



COMMONWEALTH of VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL QUALITY

Peter W. Schmidt  
Director

P. O. Box 10009  
Richmond, Virginia 23240-0009  
(804) 762-4000

June 21, 1995

Department of the Navy  
Atlantic Division  
Naval Facilities Engineering Command  
1510 Gilbert Street  
Attn: Code 1822, Mr. David Forsythe  
Norfolk, VA 23511-2699

**Re:** Comments on Proposed Discharge Limits, Camp Allen  
Landfill, Norfolk Naval Base

Dear Mr. Forsythe:

The Virginia Department of Environmental Quality has completed its review of the proposed discharge limits for the onsite wastewater treatment system at the above-referenced site. Review of this information was initially undertaken by the appropriate DEQ VPDES headquarters staff, and subsequently by the Tidewater Regional Office. Enclosed are the comments provided by both offices.

Please contact Paul Spaulding at (804) 762-4187 if you have any questions regarding this information.

Sincerely,

A handwritten signature in cursive script that reads "Paul Spaulding".

Paul Spaulding  
ARARs Coordinator, Office of  
Federal Facilities Restoration and  
Superfund Programs

Enclosure

cc: Erica Dameron  
Dinesh Vithani

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY

OFFICE OF WATER RESOURCES MANAGEMENT

WATER DIVISION

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SUBJECT: Camp Allen Landfill Site, Areas A and B, Norfolk Naval  
Base Package Review

TO: Burton Tuxford

FROM: George Cosby *GC*

DATE: February 14, 1995

COPIES:

As requested, this is a review of the materials submitted by the Office of Superfund and Federal Facilities Program dated February 2, 1995. The materials relate to the remediation of soil and groundwater at the Camp Allen Landfill site, a Federal facility located at the Norfolk Naval Base.

Proposal

The proposal consists of the treatment of ground water and soil vapor extraction by a water treatment system prior to discharge to Bousch Creek. A schematic of the water treatment system containing a material balance is included in the submittal package. The discharge flow rate is expected to range between 50,000 to 570,000 gallons per day. A list of contaminants detected at the site was provided. Also provided was a list of pollutants that will be monitored in the discharge. The pollutants found in the discharge will not be limited because either a Virginia Water Quality Standard does not exist or the pollutant's levels are below the WQS.

Comments

Effluent monitoring appears to be based upon applying the WQS to end of pipe, without regard to the receiving waters. Although the proposal states there is low flow, it may be more appropriate to determine effluent limitations by considering mixing with the receiving waters (waste load allocation) and also determining if there are any restrictions on the receiving waters. I suggest a topographical map displaying the discharge location be included with the materials for review.

SUBJECT: Camp Allen Landfill Site, Areas A and B, Norfolk Naval  
Base Package Review

Page 2.

Comments (Cont)

Although Xylene is not a 307(a) priority pollutant, I consider this pollutant an indicator of toxicity. It was detected in four of the wells and thus it should be monitored. pH and BOD<sub>5</sub> should also be considered for limitation and/or monitoring.

MEMORANDUM  
DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFF



287 Pembroke Office Park  
Pembroke No. 2, Suite 310

SUBJECT: Proposed VPDES Effluent Limitations, OWPS Model Results  
Camp Allen Landfill Site, Areas A/B Norfolk Naval Base  
Norfolk, Virginia

TO: Mr. Paul Spaulding (DEQ - Office of Fed. Fac. Restoration)

FROM: C. D. Thomas (DEQ-TRO/Water Permits) *CDT*

DATE: June 8, 1995

COPIES: DEQ/TRO-file (VPDES)

1. By memorandum dated May 11, 1995, you had requested that this office provide you the expected values for discharge permit limitations which may be applied to any point source discharge(s) originating from groundwater remedial activities conducted at the subject facility/site. Having reviewed the information contained in your memo as well as information received earlier from Mr. Cosby, the following is offered for your consideration.
2. Based on the material provided, I have conducted a model run to determine the appropriate effluent limitations as they are based on the State's Water Quality Standards. The source of this computer model is the DEQ Water Division's Office of Water Permit Support (OWPS, Mr. M. Dale Phillips). Since the only 'hard' data regarding the various effluent and receiving stream flows available was/were limited to the expected maximum discharge flow, several assumptions were made.

