCB Point Source Monitoring Guidance (TMDL Guidance Memo No. 09-2001) this facility is a candidate for low-level PCB monitoring, based upon its designation as an industrial facility with a SIC code subject to monitoring requirements. However, after consulting with representatives from the facility, DEQ has determined that the main pollutants of concern at this site are VOCs, not PCBs. TMDL/Assessment staff does not feel that low-level PCB monitoring is warranted for this facility. No PCB monitoring is recommended at this time.

   B. There is a completed downstream TMDL for the aquatic life use impairment for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.

   C. Drainage Area at Each Outfall:

      Outfall 001: 0.05 mi^2
      Outfall 002: 0.22 mi^2
      Outfall 003: 0.51 mi^2
      Outfall 004: 1.45 mi^2

5. Fact Sheet Requirements – Please provide information on other VPDES permits or VADEQ monitoring stations located within a 2 mile radius of the facility. In addition, please provide information on any drinking water intakes located within a 5 mile radius of the facility.

   Outfall 001: There are no DEQ monitoring stations or VPDES facilities within a 2 mile radius of this outfall.

   Outfall 002: There are no DEQ monitoring stations or VPDES facilities within a 2 mile radius of this outfall.

   Outfall 003: There are no DEQ monitoring stations within a 2 mile radius of this outfall. The only VPDES permitted facility within a 2 mile radius is VA0087858 – Sunoco Manassas Terminal.

   Outfall 004: There is one DEQ monitoring Station within a 2 mile radius of this outfall:
   1aBUL013.40 – Bull Run, near the Bull Run Recreation Area

   There is one VPDES facility within a 2 mile radius of this outfall:
   VA0087858 – Sunoco Manassas Terminal

   There are no drinking water intakes within a 5 mile radius of any of these outfalls.

FRESHWATER
WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Attachment 7

Facility Name: IBM -- Outfall 004

Permit No.: VA0085901

Receiving Stream: Flat Branch, UT

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =		mg/L
90% Temperature (Annual) =		deg C
90% Temperature (Wet season) =		deg C
90% Maximum pH =		SU
10% Maximum pH =		SU
Tier Designation (1 or 2) =	1	
Public Water Supply (PWS) Y/N? =	n	
Trout Present Y/N? =	n	
Early Life Stages Present Y/N? =	y	

Stream Flows

1Q10 (Annual) =	0	MGD
7Q10 (Annual) =	0	MGD
30Q10 (Annual) =	0	MGD
1Q10 (Wet season) =	0	MGD
30Q10 (Wet season)	0	MGD
30Q5 =	0	MGD
Harmonic Mean =	0	MGD

Mixing Information

Annual - 1Q10 Mix =	100	%
- 7Q10 Mix =	100	%
- 30Q10 Mix =	100	%
Wet Season - 1Q10 Mix =	100	%
- 30Q10 Mix =	100	%

Effluent Information

Mean Hardness (as CaCO3) =	360	mg/L
90% Temp (Annual) =		deg C
90% Temp (Wet season) =		deg C
90% Maximum pH =		SU
10% Maximum pH =		SU
Discharge Flow =	0.2	MGD

