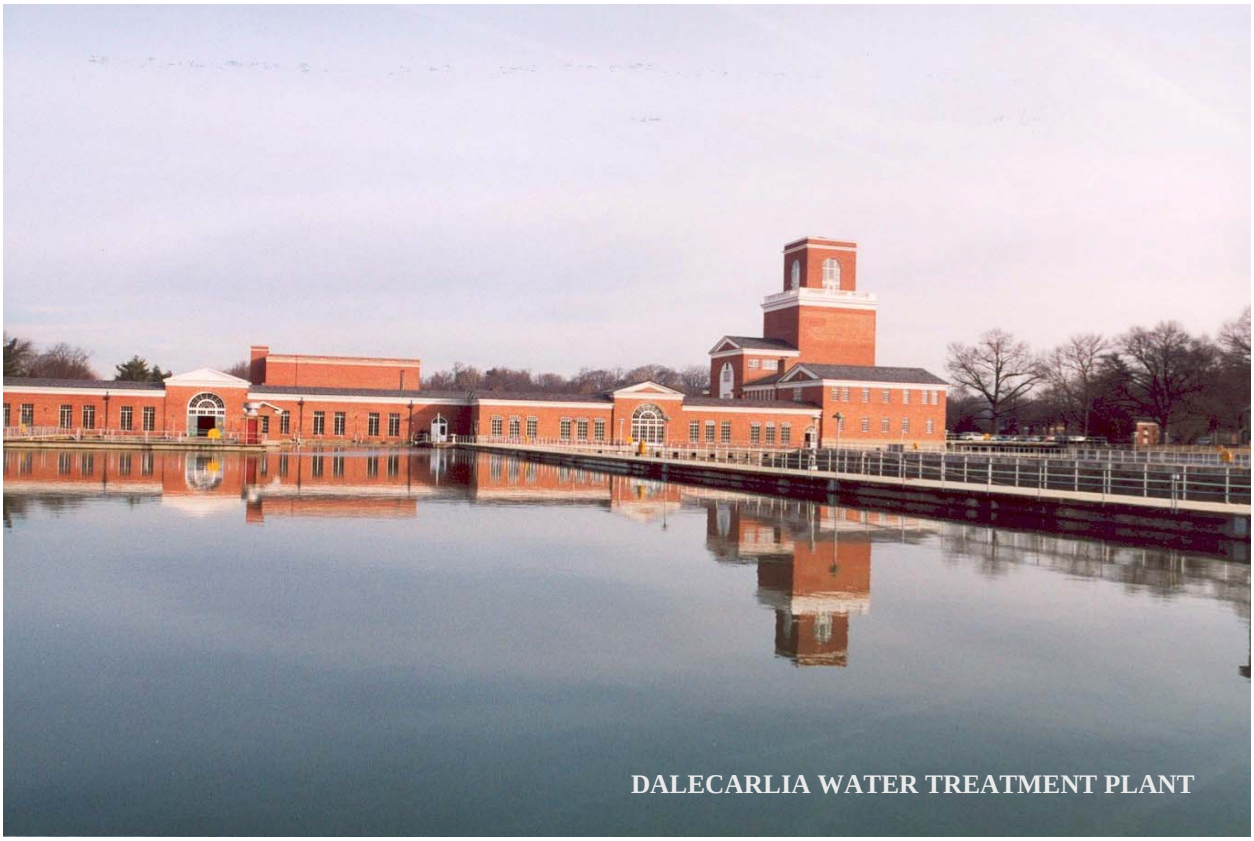
FINAL ENVIRONMENTAL IMPACT STATEMENT FOR A PROPOSED WATER TREATMENT RESIDUALS MANAGEMENT PROCESS FOR THE WASHINGTON AQUEDUCT, WASHINGTON, D.C.

US Army Corps of Engineers
Baltimore District

VOLUME 3A
COMMENTS AND RESPONSES



Prepared by: **U.S. Army Corps of Engineers, Baltimore District**
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September 2005

FINAL ENVIRONMENTAL IMPACT STATEMENT FOR A PROPOSED WATER TREATMENT RESIDUALS MANAGEMENT PROCESS FOR THE WASHINGTON AQUEDUCT, WASHINGTON, D.C.

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In Cooperation with:

NCPC

This Final Environmental Impact Statement (FEIS) describes a proposed project to alter the Washington Aqueduct's current practice of discharging water treatment residuals to the Potomac River to one of instead collecting, treating, then disposing of the residuals at an alternate location. Over 160 alternatives were considered and screened, and four of these, plus the no-action alternative were evaluated in detail to determine the potential for environmental, engineering, and economic impacts. A proposed action, the environmentally preferred alternative, is identified; It involves collection of the residuals at the Dalecarlia Water Treatment Plant and Georgetown Reservoir, treatment of residuals at an East Dalecarlia Processing Site on government property that is located north of Sibley Memorial Hospital in the District of Columbia, and then disposal of residuals by trucking on major streets to licensed land disposal sites likely located in Maryland or Virginia.

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Volume 3 of the EIS includes the response to comments information. All comments and questions received from the public through e-mails and public meeting transcripts prior to publishing the DEIS and during the DEIS public comment period are evaluated and answered within this document. The unique names of those who provided comments have been removed to protect their privacy. In this volume of the EIS, a legend for comment type, the responses to each comment type, and a customized copy of each source document is included.

There are 59 documents that constitute the content of Volumes 3A and 3B and 127 documents that constitute Volumes 3C and 3D. A customized copy of each document is provided after an enumerated tab. In each volume, the tabs are preceded by an index of all documents in volume 3 to assist the reader in finding the correct volume (3A, 3B, 3C or 3D) for a specific comment. This document index is followed by a comment-topic legend and Table 1, the Response to Comment Topic Table. Table 1 is comprehensive, covering responses for all of the comments included within Volume 3.

Every comment or question is given a unique three-level code identified by source document, sequential comment number, and comment topic. Every comment is identified in a text box on the left side of the source document. For example, the comment identified as "1-1-AA" is for document one, first comment, and comment topic AA (or cost, water user rates, etc.). Additionally, each comment is identified within the source document by a box drawn around the comment.

Each identified comment is evaluated, categorized by comment topic, and answered. The comment topic categorization allows the comments to be grouped into relevant categories. A legend defining the comment topics is provided. The responses to each comment topic are shown in Table 1. Table 1 provides the topic, a brief summary of the topic, the general response, and the specific section in the EIS where the reader can look for additional information on the topic.

Questions raised and answered during the four public meetings and one public hearing when formal transcripts were prepared are flagged with the unique three level comment code. However, as these questions were answered during the public forum and are available within the transcript, the answers to these questions have not been repeated in Table 1.

Washington Aqueduct EIS Comment Document Index

Document Number	Title/Description	Date & Time
1	Oral Statements and Questions from Interested Parties at St. Patrick's Episcopal Church Open House	1/28/04
2	Oral Statements and Questions from Interested Parties at Dalecarlia Water Treatment Facility Open House	9/7/2004
3	Email comment on Follow-up to Washington Aqueduct's September 7 Public Meeting	9/12/2002; 10:50 AM
4	Email comments	9/21/2004; 4:23 PM
5	Email comment on residuals	9/22/2004; 3:48 PM
6	Email comment on Proposed Water Treatment Residuals Management Process	9/25/2004; 1:45 PM
7	Email comment on Proposed Water Treatment Residuals Management Process	9/25/2004; 2:39 PM
8	Public Comment and Question/Answer Session and Technical Presentation on Alternatives Identification and Screening Process public meeting at Sibley Memorial Hospital	9/28/2004
9	Email comments on Dalecarlia 9/28 Meeting	09/29/2004; 4:30 PM
10	Email comments on Residuals project question	9/29/2004; 10:27 PM
11	Email comments on Suggested Alternative	09/30/2004; 10:40 AM
12	Email comment	10/2/2004; 8:55 AM
13	Cold call to Mike Peterson from Lehigh cement	<date of Email notifying contents of call: 10/12/2004; 1:42 PM>
14	Email comments on Washington Aqueduct Residuals Treatment Alternative	11/05/2004; 2:15 PM
15	Email comments on Proposed Water Treatment Residuals Management Process	11/9/2004; 11:37AM
16	Email comments on Proposed Water Treatment Residuals Management Process	7/13/2004; 8:23 PM
17	Comments on Proposed Water Treatment Residuals Management Process	11/10/2004; 12:21 AM
18	Email comments on Proposed Water Treatment Residuals Management Process	11/11/2004; 10:24 AM
19	Email comments regarding sludge treatment plant	11/11/2004; 12:05 AM
20	Email comments on Dalecarlia Sludge Alternative proposals	11/11/2004; 1:08 PM