The assumptions were: 90th % Temperature = 20°C, 90th % pH = 7.0, hardness effluent & receiving stream = 100 (recommended default value if site specific information unavailable), receiving stream = fresh water/dry ditch, 1Q10/7Q10/30Q5 and Harmonic mean were all = 0, and the maximum expected effluent flow = 0.57 MGD (per Cosby memo).

3. The results of the modeling effort are presented on the attached printout. Those pollutants of concern (per Cosby memo), which are addressed by the State's WQS, are highlighted for your attention. As you may note, the post-treatment concentrations appear to fall well below any possible permit limitations, as the OWPS procedures are currently written. If the 'assumptions' were to be replaced by real values the results may be somewhat different, especially when metals are concerned. However, since metals do not appear to be a problem at this time, I tend to stand by the numbers presented as possible permit limitations. In this regard, the results appearing in the columns labeled WLAa, WLAc and WLAh equate to Waste Load Allocations acute, chronic and human health respectively.

If there are any questions, or if we can be of any further assistance, please feel free to contact this office (804) 552-1121.

*28150-1-FF*

05-25-1995

## STANDARDS FOR Headwaters of Bousch Crk. at Norfolk Naval Base (VA0004421)

Units = ug/l unless noted as mg/l

There are NO  
 Camp Allen Just  
 →  
 w/w this per  
 Reference

PARAMETER	STANDARD			QL	WLAa	WLAc	WLAh
	Acute	Chronic	HH				
NH3-N, mg/l	19.23	2.05		0.2	19.2262	2.047037	
Aldrin	3	.3	.0014	0.05	3	.3	.0014
Anthracene			110000	10			110000
AS III	360	190			360	190	
Benzene			710	10			710
Benzo(a)anthracene			.311	10			.311
Benzo(b)fluoranthene			.311	10			.311
Benzo(k)fluoranthene			.311	10			.311
Benzo(a)pyrene			.311	10			.311
Bromoform			3600	10			3600
Cadmium	3.92	1.13	170	1	3.922119	1.134259	170
Carbon Tetrachloride			45	10			45
Chlordane	2.4000	0.0043	0.0059	0.2	2.4	.0043	.0059
Chloride, mg/l	860	230			860	230	
Chlorodibromomethane			57000	10			57000
Chloroform			4700	10			4700
Chloromethane			4700	20			4700
Chlorpyrifos	.083	.041		0.2	.083	.041	
CR III	1736.514	206.983	670000	10	1736.514	206.9825	670000
CR VI	16	11	3400	10	16	11	3400
Chrysene			.311	10			.311
Copper	17.725	11.824		10	17.72527	11.82384	
Cyanide	22	5.2	215000	10	22	5.2	215000
DDT	1.1	.001	.0059	0.1	1.1	.001	.0059
Demeton		.1				.1	
Dibenz(a,h)anthracene			.311	20			.311
Dichloromethane			16000	20			16000
1,2-Dichlorobenzene			17000	10			17000
1,3-Dichlorobenzene			2600	10			2600
1,4-Dichlorobenzene			2600	10			2600
Dichlorobromomethane			220	10			220
1,2-Dichloroethane			990	10			990