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Acenapthene	5	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	--	--	--	--	na	9.9E+02
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	--	--	--	--	na	9.3E+00
Acrylonitrile[C]	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	--	--	--	--	na	2.5E+00
Aldrin [C]	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	--	--	--	--	3.0E+00	--	na	5.0E-04
Ammonia-N (mg/l) (Yearly)	0	5.84E+01	7.09E+00	na	--	5.84E+01	7.09E+00	na	--	--	--	--	--	--	--	--	--	5.84E+01	7.09E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	5.84E+01	7.09E+00	na	--	5.84E+01	7.09E+00	na	--	--	--	--	--	--	--	--	--	5.84E+01	7.09E+00	na	--
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	--	--	--	--	na	4.0E+04
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	--	--	--	--	na	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene [C]	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	--	--	--	--	na	5.1E+02
Benzidine[C]	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	--	--	--	--	na	2.0E-03
Benzo (a) anthracene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (b) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (k) fluoranthene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Benzo (a) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Bis2-Chloroethyl Ether [C]	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	--	--	--	--	na	5.3E+00
Bis2-Chloroisopropyl Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	--	--	--	--	na	6.5E+04
Bis 2-Ethylhexyl Phthalate [C]	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	--	--	--	--	na	2.2E+01
Bromoform [C]	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	--	--	--	--	na	1.4E+03
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	--	--	--	--	na	1.9E+03
Cadmium	0	1.7E+01	3.1E+00	na	--	1.7E+01	3.1E+00	na	--	--	--	--	--	--	--	--	--	1.7E+01	3.1E+00	na	--
Carbon Tetrachloride [C]	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	--	--	--	--	na	1.6E+01
Chlordane [C]	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	8.1E-03
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Chlorodibromomethane[C]	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.3E+02**
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.1E+04**
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.6E+03**
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.5E+02**
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	**8.3E-02**	**4.1E-02**	**na**	**--**
Chromium III	0	1.6E+03	2.1E+02	na	--	1.6E+03	2.1E+02	na	--	--	--	--	--	--	--	--	--	**1.6E+03**	**2.1E+02**	**na**	**--**
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	**1.6E+01**	**1.1E+01**	**na**	**--**
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Chrysene [C]	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.8E-02**
Copper	0	4.5E+01	2.7E+01	na	--	4.5E+01	2.7E+01	na	--	--	--	--	--	--	--	--	--	**4.5E+01**	**2.7E+01**	**na**	**--**
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	--	--	--	--	--	--	**2.2E+01**	**5.2E+00**	**na**	**1.6E+04**
DDD [C]	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.1E-03**
DDE [C]	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.2E-03**
DDT [C]	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	**1.1E+00**	**1.0E-03**	**na**	**2.2E-03**
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	**--**	**1.0E-01**	**na**	**--**
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	**1.7E-01**	**1.7E-01**	**na**	**--**
Dibenz(a,h)anthracene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.8E-01**
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.3E+03**
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**9.6E+02**
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.9E+02**
3,3-Dichlorobenzidine[C]	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.8E-01**
Dichlorobromomethane [C]	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.7E+02**
1,2-Dichloroethane [C]	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.7E+02**
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**7.1E+03**
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.0E+04**
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.9E+02**
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
1,2-Dichloropropane[C]	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.5E+02**
1,3-Dichloropropene [C]	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.1E+02**
Dieldrin [C]	0	2.4E-01	5.6E-02	na	5.4E-04	2.4E-01	5.6E-02	na	5.4E-04	--	--	--	--	--	--	--	--	**2.4E-01**	**5.6E-02**	**na**	**5.4E-04**
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.4E+04**
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**8.5E+02**
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.1E+06**
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.5E+03**
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**5.3E+03**
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.8E+02**
2,4-Dinitrotoluene [C]	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.4E+01**
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**5.1E-08**
1,2-Diphenylhydrazine[C]	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.0E+00**
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	**2.2E-01**	**5.6E-02**	**na**	**8.9E+01**
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	**2.2E-01**	**5.6E-02**	**na**	**8.9E+01**
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	**2.2E-01**	**5.6E-02**	**--**	**--**
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**8.9E+01**
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	**8.6E-02**	**3.6E-02**	**na**	**6.0E-02**
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.0E-01**

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	**na**	**2.1E+03**
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	**na**	**1.4E+02**
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	**na**	**5.3E+03**
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	**1.0E-02**	**na**	--
Heptachlor [C]	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	**5.2E-01**	**3.8E-03**	**na**	**7.9E-04**
Heptachlor Epoxide[C]	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	**5.2E-01**	**3.8E-03**	**na**	**3.9E-04**
Hexachlorobenzene[C]	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	**na**	**2.9E-03**
Hexachlorobutadiene[C]	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	**na**	**1.8E+02**
Hexachlorocyclohexane Alpha-BHC[C]	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	**na**	**4.9E-02**
Hexachlorocyclohexane Beta-BHC[C]	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	**na**	**1.7E-01**
Hexachlorocyclohexane Gamma-BHC[C] (Lindane)	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	**9.5E-01**	--	**na**	**1.8E+00**
Hexachlorocyclopentadiene	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	**na**	**1.1E+03**
Hexachloroethane[C]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	**na**	**3.3E+01**
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	**2.0E+00**	**na**	--
Indeno (1,2,3-cd) pyrene [C]	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	**na**	**1.8E-01**
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Isophorone[C]	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	**na**	**9.6E+03**
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	**0.0E+00**	**na**	--
Lead	0	6.1E+02	6.9E+01	na	--	6.1E+02	6.9E+01	na	--	--	--	--	--	--	--	--	--	**6.1E+02**	**6.9E+01**	**na**	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	**1.0E-01**	**na**	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Mercury	0	1.4E+00	7.7E-01	- -	- -	1.4E+00	7.7E-01	- -	- -	--	--	--	--	--	--	--	--	**1.4E+00**	**7.7E-01**	**- -**	**- -**
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	**na**	**1.5E+03**
Methylene Chloride [C]	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	**na**	**5.9E+03**
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	**3.0E-02**	**na**	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	**0.0E+00**	**na**	--
Nickel	0	5.4E+02	6.0E+01	na	4.6E+03	5.4E+02	6.0E+01	na	4.6E+03	--	--	--	--	--	--	--	--	**5.4E+02**	**6.0E+01**	**na**	**4.6E+03**
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	**na**	**6.9E+02**
N-Nitrosodimethylamine[C]	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	**na**	**3.0E+01**
N-Nitrosodiphenylamine[C]	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	**na**	**6.0E+01**
N-Nitrosodi-n-propylamine[C]	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	**na**	**5.1E+00**
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	**2.8E+01**	**6.6E+00**	**na**	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	**6.5E-02**	**1.3E-02**	**na**	--
PCB Total[C]	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	**1.4E-02**	**na**	**6.4E-04**
Pentachlorophenol [C]	0	7.7E-03	5.9E-03	na	3.0E+01	7.7E-03	5.9E-03	na	3.0E+01	--	--	--	--	--	--	--	--	**7.7E-03**	**5.9E-03**	**na**	**3.0E+01**
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	**na**	**8.6E+05**
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	**na**	**4.0E+03**
Radionuclides	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	**na**	**4.0E+00**
Radium 226 + 228 (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	**na**	--