Document Number	Title/Description	Date & Time
21	Email comments on Proposed Water Treatment Residuals Management Process	11/11/2004; 5:22 PM
22	Proposed Water Treatment Residuals Management Process, Request for Comments	11/12/2004
23	Email comments on Proposed Water Treatment Residuals Management Process	11/14/2004; 9:15 PM
24	Email comments on Proposed Water Treatment Residuals Management Process	11/15/2004; 12:08 AM
25	Email comments on Proposed Water Treatment Residuals Management Process-"Public Submission of Residuals Alternatives" Set of 72	11/15/04; 4:57 PM
26	Email comments on Proposed Water Treatment Residuals Management Process	11/15/2004; 5:25 PM
27	Email comments on Proposed Water Treatment Residuals Management Process	11/15/2004; 6:09 PM
28	Email comments on Proposed Water Treatment Residuals Management Process	11/15/04; 9:18 PM
29	Brookmont Community comments on and alternatives to the proposed Washington Aqueduct Water Treatment Residuals Management Process Facility to be located at the existing Dalecarlia Facility	11/15/2004
30	Public Comment and Question/Answer Session and Technical Presentation on Alternatives Identification and Screening Process public meeting at Sibley Memorial Hospital	11/16/2004
31	Email comments on Barge Option	11/19/2004; 2:08 PM
32	Email comments on EIS Wastewater	1/24/2005; 1:45 PM
33	Concerned Neighbors letter - Washington Aqueduct Residuals Management Project: Comments on Alternatives	2/14/2005; 4:45 PM
34	Sludge Stoppers letter - Washington Aqueduct Residuals and Dewatering Facility Additional 40 Alternatives	2/14/2005
35	ANC Meeting Comments, Questions from the Commissioners	3/2/2005
36	DOPAA Meeting Notes	5/26/2005
37	Concerned Neighbors letter - Washington Aqueduct Residuals Management Project: Comments on Alternatives	11/15/2004
38	Washington Aqueduct Residuals EIS	1/24/2005; 9:23 PM
39	Suggested Alternatives	9/30/2004; 10:40 AM
40	Waste Management Plan	2/10/2004; 3:58 PM
41	Comments on Proposed Water Treatment Residuals Management Process	2/10/2004; 4:24 PM

Document Number	Title/Description	Date & Time
42	Comments on Proposed Water Treatment Residuals Management Process	6/3/2004; 6:54 PM
43	Sediment Disposal Options	5/24/2004; 1:41 PM
44	EIS and Related Activities relating to Proposed Water Treatment Residuals Management Process	6/18/2004; 11:43 AM
45	Comments on Proposed Water Treatment Residuals Management Process	1/11/2004; 2:12 PM
46	Comments on Proposed Water Treatment Residuals Management Process	7/14/2004; 8:06 PM
47	Comments on Proposed Water Treatment Residuals Management Process	7/19/2004; 2:24 PM
48	Comment on Residuals Project	7/28/2004; 4:47 PM
49	Comments on Proposed Water Treatment Residuals Management Process	9/22/2004; 10:19 AM
50	Comments on Proposed Water Treatment Residuals Management Process	9/21/2004; 4:17 PM
51	Comments on Proposed Water Treatment Residuals Management Process	9/25/2004; 1:45 PM
52	Comments on Proposed Water Treatment Residuals Management Process	9/8/2004; 10:10 AM
53	SSN-ANC – Needed Analysis for Next Public Review	9/22/2004; 6:01 PM
54	Comments on Proposed Water Treatment Residuals Management Process	9/25/2004; 2:39 PM
55	Comments on Proposed Water Treatment Residuals Management Process	10/4/2004; 8:39 PM
56	Residuals Project Question	10/9/2004; 11:19 AM
57	Comments on Proposed Water Treatment Residuals Management Process	11/7/2004; 10:30 PM
58	Comments on Proposed Water Treatment Residuals Management Process	11/9/2004; 11:37 AM
59	Concerned Neighbors letter - Fatal Flaws in the Corps' NEPA Analysis of Alternatives to the Current Residuals Disposal Practices at the Washington Aqueduct	3/30/2005
60	Comment regarding residuals trucking plan	Wed 7/6/2005 10:22 AM
61	Email comments on DEIS	Wed 7/6/2005 2:22 PM
62	Email comments on DEIS	Wed 7/6/2005 2:59 PM
63	Email comments on DEIS	Wed 7/6/2005 3:08 PM
64	Objection to Washington Aqueduct Project	Wed 7/6/2005 3:45 PM
65	Email comments on DEIS	Wed 7/6/2005 4:31 PM
66	Dewatering plant	Wed 7/6/2005 6:45 PM

Document Number	Title/Description	Date & Time
67	Dalecarlia water residuals treatment and DEIS	Wed 7/6/2005 9:57 PM
68	Strong opposition to Brookmont Option B	Wed 7/6/2005 10:47 PM
69	Response to the DEIS for the Washington Aqueduct proposal to construct a thickening and dewatering facility - Strong opposition to Brookmont Option B	Wed 7/6/2005 11:18 PM
70	Letter in Opposition Tio The Dalecarlia Sludge Factory	Thu 7/7/2005 12:20 AM
71	Sludge Plan public comment	Fri 7/8/2005 11:58 PM
72	thickening/dewatering facility	Mon 4/25/2005 11:16 AM
73	Dalecarlia water treatment facility	4/26/2005 12:55 PM
74	Washington Aqueduct Draft Environmental Impact Statement	Tue 4/26/2005 4:27 PM
75	Bait and Switch	Wed 4/27/2005 1:01 PM
76	Dalecarlia Water Treatment Facility	Wed 4/27/2005 2:33 PM
77	Request for Extension of Comment Period for Draft DEIS on the Washington Aqueduct Project	Mon 5/2/2005 10:26 PM
78	Testimony	Tue 5/10/2005 8:32 AM
79	Letter from Concerned Neighbors	Tue 5/10/2005 10:55 AM
80	Testimony	Tue 5/10/2005 11:45 AM
81	Washington Aqueduct Draft Environmental Impact Statement & Hearing Request	Wed 5/11/2005 3:06 PM
82	Email question	Wed 5/11/2005 4:36 PM
83	Washington Aqueduct Construction Funding?	Wed 5/11/2005 6:38 PM
84	Washington Aqueduct Construction Funding	Thu 5/12/2005 5:35 PM
85	Delcarlia Waste Plan	Fri 5/13/2005 4:17 PM
86	Email comment	Sat 5/14/2005 10:43 AM
87	Dewatering facility	Thu 5/26/2005 2:32 PM
88	Sludge Facility	Fri 6/3/2005 3:15 PM
89	Opposed to current plan of action	Fri 6/3/2005 3:27 PM
90	Comments on Proposed Water Treatment Residuals Management Process	Fri 6/3/2005 5:48 PM
91	Comments on DEIS	Fri 6/3/2005 9:40 PM
92	Comments on DEIS	Fri 6/3/2005 11:52 PM
93	I Oppose any Vehicular Solution to sludge removal!	Mon 6/6/2005 11:56 PM
94	Comments on Proposed Water Treatment Residuals Management Process	Mon 6/6/2005 4:32 PM
95	Opposition to Brookmont Option	Sun 6/5/2005 10:47 PM