PARAMETER	STANDARD			QL	WLAa	WLAc	WLAh
	Acute	Chronic	HH				
Dieldrin	2.5	.0019	.0014	0.1	2.5	.0019	.0014
Di-2-EthylhexylPhthalate			59	10			59
2,4-Dinitrotoluene			91	10			91
Endosulfan*	.22	.056	2	0.1	.22	.056	2
Endrin	.18	.0023	.81	0.1	.18	.0023	.81
Ethylbenzene			29000	10			29000
Fluoranthene			370	10			370
Fluorene			14000	10			14000
Guthion		.01				.01	
Heptachlor	.52	.0038	.0021	0.05	.52	.0038	.0021
Hexachlorocyclohexane	2	.08	25	0.05	2	.08	25
Hydrogen Sulfide		2				2	
Indeno(1,2,3cd)pyrene			.311	20			.311
Isophorone			490000	10			490000
Kepone		0				0	
Lead	81.645	3.182		5	81.64511	3.181593	
Malathion		.1				.1	
Mercury	2.4	.012	.146	0.2	2.4	.012	.146
Methoxychlor		.03		0.2		.03	
Mirex		0				0	
Monchlorobenzene			21000	50			21000
Nickel	1418.244	157.665	4583	40	1418.244	157.6653	4583
Parathion	.065	.013			.065	.013	
PCB (check isomer**)		.014	.00045	1		.014	.00045
Pentachlorophenol	9.070	5.726	82	50	9.070251	5.725901	82
Phenol			4600000	10			4600000
Pyrene			11000	10			11000
Selenium	20	5	11200	5	20	5	11200
Silver	4.059			2	4.058822		
Tetrachloroethylene			3519	10			3519

PARAMETER	STANDARD			QL	WLAa	WLAc	WLAh
	Acute	Chronic	HH				
Toluene			200000	10			200000
Toxaphene	.73	.0002	.0075	5	.73	.0002	.0075
Trichlorethylene			807	10			807
2,4,6-Trichlorophenol			65	10			65
Vinyl Chloride			5250	10			5250
Zinc	117.022	105.992		20	117.0219	105.9917	

Standards also applicable for D.O., pH, Temp., Chlorine, Dioxin, TBT and Radioactivity

\* Endosulfan I-0.014, Endosulfan II-0.004, Endosulfan Sulfate-0.066

\*\* PCB 1242, 1254, 1221, 1232, 1248, 1260 or 1016 (only 1242 has a detection level)

If background data is available correct the WLA by subtracting the product of background concentration and the appropriate factor (Q7/QE, Q1/QE, Q30/QE, QH/QE, 0, 1 or 49)

If receiving waters are transitional, run fresh and salt and use most stringent

INPUT INFORMATION

Receiving stream is fresh water

PWS = n Lake, marsh or swamp = n Contaminated stormwater = n

90th percentile Temperature = 20 90th percentile pH = 7

Effluent hardness = 100 Stream hardness = 100

1Q10 = 0 7Q10 = 0 30Q5 = 0 Harmonic mean = 0 Effluent flow = .57

IWCa = 1 IWCC = 1 Flow ratios: Q1/QE= 0 Q7/QE= 0 Q30/QE= 0 QH/QE= 0

VALUE from  
COSBY's 2/14/95  
memo

all highlighted values are "assumed" since this info is not available in any documents referenced for this Request.  
COSBY 2/14/95.



RECEIVED

MAY 15 1995

DEQ TRO

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Peter W. Schmidt  
Director

P. O. Box 10009  
Richmond, Virginia 23240-0009  
(804) 762-4000

MEMORANDUM

**TO:** Robert Goode, TRO - Water

**FROM:** Paul Spaulding, Office of Federal Facilities Restoration <sup>RS</sup>

**DATE:** May 11, 1995

**SUBJECT:** Camp Allen Landfill Site, Areas A and B, Norfolk Naval Base

This is to request your assistance in the review of information submitted by the Norfolk Naval Base regarding the establishment of effluent discharge limits and monitoring requirements for the discharge of treated water from the facility.

The discharge will be conducted as part of the restoration activities for the Camp Allen Landfill site at the base. These activities are under the facility's Installation Restoration Program (IRP) and are to be carried out in a manner consistent with the federal Superfund statute. The facility is likely to be proposed for listing on the National Priorities List and will soon be entering into negotiations for a Federal Facility Agreement to govern its IRP activities. Sites listed on the NPL are exempt for administrative permitting requirements under the Superfund law. In the event the facility is not placed on the NPL, the permit exemption issue will be reevaluated.

It is my understanding that George Cosby recently sent you a copy of the information package submitted by the base. Please provide this office with any comments on this material that should be addressed in order to comply with all substantive requirements under the VPDES regulations governing this discharge. Attached are the initial comments on the package from Mr. Cosby.

Thank you for your assistance and please call me at (804) 762-4187 if you have any questions concerning this request.