Parameter	Background	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				**Most Limiting Allocations**			
(ug/l unless noted)	Conc.	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	**Acute**	**Chronic**	**HH (PWS)**	**HH**
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	--	--	--	--	**2.0E+01**	**5.0E+00**	**na**	**4.2E+03**
Silver	0	3.1E+01	--	na	--	3.1E+01	--	na	--	--	--	--	--	--	--	--	--	**3.1E+01**	**--**	**na**	**--**
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
1,1,2,2-Tetrachloroethane[C]	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.0E+01**
Tetrachloroethylene[C]	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.3E+01**
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**4.7E-01**
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**6.0E+03**
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Toxaphene [C]	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	--	--	--	--	**7.3E-01**	**2.0E-04**	**na**	**2.8E-03**
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	--	--	--	--	**4.6E-01**	**7.2E-02**	**na**	**--**
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**7.0E+01**
1,1,2-Trichloroethane[C]	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**1.6E+02**
Trichloroethylene [C]	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**3.0E+02**
2,4,6-Trichlorophenol [C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.4E+01**
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**--**
Vinyl Chloride[C]	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	**--**	**--**	**na**	**2.4E+01**
Zinc	0	3.5E+02	3.5E+02	na	2.6E+04	3.5E+02	3.5E+02	na	2.6E+04	--	--	--	--	--	--	--	--	**3.5E+02**	**3.5E+02**	**na**	**2.6E+04**

Notes:

1. All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
2. Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
3. Metals measured as Dissolved, unless specified otherwise
4. "C" indicates a carcinogenic parameter
5. Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
   Antidegradation WLAs are based upon a complete mix.
6. Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
   = (0.1(WQC - background conc.) + background conc.) for human health
7. WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	1.9E+00
Chromium III	1.3E+02
Chromium VI	6.4E+00
Copper	1.6E+01
Iron	na
Lead	4.1E+01
Manganese	na
Mercury	4.6E-01
Nickel	3.6E+01
Selenium	3.0E+00
Silver	1.2E+01
Zinc	1.4E+02

Note: do not use QL's lower than the minimum QL's provided in agency guidance

8/2/2011 10:08:56 AM

Facility = IBM Corporation
Chemical = Chlorides
Chronic averaging period = 4
WLAa = 860000
WLAc = 230000
Q.L. = 20000
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 39000
Variance = 5475600
C.V. = 0.6
97th percentile daily values = 94903.2
97th percentile 4 day average = 64887.8
97th percentile 30 day average= 47036.0
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

39000

8/2/2011 10:11:18 AM

Facility = IBM Corporation
Chemical = Heptachlor
Chronic averaging period = 4
WLAa = 0.52
WLAc = 0.0038
Q.L. = 0.021
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 5
Expected Value = .015357
Variance = .000084
C.V. = 0.6
97th percentile daily values = .037370
97th percentile 4 day average = .025551
97th percentile 30 day average= .018521
< Q.L. = 4
Model used = BPJ Assumptions, Type 1 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 5.55778417940228E-03
Average Weekly limit = 5.55778417940228E-03
Average Monthly LImit = 5.55778417940228E-03

The data are:

0.041
0
0
0
0

9/14/2011 10:49:22 AM

Facility = IBM Corporation
Chemical = Selenium
Chronic averaging period = 4
WLAa = 20
WLAc = 5
Q.L. = 3.4
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 5
Expected Value = 4
Variance = 5.76
C.V. = 0.6
97th percentile daily values = 9.73367
97th percentile 4 day average = 6.65516
97th percentile 30 day average= 4.82421
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 7.31287392026616
Average Weekly limit = 7.31287392026616
Average Monthly LImit = 7.31287392026616

The data are:

3.4
4
4.4
4.1
4.1

8/2/2011 10:33:59 AM

Facility = IBM Corporation
Chemical = TRC
Chronic averaging period = 4
WLAa = 19
WLAc = 11
Q.L. = 20
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 90
Variance = 2916
C.V. = 0.6
97th percentile daily values = 219.007
97th percentile 4 day average = 149.741
97th percentile 30 day average= 108.544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 16.0883226245855
Average Weekly limit = 16.0883226245855
Average Monthly LImit = 16.0883226245855

The data are:

90

7/15/2011 11:43:06 AM

Facility = IBM -- Outfall 004
Chemical = Zinc
Chronic averaging period = 4
WLAa = 350
WLAc = 350
Q.L. = 5
# samples/mo. = 1
# samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 65
Variance = 1521
C.V. = 0.6
97th percentile daily values = 158.172
97th percentile 4 day average = 108.146
97th percentile 30 day average= 78.3934
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

65

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into water bodies in Prince William County, Virginia and the City of Manassas Virginia.

PUBLIC COMMENT PERIOD: October 29, 2011 to 5:00 p.m. on December 12, 2011

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board.

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: International Business Machines Corporation, 8976 Wellington Road, Manassas, VA 20109 -- VA0085901

NAME AND ADDRESSES OF FACILITY: International Business Machines Corporation, 9100 Ashton Ave., Bldg. 500; 9600 Godwin Drive, Bldg. 401; 8944 Rolling Rd.; 8417 Sunset Drive-- Manassas, VA 20110

PROJECT DESCRIPTION: The IBM Corporation has applied for reissuance of a permit for groundwater remediation discharges from four wells in Prince William County and the City of Manassas. The applicant proposes to release industrial wastewater from groundwater remediation wells at an average rate of 0.10 million gallons per day into an unnamed tributary of Cannon Branch in Prince William County located in the Potomac River watershed and 0.26 million gallons per day into an unnamed tributary of Flat Branch in Prince William County and the City of Manassas located in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, tetrachloroethylene, trichloroethylene, trans 1,2-dichloroethylene, and 1,1,1-trichloroethane.

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 and requests 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. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.
Name: Anna T. Westernik
Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193
Phone: (703) 583-3837 E-mail: anna.westernik@deq.virginia.gov Fax: (703) 583-3821

State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	International Business Machines Corporation
NPDES Permit Number:	VA00085901
Permit Writer Name:	Anna Westernik
Date:	August 9, 2011

Major [ ] **Minor** [X] **Industrial** [X] **Municipal** [ ]

I.A. Draft Permit Package Submittal Includes:	**Yes**	**No**	**N/A**
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?		X	
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics	**Yes**	**No**	**N/A**
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet **or** permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet **or** permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?	X		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?	X		
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	
I.B. Permit/Facility Characteristics – cont.	**Yes**	**No**	**N/A**
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	

Attachment 10

12. Are there any production-based, technology-based effluent limits in the permit?	X		
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?	X		
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Review Checklist – For Non-Municipals
(To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	**Yes**	**No**	**N/A**
1. Does the fact sheet **or** permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	**Yes**	**No**	**N/A**
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether "antibacksliding" provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	**Yes**	**No**	**N/A**
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a "reasonable measure of ACTUAL production" for the facility (not design)?			X
5. Does the permit contain "tiered" limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X
II.D. Water Quality-Based Effluent Limits – cont.	**Yes**	**No**	**N/A**
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
d. Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?		X	
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?		X	
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?			
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			X

II.G. Standard Conditions	Yes	No	N/A
1. Does the **permit** contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		

List of Standard Conditions – 40 CFR 122.41		
Duty to comply	Property rights	Reporting Requirements
Duty to reapply	Duty to provide information	Planned change
Need to halt or reduce activity not a defense	Inspections and entry	Anticipated noncompliance
	Monitoring and records	Transfers
Duty to mitigate	Signatory requirement	Monitoring reports
Proper O & M	Bypass	Compliance schedules
Permit actions	Upset	24-Hour reporting
		Other non-compliance

2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Anna T. Westernik
Title	ENVIRONMENTAL SPECIALIST II
Signature	A T Westernik
Date	August 9, 2011