Document Number	Title/Description	Date & Time
96	Comments on Proposed Water Treatment Residuals Management Process	Sun 6/5/2005 10:28 PM
97	Dalecarlia proposed dewatering facility	Fri 7/1/2005 2:15 PM
98	Comments on Proposed Water Treatment Residuals Management Process	Fri 6/10/2005 12:46 AM
99	Comment to DEIS	
100	Trucking	
101	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	April 29, 2005
102	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	April 30, 2005
103	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	April 30, 2005
104	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	
105	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	May 2, 2005
106	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	May 2, 2005
107	Request for extension of comment period for draft DEIS on the Washington Aqueduct Project	May 5, 2005
108	Comment	May 26, 2005
109	Dalecarlia Sludge Disposal	May 30, 2005
110	Comments on DEIS	June 2, 2005
111	Comments on DEIS	June 17, 2005
112	Plans for Water Extraction Facility	June 20, 2005
113	Comments on DESI	June 20, 2005
114	Comments on DEIS	June 21, 2005
115	Comments on DEIS	
116	Comments on DEIS	
117	Comments on DEIS	May 20, 2005
118	United States Senate - Comments on DEIS	June 2, 2005
119	Council of the District of Columbia - Comments on DEIS	May 10, 2005
120	US EPA - Request for Modification of Federal Facility Compliance Agreement	June 28, 2005
121	Council of the District of Columbia - See DOC 111 for responses	
122	US Department of the Interior - Comments to DEIS	May 31, 2005

Document Number	Title/Description	Date & Time
123	Montgomery County Council – Washington Aqueduct Residuals Project - Comments to DEIS	June 23, 2005
124	Commonwealth of Virginia – Water Treatment Residuals Management Process for the Washington Aqueduct - Comments to DEIS	May 26, 2005
125	Maryland National Capital Park and Planning Commission – Montgomery County Planning Board - Comments on DEIS	June 1, 2005
126	Sludge processing plant	Fri 6/10/2005 4:51 PM
127	Maryland State Highway Administration - Washington Aqueduct DEIS comments	Mon 6/13/2005 7:29 AM
128	Washington Aqueduct DEIS comment period	Mon 6/13/2005 10:31 AM
129	opposition to Dalecarlia sludge plant	Tue 6/21/2005 2:02 PM
130	DEIS-I oppose your proposal	Thu 6/30/2005 8:38 PM
131	Attached please find a letter to Mr. Thomas Jacobus	Thu 6/30/2005 5:59 PM
132	Washington Aqueduct	Tue 7/5/2005 6:59 AM
133	Alternative E of their Draft Environmental Impact Statement ('DEIS')	Mon 7/4/2005 11:34 AM
134	Sibley dewatering facility proposal	Mon 7/4/2005 12:02 PM
135	U.S. Army Corps of Engineers Draft Environmental Impact Statement ('DEIS') Alternative E	Mon 7/4/2005 12:20 PM
136	Washington Aqueduct	Mon 7/4/2005 2:10 PM
137	proposed industrial sludge treatment facility near Sibley Hospital	Mon 7/4/2005 5:00 PM
138	Alternative E opposition	Mon 7/4/2005 7:09 PM
139	Dewatering facility	Mon 7/4/2005 9:47 PM
140	industrial facility	Mon 7/4/2005 10:17 AM
141	80-foot industrial dewatering facility proposed behind Sibley Hospital (Alternative E)	Mon 7/4/2005 8:40 AM
142	Comments on DEIS	Mon 7/4/2005 9:11 AM
143	Dewatering Facility Proposal	Mon 7/4/2005 10:01 AM
144	Comments on DEIS	Mon 7/4/2005 7:55 AM
145	Comments on Proposed Water Treatment Residuals Management Process	Fri 7/1/2005 7:07 PM
146	Comments on DEIS	Fri 7/1/2005 6:00 PM
147	Washington Aqueduct	Mon 7/4/2005 12:29 AM
148	Washington Aqueduct	Sun 7/3/2005 11:32 PM
149	Deadline for comment period on DEIS for proposed dewatering plant	Sun 7/3/2005 4:08 PM

Document Number	Title/Description	Date & Time
150	Dewatering facility	Tue 7/5/2005 9:09 AM
151	Construction of Industrial Dewatering Facility Near Sibley Hospital	Tue 7/5/2005 10:05 AM
152	residue facility	Tue 7/5/2005 11:08 AM
153	Need for another alternative to siting of proposed 8 story tall toxic waste dump site next to Sibley Hospital under current Corps proposal E	Tuesday, July 05, 2005 11:36 AM
154	Water Extraction Facility at the Dalecarlia Filtration Plant	Tue 7/5/2005 11:47 AM
155	OPPOSITION TO Alternative E re the new industrial de-watering facility near Sibley Hospital	Tue 7/5/2005 11:44 AM
156	Sibley Memorial Hospital Comments on DEIS	June 27, 2005
157	Government of the District of Columbia Department of Health - Draft Environmental Impact Statement for Proposed Residuals Management Process	July 5, 2005
158	Washington Aqueduct	Tue 7/5/2005 12:35 PM
159	Opposition to DEISN	Tue 7/5/2005 1:36 PM
160	Washington Aqueduct: Draft EIS for dewatering facility	Tue 7/5/2005 2:44 PM
161	industrial plant in my backyard	Tue 7/5/2005 3:11 PM
162	Washington Aqueduct DEIS Response	Tue 7/5/2005 4:22 PM
163	Comments to DEIS	Tue 7/5/2005 4:59 PM
164	Dewatering Facility	Tue 7/5/2005 5:03 PM
165	Washington Aqueduct -	Tue 7/5/2005 5:45 PM
166	Washington Aqueduct: Draft EIS for De-Watering facility	Tue 7/5/2005 10:16 PM
167	Washington Aqueduct-environmental hazard	Wed 7/6/2005 7:10 AM
168	Transcripts (Private)	
169	Transcripts (Public)	
170	Letter from Concerned Neighbors - Fatal Flaws in the Corps' Draft Environmental Impact Statement ("DEIS") and Reasons Why the NEPA Process Must be Restarted	July 5, 2005
171	Public Comments on Draft Environmental Impact Statement (DEIS)	July 6, 2005
172	Comments on DEIS	July 5, 2005
173	Comments on DEIS	July 4, 2005
174	Comments on DEIS	July 1, 2005
175	Comments on DEIS	July 5, 2005
176	Comments on DEIS	July 4, 2005
177	Comments on DEIS	June 30, 2005
178	Comments on DEIS	June 30, 2005

Document Number	Title/Description	Date & Time
179	Comments on DEIS	July 5, 2005
180	Comments on DEIS	July 5, 2005
181	Industrial Dewatering Plant	Mon 7/5/05 5:59 PM
182	US EPA - Draft Environmental Impact Statement for the Washington Aqueduct Residuals Project CEQ #20050154	June 27, 2005
183	Comments on DEIS	May 17, 2005
184	Testimony	May 17, 2005
185	Statement Regarding the Draft Environmental Impact Statement for a Proposed Water Treatment Residuals Management Process for the Washington Aqueduct	May 17, 2005
186	Sludge Stoppers – Alternatives regarding the proposed Army Corps of Engineers Washington Aqueduct "residuals and dewatering facility" aka Sludge Factory	November 15, 2004

Agency Reviewers:

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United States Environmental Protection Agency	120, 182
United States Department of the Interior	122
The Maryland – National Capital Park and planning Commission	125
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Commonwealth of Virginia – Department of Historic Resources	124

City and County Agencies, and Elected Officials:

	Document #
United States Senate	118
Montgomery County Council	123

LEGEND
Comment topics received through public and agency correspondence

Topic		Sub-Topic	
A	Cost	AA	Cost, water user rates, etc.
		AB	Cost, supporting data
		AC	Opportunity cost of land
		AD	Washington Aqueduct Funding
B	Facility (residuals processing)	BA	Facility appearance
		BB	Facility location
		BC	Facility noise
		BD	Facility simulation
		BE	Facility access
		BF	Facility light
		BG	Facility smell
		BH	Facility impact on habitats
		BI	Facility impact on Sibley Hospital
		BJ	Facility impact on dirt/dust
		BK	Facility impact on health
		BL	Facility will impact property values
		BM	Disturbing site B soil
C	Monofill	CA	Monofill, preference
		CB	Monofill, chemical exposure
		CC	Monofill, height
		CD	Monofill, trees
D	Pipeline	DA	Pipeline, preference to Blue Plains
		DB	Pipe in a pipe
		DC	Active management of residual discharge
		DD	WSSC Potomac WFP
		DE	Carderock
		DF	FCWA Corbalis WTP
		DG	Potomac River
		DH	George Washington Parkway

LEGEND
Comment topics received through public and agency correspondence

Topic		Sub-Topic	
		DI	Pipeline size
		DJ	Regionalization
		DK	Rockville WTP
		DL	New processing site near the Beltway
		DM	COE hasn't adequately investigated other piping alternatives
E	Residuals	EA	Residuals disposal method
		EB	Residuals processing method and impacts
		EC	Residuals Quantities
F	Schedule	FA	Construction schedule
		FB	EIS schedule
		FC	Compliance performance
		FD	Temporary alternatives
		FE	Public comment period
		FF	DEIS review period time extension
		FG	EPA grants interim FFCA schedule milestone
G	Trucking	GA	Trucking, neighborhood impact
		GB	Trucking alternative
		GC	Trucking, noise
		GD	Trucking, routes
		GE	Trucking, frequency
		GF	Trucking, air pollution
		GG	Trucking, safety
		GH	Trucking, vibration
		GI	Trucking costs
		GJ	Existing Dalecarlia Parkway vehicle/truck volumes
		GK	Trucking hours
H	Barge	HA	Barge, preference
I	Comment	IA	Preference
		IB	Useful Life of Alternatives

LEGEND
Comment topics received through public and agency correspondence

Topic		Sub-Topic	
J	Residuals Discharge Resolutions	JA	River discharge
		JB	Discharge during spawning season
K	Human Health and Environment	KA	Impure water quality, raw water intake
		KB	Monitoring water quality and safety
		KC	Residuals quality
		KD	Health Impacts of Diesel Truck Traffic
L	Alternate Water Treatment Process	LA	Suggested Processes
M	Government	MA	EPA mandate
		MB	FOIA requests
		MC	Conflict of Interest
		MD	Agency Recommendations on DEIS
N	EIS Process	NA	Understanding
		NB	Screening criteria and meeting
		NC	Communication
		ND	NEPA Process
		NE	Limited number of alternatives evaluated in DEIS
		NF	Institutional constraints screening criteria
		NG	Restart NEPA process
		NH	Regional approach to NEPA
O	Alternate Coagulants	OA	Continued River Discharge
P	Residuals Handling in Other Metropolitan Areas	PA	Disposal
		PB	Residuals studies throughout the world
Q	Residuals Alternatives	QA	Public Residuals Alternatives
		QB	Environmental assessment
		QC	Northwest (alternate B) versus east (alternate E) residuals processing sites
		QD	Residuals processing site near Beltway versus Dalecarlia WTP site

A number of comments were received from the public and the various agencies involved with the project prior to and following the issuance of the DEIS. Many of the comments are focused on similar EIS topics. This table documents the topics addressed in the comments, summarized the general response for each topic, and refers the reader to the EIS section where more information is provided on the topic/subtopic.

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
AA	Costs, water user rates, etc.	Costs of alternatives are estimated and compared. Screening criteria for cost: a feasible alternative must be no more than 30 percent of the baseline budget of $50 million, to avoid undue impact on user rates. Actual rate impacts are not estimated. The wholesale customers are responsible for estimating water rate impacts and adjusting water rates accordingly. Questions related to the effect of operations and capital improvements on retail rates should be directed to the appropriate wholesale customer. The effect of Washington Aqueduct project costs on the financial plans developed by individual wholesale customer varies from one customer to another. As a result, Washington Aqueduct is not able to describe the direct effect of our proposed project costs on retail rates. It is impossible to say at what cost users' rates will be "unduly" or "unreasonably" impacted, but it is likely that this project will have an impact on retail water rates. The 30% threshold is a number that the project engineers discussed at length early in the planning stage and consider to be a reasonable limit to use as screening. Note that there are no alternatives that are screened out based on cost alone. The residuals project will be paid for by the wholesale customers. See topic AD for a discussion of Washington Aqueduct project funding.	EIS Volume 1 - Section 2.3 Alternatives screening Process and Criteria EIS Volume 1 - Section 4.14 Cost
AB	Cost, supporting data	Capital and O&M costs and associated supporting data are provided in the Feasibility Study. Monofill operating costs were obtained from a neighboring wastewater treatment utility that operates a similar monofill facility. A question was raised concerning the difference between the pipeline construction costs included in Alternatives 5 versus Alternative 8, as summarized in the May 2004 Engineering Feasibility Study document. The pipeline cost included for Alternative 8 includes a $10,000,000.00 allowance for land purchase that is not included in the Alternative 5 cost. The cost for the Alternative 5 pipeline was modified in Volume 4 of the EIS to reflect a change in construction technique (to directional drilling).	EIS Volume 4 - Engineering Feasibility Study Compendium EIS Volume 4 –Engineering Feasibility Study Compendium Sections 3.1.2 and Section 5.7.

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		This change significantly increased the cost of the Alternative 5 pipeline. Several public comments were received on the costs summarized in Table 5-2 of the EIS Volume 4 - Engineering Feasibility Study Compendium. The same trucking costs were used for Alternatives B, C, and E. The unit trucking cost is based on an assumed haul distance. It is assumed that the permitted residuals disposal site would be the same distance from the Blue Plains AWWTP or the Dalecarlia WTP. Costs of hauling residuals to the monofill are included in the category name - Other Monofill Specific Costs. Road deterioration costs are not included in the trucking alternatives because the Department of Transportation provides funds for the maintenance of public roads.	EIS Volume 4 – Engineering Feasibility Study Compendium, Table 5-2
AC	Opportunity cost of land	The land surrounding the Dalecarlia Reservoir is owned by the Federal Government. The Federal Government does not intend to sell this land because it provides valuable buffer and security functions to the Washington Aqueduct. There is no Washington Aqueduct property considered to be excess and even if there were, proceeds from the sale of the property would belong to the U.S. Treasury, not the Washington Aqueduct.	The sale price of the land surrounding the Dalecarlia Reservoir was not evaluated in the EIS because this action is not planned by the Washington Aqueduct.
AD	Washington Aqueduct Funding	Although owned and operated by the Army Corps of Engineers, Washington Aqueduct functions as a public water utility and is not part of the Corps' civil works program to be included in the Civil Works budget request. All funds for Washington Aqueduct operations and capital improvements, whether self-initiated or in response to regulation and permitting actions, come from the wholesale customers (i.e., District of Columbia Water and Sewer Authority, Arlington County, and the City of Falls Church). Each year, the Washington Aqueduct Wholesale Customer Board, which is comprised of the General Manager of the DC Water and Sewer Authority, the County Manager of Arlington County, and the City Manager of the City of Falls Church, meets to discuss and approve the upcoming fiscal year operating and capital improvement budgets for Washington Aqueduct. At that time, future projects are described in a multiyear capital plan. This gives the customers an idea of how they will need to plan for funding Washington Aqueduct. Each customer may have a different approach. Customer funding of Washington Aqueduct operations and capital improvements is tied to the proportional use of the water produced. Those shares are approximately 75 percent for the District of Columbia Water	

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		and Sewer Authority, 15 percent for Arlington County, and 10 percent for Falls Church. The costs associated with Washington Aqueduct operations are completely reimbursable. Washington Aqueduct has no retained earnings. A section of the 1996 Safe Drinking Water Act Amendments provided Washington Aqueduct with $75 million of borrowing authority over fiscal years 1997, 1998 and 1999. The purpose of this authority was to allow the execution of an aggressive capital improvement program while the Army and the Washington Aqueduct customers considered alternative ownership and operations of Washington Aqueduct. This borrowing was added to the existing debt service that the customers pay as part of their cost of water service. This borrowing authority expired in fiscal year 1999 and was not renewed. All capital investments made by the customers in Washington Aqueduct infrastructure since then have been on a pay-as-you-go basis, in cash from their accounts. Although Washington Aqueduct annual operations and capital improvements are not funded through any Congressional appropriation, it is technically possible for Washington Aqueduct to receive a specific authorization and appropriation. The loans discussed earlier, are being repaid with interest, and those amounts are reflected in the water bills of the retail customers. Based on all discussions with officials throughout the development of the NPDES permit and the analysis of the nature of the project that would be required to comply with it, there has been no expression by any Congressional committee that an outright appropriation or authority for a new loan is under consideration. The timing of Washington Aqueduct's permit compliance under the Federal Facilities Compliance Agreement requires that the NEPA action be completed in accordance with the schedule in the FFCA and that the customers provide sufficient funds.	

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Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
BA	Facility appearance	The visual impact of residuals facilities is evaluated in Section 4 of the EIS. Visual simulations have been developed to show the anticipated look of the proposed buildings and structures. These views will be refined during the design phase of the project. The photos of the existing site included in the EIS were taken during both summer and winter seasons to show the variation in natural screening provided by the existing trees. The feasibility of building the settling tanks and truck entrance/exit below grade is influenced by cost impacts and available site topography and space. Reduced facility heights will be considered for applicable alternatives. Berms and other architectural landscape devices are possible measures to mitigate or minimize visual impacts. These features will be incorporated into the selected alternative. The proposed thickening and dewatering building has three floor levels plus a basement thickened residuals pump area located on each side of the building. The description of the building has been changed from three-story building to three-floor building to address any potential confusion related to the height of the building. The floor to floor spacing used on the proposed building is greater than those typically used for a commercial office building to allow sufficient vertical space for residuals processing and storage equipment and vehicles. The floor to floor spacing and overall building height are shown on the building drawings included in Volume 4 of the EIS. The project will be submitted to the National Capital Planning Commission (NCPC) and the Commission of Fine Arts (CFA) for full project review and approval. These agencies have authority for architectural review of Federal Projects in the Capital region. The architectural look of the proposed residuals processing facilities will continue to be developed as the project proceeds. The proposed facilities will be designed to provide a pleasant appearance in keeping with NCPC regulations. The architecture and siting of the building will take the natural and built surroundings into consideration.	EIS Volume 1 - Section 4.12 Visual Aesthetics EIS Volume 1 - Figures 4-2 to 4-11 EIS Volume 4 – Engineering Feasibility Study Compendium, Section 4.4

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Topic / Sub-topic	Summary	Response	See EIS section
BB	Facility location	Washington Aqueduct would contract haul and dispose of residuals for alternatives B, C and E. Multiple disposal sites are required to ensure disposal reliability. Disposal site selection will be the responsibility of the residuals disposal contractor. An evaluation of residuals land application sites based solely on existing permits and capacity of specific locations is unable to accommodate a variety of land disposal practices that may take place in a dynamic market place over the 20-year design life of the project. The EIS uses a programmatic approach to evaluate the ability of the residuals disposal marketplace to meet increasing demand within an approved regulatory environment.	EIS Volume 1 - 4.16 Land Application of Water Treatment Residuals
		Multiple residuals processing sites have been evaluated in the Engineering Feasibility Study Compendium, including numerous sites located distant from the Dalecarlia WTP site. One such alternative involves constructing new residuals processing facilities at the Carderock facility near the beltway. Several alternatives involving Carderock were suggested by the public. These alternatives were evaluated in Volume 4 of the EIS – Engineering Feasibility Study Compendium, Section 3.2.2. These alternatives screened out because the Navy had determined that the construction of Washington Aqueduct residuals facilities is inconsistent with their long-term plan for the Carderock facility. See topic DE for further discussion of the “Carderock” and other offsite residuals processing alternatives.	EIS Volume 4 - Engineering Feasibility Study Compendium Section 3 Screening of Alternatives
		Relocation of the entire existing Dalecarlia WTP and Georgetown Reservoir complex to another site would be a massive undertaking. Such a project could not be completed within the FFCA schedule and would be cost prohibitive. It is anticipated that such a project would cost at least $640,000,000.00, exclusive of land purchase and raw water conveyance cost impacts.	
		The northwest Dalecarlia processing site was previously reviewed and approved by NCPC as part of a Master Plan update completed in 1980. The specific location of the proposed residuals thickening and dewatering facilities shown in Figure 4-22 of the Engineering Feasibility Study Compendium can be adjusted within the confines of the site area shown on this figure. Additional sites on the Dalecarlia WTP property are also evaluated in the EIS (such as the east site evaluated for Alternative E).	EIS Volume 4 – Engineering Feasibility Study Compendium, Figure 4-22. EIS Volume 1, Section 6

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Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		Reference Section 6, Volume 1 of the EIS for a discussion of the reasons for recommending the East Dalecarlia Processing site. One of the public comments indicates that existing pine trees located along the west property line of the Northwest Processing Site, as shown on Figure 4-22 of the Engineering Feasibility Study Compendium, will be cut down if the proposed residuals facilities are constructed. This is not true of the case with Alternative B. In fact; it is likely that additional trees would be planted to provide a visual screen with this alternative.	
BC	Facility noise	The noise analysis summarized in the EIS is a conservative worst case approach to determining noise impacts based upon regulations. Sound attenuation attributable to distance from residential receptors is considered in this analysis. Construction measures, such as installation of berms, will be used as needed to mitigate noise impacts to "sensitive" receptors during construction and operation of the residuals facilities. The proposed residuals processing facility will not generate noise or vibrations that could travel through the ground or the groundwater. The various environmental impacts of the proposed residuals processing facility are summarized in the EIS.	EIS Volume 1, Section 4.3.3.2 Alternative B – Dewatering at Northwest Dalecarlia Processing Site and Disposal by Trucking EIS Volume 1, Section 4.3.3.5 Alternative E – Dewatering at East Dalecarlia Processing Site and Disposal by Trucking EIS Volume1, Section 4.
BD	Facility simulation	Visual simulations have been prepared for individual residuals facilities in lieu of an area-wide digital model.	EIS Volume 1 – Section 4
BE	Facility access	See transcript discussions labeled "BE" for responses.	EIS Volume 4 – Engineering Feasibility Study Compendium
BF	Facility light	Lighting surrounding or on the proposed thickening and dewatering facility will be designed to minimize impacts on area neighbors by directing light towards the ground. The lighting surrounding the residuals facilities will be designed to provide a safe environment for the public, vehicular traffic, and maintenance and emergency workers required to visit the facility during non daylight hours and serve as a deterrent to vandalism. The proposed lighting design will be reviewed by NCPC as part of their overall design review process. Lighting during construction will be restricted to levels required for safety and security. Light fixtures will be hooded and directed toward the work areas to minimize offsite impacts.	EIS Volume 4 – Engineering Feasibility Study Compendium EIS Volume 1- Section 4.12 Visual Aesthetics

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Topic / Sub-topic	Summary	Response	See EIS section
		Also, see transcript discussions labeled “BF” for responses.	
BG	Facility smell	The air pollution issues associated with each alternative are evaluated in the EIS. In general, the alternatives being considered are not anticipated to have a significant impact on area air pollutant levels. The water treatment residuals that would be processed at the proposed facility produce very little or no odor because they contain very low levels of biodegradable organic compounds. The majority of the residuals consist of river silt and alum residuals, both of which are biologically inert. The project team and a group of interested citizens, visited one or more similar facilities, the closest being WSSC’s Potomac Water Filtration Plant. Observation confirms that there is no objectionable smell associated with this type of facility.	EIS Volume 1 - Section 4.4 Air Quality
BH	Facility impact on habitats	Construction of the proposed residuals thickening and dewatering facilities on the East Dalecarlia Processing Site (Alternative E) and disposal by trucking would not adversely impact the river-based environmental indicators such as water quality, sediment quality, aquatic resources including the benthic community, fisheries, essential fish habitat, and submerged aquatic vegetation. The wildlife and bird habitats on site E are not expected to be negatively impacted as the area is already cleared and does not contain any habitat for wildlife or bird nesting.	EIS Volume 1- Sections 4.5 Aquatic Resources and Section 4.6 Biological Resources (Terrestrial) EIS Volume 2-Appendix 2B: Biological Resources
BI	Facility impact on Sibley Hospital	Earlier this year, Sibley Hospital completed construction of a major infrastructure improvement (a new parking garage). This construction project did not have an adverse effect on Sibley Hospital daily operations. The construction of the proposed Washington Aqueduct residuals facilities is also not anticipated to have a negative impact on ongoing operations at Sibley Hospital or upcoming Sibley Hospital construction projects. The two construction projects will take place on adjacent, but unique sites. Site access and deliveries to the residuals construction site will be coordinated with Sibley Hospital to ensure that the hospital operations are not impacted. The project has been coordinated with Sibley Hospital. By letter dated June 27, 2005, the hospital administration indicated a desire to coordinate future hospital and Washington Aqueduct residuals project activities and	

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Topic / Sub-topic	Summary	Response	See EIS section
		offered suggestions related to the proposed residuals processing site.	
BJ	Facility, Dirt/Dust	The dust/dirt generated by construction and operation of the proposed residuals thickening and dewatering facilities on the East Dalecarlia Processing Site (Alternative E), the associated new residuals removal equipment at the Dalecarlia sedimentation basins, and operation of two new residuals dredges in the Georgetown Reservoir is less than the *de minimus* threshold levels for particulate matter (PM 10). The alum water treatment residuals for this facility are very moist and generally dewatered to 30% solids (70% water). This moist composition of the residuals physically minimizes the generation of dust and dirt. The nature of alum residuals is that they retain moisture and therefore are not expected to dry out on the haul route. The means of processing residuals would be through thickeners and centrifuges. These types of equipment operate in a wet/moist environment. In addition to the physical properties of the water treatment residuals, the amount of dust/dirt that becomes airborne during construction and operation of the facility will be further minimized by employing all appropriate dust control measures. During construction of the facility dust and dirt will be controlled by maintaining moist conditions using standard construction methods, such as wetting down the construction area periodically throughout the workday.	EIS Volume 1- Section 4.3 Air Quality EIS Volume 2A- Air Quality EIS Volume 4
BK	Facility impact on health	There are no specific health effects associated with the proposed residuals processing facility. See EIS Volume 1, Section 4 for an evaluation of the impacts of the proposed facilities on the environment and surrounding neighborhood.	EIS Volume 1, Section 4
BL	Facility will impact property values	The water treatment operation currently performed at the Dalecarlia WTP and Georgetown Reservoir sites will not significantly change as a result of adding residuals processing facilities. All of the property required for the proposed residuals project is currently owned by Washington Aqueduct and currently used in the production of drinking water. The proposed residuals processing operation is not anticipated to negatively impact	

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Topic / Sub-topic	Summary	Response	See EIS section
		neighborhood property values because the construction and operation of the proposed residuals facilities will have no significant environmental impact on the neighborhood. Similar previous neighborhood concerns related to the potentially negative impact of the AUES FUDS environmental remediation activities on neighborhood property values were analyzed as part of the Spring Valley project. This analysis examined the potential impact of the AUES FUDS remediation work on property values, average number of days that homes remain on the market and the difference between list price and sale price during the period between 1995 and 2001. This study concluded that housing values rose steadily between 1995 and 2001 while the average days on the market dropped considerably indicating that the neighborhood remained a very desirable location throughout this period. Given that the environmental impact of the proposed residuals processing and disposal project will be considerably less than the ongoing AUES FUDS project, no impact on neighborhood property values is anticipated to be associated with the residuals project. The full text of the report can be found in the Administrative Record.	Administrative Record
BM	Disturbing site B soil	The proposed action is to construct dewatering and thickening facilities at site E. As a result, no modifications are planned to site B (Brookmont site) where soil borings were conducted and an oily smell was observed in the existing fill material. The Washington Aqueduct reported the observed odor to Maryland Department of the Environment (MDE) and will work with MDE on any follow-up required.	EIS Volume 1 – Sections 3.7 and 4.8
CA	Monofill, preference	Alternative A (Monofill) was initially found to be technically feasible, based upon the screening criteria. However, when the alternative was thoroughly evaluated in the EIS and then balanced against the purpose and need for the project, it presented impacts that precluded its selection as the preferred alternative. The Corps of Engineers plans to investigate the monofill site for the potential presence of buried munitions in 2008. The public suggested several alternate transport systems, such as a small rail system or a conveyor in a tunnel, to move dewatered residuals from the Dalecarlia WTP to the monofill. These options were considered but none were determined to be relevant once it was determined that the monofill could no longer be potentially recommended as the preferred	EIS Volume 1 - Section 6.2.1 Detailed Reasons for Not Selecting Alternative A: Dewatering and Disposal by Monofill EIS Volume 4 – Engineering Feasibility Study Compendium - Section 3.1.2

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Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		alternative. Environmental impacts associated with the Alternative A (monofill) are described in the EIS. Current District of Columbia monofill regulations do not prohibit the government from constructing a residuals monofill on their property. This was confirmed in a meeting with the Office of the Attorney General of the District of Columbia held on September 24, 2004. The anticipated life span of the monofill alternative is not as long as some of the other alternatives considered in the EIS. However, it would not be considered a temporary alternative given its 20-year life – a typical life for such a project. The monofill would be located on the east side of the Dalecarlia Reservoir in an area designated the Dalecarlia Woods. The monofill cannot be buried deeper in the ground because it must be constructed above the groundwater table to prevent the liner system, designed to separate the residuals from the groundwater, from floating. The costs for the monofill alternative are included in the Volume 4 of the EIS.	EIS Volume 1, Section 4 EIS Administrative Record EIS Volume 1, Figure 2-1 EIS Volume 1, Section 4.9.3 EIS Volume 4- Engineering Feasibility Study Compendium, Section 5-7.
CB	Monofill Chemical Exposure	The monofill site would be fenced off to prevent access by the public. Although the residuals are not toxic, an impermeable liner would be installed on the bottom of the monofill to prevent the residuals from coming into contact with the groundwater. Once completed, the monofill would be capped (or sealed). Reference topic CA for a discussion of why this alternative can no longer be recommended as the preferred alternative.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.1.2 Alternative 2
CC	Monofill height	The height and footprint of the monofill is defined in the Engineering Feasibility Study Compendium. Reference topic CA for a discussion of why this alternative can no longer be recommended as the preferred alternative.	EIS Volume 4 – Engineering Feasibility Study Compendium Section 3.1.2, Alternative 2. Additional information concerning the size of the monofill is provided in Figure 4-5b of the EIS.

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Topic / Sub-topic	Summary	Response	See EIS section
CD	Monofill Trees	The impacts associated with removing trees from the proposed monofill site are described in Section 4 of the EIS. Compliance with the Urban Forest Preservation Act of 2002 is acknowledged as one of the issues that would need to be addressed if this alternative were selected for implementation. Reference topic CA for a discussion of why this alternative can no longer be recommended as the preferred alternative.	EIS Volume 1, Section 4.
DA	Pipeline preference to Blue Plains	Alternative C (Pipeline to Blue Plains) was found feasible, based on screening criteria. However, when the alternative was thoroughly evaluated in the EIS and then balanced against the purpose and need for the project, it presents impacts that preclude selection as the preferred alternative. Some of the impacts could be mitigated to lesser levels, but the work is not possible within the schedule required by the Federal Facility Compliance Agreement (FFCA) issued by the U.S. EPA and it is more than double the cost of each of the other alternatives. In addition, DCWASA is not able to allocate space for residuals processing facilities at Blue Plains because the limited amount of available space is reserved for the District of Columbia Water and Sewer Authority's long-term plans for its Blue Plains AWWTP to meet future nutrient loading and CSO demands. The cost to construct the pipeline to Blue Plains alone is anticipated to be $142,600,000 in 2004 dollars (or $165,100,000 in July 2008 dollars). Alternate routings for residuals pipelines to Blue Plains, such as Metro Rights of Way or abandoned sewer lines were considered but none were determined to be relevant because WASA cannot accept the Washington Aqueduct residuals to be processed on the Blue Plains site. **Potomac Interceptor Shut-off Valve:** As discussed in Section 3.1.2of the Engineering Feasibility Study Compendium, Alternative 4, Washington Aqueduct residuals combined with sewage in the Potomac Interceptor sewer and piped directly to Blue Plains cannot be processed at Blue Plains AWWTP because of the adverse impact on the existing treatment process at Blue Plains. The writer of one comment proposed a novel approach for the use of the Potomac Interceptor. According to this approach, valves would be installed in the Potomac Interceptor at strategic locations to allow the sewage flow to be trapped and stored for a long enough period of time to allow the water treatment residuals to be flushed into the interceptor so	EIS Volume 1 - Section 6.2.2 Detailed Reasons for Not Selecting Alternative C: Thickening and Piping to Blue Plains AWWTP EIS Volume 4 – Engineering Feasibility Study Compendium Section 3.2.1. EIS Volume 1 – Table 4-6. EIS Volume 1 – Section 3.1.2. EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.1.2

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Topic / Sub-topic	Summary	Response	See EIS section
		that they could flow towards Blue Plains. In principle, it would be possible to send the residuals to Blue Plains daily as a relatively intact "slug" if enough valves and instrumentation were provided. The residuals slug could then be captured at Blue Plains for processing, or for pumping further downstream to another processing location. This approach is somewhat analogous to the concept that is planned for the control of sanitary sewer overflows (SSOs) and combined sewer overflows (CSOs) in many areas of the country, including the District of Columbia. In the case of SSOs and CSOs, sewage flows that exceed the capacity of a collection system would be captured and stored in tunnels to prevent them from overflowing into adjacent rivers and streams. The volume of storage required and the logistics of finding locations for and building the storage tunnels have shown this approach to be very expensive. For the management of water treatment residual flows, this approach would require that storage be constructed at the Dalecarlia site for at least the maximum daily flow of water treatment residuals (8,000,000 gallons if unthickened and 2,000,000 gallons if thickened). A large pump station would also be required to meter the entire day's flow of residuals into the Potomac Interceptor during a short period of time. In addition, valves, diversion chambers, and storage facilities would be needed at virtually every confluence point and pump station in the system for the management of sewage flows to keep them separate from the residuals flows. The cost of this effort was not calculated, but can be assumed to be tremendous since the cost for conveyance facilities is generally greater than that for associated treatment facilities. Dry weather low flow in the Potomac Interceptor near the Washington Aqueduct site is approximately 32 mgd (222,222 gpm), and typically occurs between the hours of 6:00 and 9:00 AM. A minimum of 1.3 million gallons (MG) of storage would be required to hold this flow for one hour. More storage volume would be required during wet weather periods. It would not be feasible to store flow in the pipeline because it would fill the pipeline at the rate of about 60 feet per minute at this flow rate. Without storage, overflows would occur at manholes and overflow points upstream of the point where the shutoff valve is located. While this approach seems like a solution, it would simply be too difficult to implement in a practical manner due to the large volume of sewage and	

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Topic / Sub-topic	Summary	Response	See EIS section
		residuals flows that would have to be addressed and the logistics, difficulties, and costs of making major system changes in an urban area. Since it would add many diversion chambers and storage facilities and would not eliminate any residuals processing facilities, this approach would certainly cost more than the Alternative 25.	
DB	Pipe in a pipe	The installation of two dedicated water treatment residuals pipes within the existing Potomac Interceptor pipe/conduit would be complex, dangerous, time consuming, and costly. Two redundant residuals pipelines would be required to avoid discharging residuals into the Potomac Interceptor in the event of a pipe break. Such a discharge could overload the Blue Plains plant and prevent further discharge of residuals from the Dalecarlia residuals thickening facilities until repairs were made to the residuals pipeline installed within the Potomac Interceptor. Based on the long length of pipeline required, the frequency of rainfall events, and the physical configuration of the Potomac Interceptor, it is anticipated that new water treatment residuals pipelines would need to be installed by workers dressed in Class D waterproof hazardous environment suits equipped with portable air supplies. Since the Potomac Interceptor is a stand alone sewer without a parallel back-up sewer over much of its length, it is anticipated that the new residuals pipelines would need to be installed within the Potomac Interceptor while it is partially filled with sewage. Pipeline installation contractor staff would likely work from portable platforms that float on the sewage flow while they install pipe hangers in the crown of the interceptor. Work would need to be interrupted whenever rainfall increases sewage liquid levels above safe depths within the interceptor. The hazardous and intermittent nature of this work would make it very expensive to complete. In addition to the cost escalation factors associated with the hazardous and intermittent nature of such a project, conversations with DCWASA indicate that they would require stainless steel pipe to be installed along the entire length of the Potomac Interceptor to minimize future maintenance issues associated with the corrosive atmosphere inside the interceptor. This pipe material is significantly more costly (2 to 3 times) than the pipe materials assumed for other piping alternatives. Even if the new residuals pipelines could be cost effectively installed within the Potomac Interceptor, the transfer of residuals to the Blue Plains site still could not be recommended as the preferred alternative because	EIS Volume 4 - Engineering Feasibility Study Compendium, Section 3.2.1

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Topic / Sub-topic	Summary	Response	See EIS section
		WASA has indicated that they need to reserve the available site space for future wastewater or CSO treatment facilities. As a result, no room exists to construct the residuals dewatering facilities required to process the Washington Aqueduct residuals.	
DC	Active management of residuals discharge	Discharging residuals to the Potomac Interceptor during dry weather conditions would require approximately 25 additional 105-foot diameter gravity thickeners to be constructed at the Dalecarlia WTP (above and beyond the 4 gravity thickeners anticipated for the current project). These thickeners would provide up to 30-days of residuals storage for rainy periods. The additional gravity thickener complex would occupy approximately 10 additional acres of area on the plant site. The additional thickeners would have a significant visual impact of the neighbors surrounding the plant site and increase the construction cost of the Blue Plains alternative significantly. Even if the additional gravity thickeners and associated thickened residuals pumping facilities could be constructed cost effectively (which is very unlikely), the dry-weather discharge of residuals to Blue Plains would still overload the existing Blue Plains treatment capacity. The total pounds of residuals delivered to Blue Plains would still be the same as suggested in Alternative 5. Based on these concerns, this option cannot be recommended as the preferred alternative.	EIS Volume 4 – Engineering Feasibility Study Supplement, Section 3.1.2, Alternative 5
DD	WSSC Potomac WTP	Alternative 7 was screened out based on economic and institutional concerns. The cost of the alternative did not comply with the cost screening criteria and WSSC is not willing to process residuals from the Washington Aqueduct at their facility.	EIS Volume 1, Section 3.1.2, Alternative 7 and Table 3-9. EIS Volume 2 – Appendices, Public Involvement and Agency Coordination Section.
DE	Carderock	The Navy was contacted to determine if they would be willing to allow the Washington Aqueduct to construct residuals processing facilities on the Carderock site. They responded that this action would be inconsistent with their mission and future plans for the Carderock site and could not be considered. The many piping alternatives are dependent upon the ability and willingness of the receiving facility at the other end of the pipe, whether to process and dispose of the residuals, or to supply space for the Washington Aqueduct to do so. None of the organizations involved, whether it be the DC WASA, WSSC, Fairfax Water, the Central Intelligence Agency (CIA), the United States Navy, the City of Rockville,	EIS Volume 4 - Engineering Feasibility Study Compendium, Section 3.

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Topic / Sub-topic	Summary	Response	See EIS section
		or the Federal Highway Administration, are able or willing to provide processing capacity or facility space. Neither the United States Army Corps of Engineers, the United States Army, nor the Washington Aqueduct have any authority over any of the agencies. Like Washington Aqueduct, each of these facilities has mission requirements and short-term and long-term plans for meeting them. In addition, in many cases (for example, Carderock) even if there were space available for Washington Aqueduct facilities, it would not be a total solution. Many of the concerns being addressed at the Washington Aqueduct would just be transferred to another location.	
DF	Fairfax Water - Corbalis WTP	Fairfax Water was contacted to determine if they would be able to process Washington Aqueduct's residuals. They indicated that this was not feasible due to a lack of excess capacity. The processing of Washington Aqueduct residuals is also not within Fairfax Water's mission. In addition to issues related to the Fairfax Water's capacity and mission, implementation of a Fairfax Water residuals processing option would also require the construction of a dedicated residuals pipeline to convey the residuals from the Dalecarlia WTP site to the Corbalis Water Treatment Plan site. Such a pipeline would be difficult and costly to install, requiring permission from numerous agencies and private property owners. Based on our analysis of similar piping alternatives, the time required to obtain new easements and the costs associated with constructing the residuals pipeline would create additional obstacles to implementing such an option. Compliance with the FFCA residuals project schedule, as well as, cost screening criteria defined for the project are not feasible for this alternative.	EIS Volume 2A – Appendices EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3
DG	Potomac River	It would be possible to use the existing residuals discharge pipes that connect the sedimentation basins to the Potomac River as carrier pipes to transport thickened residuals to the river. However, it is unlikely that the National Park Service would allow Washington Aqueduct to construct a barge loading station or residuals storage tanks on National Park land adjacent to the Potomac River. It is also likely that the approval to construct a residuals pipeline within the Potomac River bed to transport residuals to the Blue Plains AWWTP could be obtained and the pipeline constructed within the FFCA schedule milestones required by EPA. As a minimum, it is anticipated that a pipeline route study and archeological investigation of the route would be required to prove that there aren't any	EIS Volume 4 - Engineering Feasibility Study Compendium, Section 3.

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Topic / Sub-topic	Summary	Response	See EIS section
		other routes available for the pipeline that present fewer impacts on park land. As with the pipeline to Blue Plains explored for Alternative C, it is anticipated that many Federal and local agencies would become involved in the design, permitting, and approval of such a pipeline route. The timeframe required for such approvals would be considerable, certainly beyond the timeframes allowed in the FFCA schedule. In addition to the pipeline issues, the alternative would also be negatively impacted by WASA's need to reserve property at the Blue Plains AWWTP for planned future nutrient reduction and CSO treatment improvements. This position prevents Washington Aqueduct from constructing any water treatment residuals processing on the Blue Plains AWWTP site.	
DH	George Washington Parkway	This alternate pipeline route was evaluated in Volume 4 of the EIS. The George Washington Parkway is not considered a suitable residuals disposal route through Virginia because truck access is restricted on this road. The two residuals haul routes proposed through northern Virginia in the EIS are considered more appropriate options because they do not have similar truck restrictions and are capable of handling the number of residuals trucks proposed for the Washington Aqueduct residuals project.	EIS Volume 4 – Engineering Feasibility Study Compendium, Table 3-7.
DI	Pipeline Size	The two 12-inch pipelines proposed for the Blue Plains alternative provide 100-percent redundancy for the design flow rate.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.1.2 Alternative 5 discussion
DJ	Regionalization	Washington Aqueduct has a copy of the December 2000 report entitled "DC WASA Regionalization Study" prepared by staff from the Metropolitan Washington Council of Governments under contract to the District of Columbia Water and Sewer Authority in support of the DC WASA Regionalization Committee. Washington Aqueduct management has met with the consultant conducting the study and given them a full understanding of our current and future operations. The acknowledgements of this report have no reference to any involvement by Washington Aqueduct specifically or the Corps of Engineers in general. Washington Aqueduct is also aware that in March 2005, the DC WASA board acted on an agenda item selecting a regionalization study committee to fulfill the commitment to do a five years hence reevaluation of the work done in 2000. The general manager of Washington Aqueduct has recently met with a representative of the contractor doing the study for DC WASA. Washington Aqueduct explained its role as a wholesale	EIS Volume 4 – Engineering Feasibility Study Compendium

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Topic / Sub-topic	Summary	Response	See EIS section
		producer and described its business and operational relationships with its customers. It is Washington Aqueduct's view that the current operational and business arrangement is sound. At the interview, the question of residuals was discussed and it was pointed out that the issue of piping to WASA's Blue Plains facility for processing and removal at that location is a technical, engineering issue and is not related to governance. The 2000 report was clear that there are many possible models for what might constitute regionalization of the wastewater and drinking water systems. Centralized ownership and operation of all wastewater and drinking water plants in the District of Columbia, in Northern Virginia, and in the Maryland counties adjacent to the District of Columbia is one option that might be studied. Without commenting on the appropriateness or likelihood of this model being selected and implemented, the practical issue is that EPA Region 3 has issued an NPDES permit that has an accompanying compliance schedule that is not compatible with the establishment of an independent regional authority. Regardless of the management structure that might come from a decision to create an independent regional authority sometime in the future, the fact remains that the Dalecarlia and McMillan water treatment plants will continue to operate to produce potable water for the region because the surrounding water treatment utilities do not have sufficient excess treatment capacity to offset the existing Washington Aqueduct production rate and residuals from these plants would have to be managed. Washington Aqueduct has consulted with WSSC, Fairfax Water and the city of Rockville to determine if those entities are able to handle the solids produced by Washington Aqueduct. In all cases, their existing residuals processing capacity is insufficient to accommodate the Washington Aqueduct residuals. In addition, the cost and environmental impacts associated with transporting the Washington Aqueduct residuals to another facility are significant.	
DK	Rockville WTP	The City of Rockville, MD was contacted to determine if they would be able to process Washington Aqueduct's residuals. They indicated that this was not feasible for a variety of reasons (inadequate treatment plant and residuals processing capacity (5 mgd average water production rate for Rockville WTP versus 185 mgd for Washington Aqueduct), tight site conditions, etc.).The processing of Washington Aqueduct residuals is also not within the mission of the City of Rockville. In addition to issues related	EIS Volume 2A – Appendices

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Topic / Sub-topic	Summary	Response	See EIS section
		to the Rockville WTP site and mission, implementation of a Rockville residuals processing option would also require the construction of a dedicated residuals pipeline to convey the residuals from the Dalecarlia WTP site to the Rockville WTP site. Such a pipeline could be installed inside the existing Washington Aqueduct raw water conduit for some distance. However, a section of the pipeline to the Rockville WTP site would have to be direct buried and routed through either National Park Service or private property. New easements would be required for this portion of the route. Based on our analysis of other similar piping alternatives, the time required to obtain new easements and the costs associated with constructing the residuals pipeline would create additional obstacles to implementing such an option. Compliance with the FFCA residuals project schedule, as well as, cost screening criteria defined for the project is not feasible for this alternative.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3
DL	Processing site near Beltway	As with Alternate 8 as evaluated in Volume 4 of the EIS (Engineering Feasibility Study Compendium), it is not feasible to locate and acquire a new site situated near the Beltway, design residuals transport and processing facilities, and construct said facilities within the requirements of the FFCA compliance schedule due to time requirements for siting, obtaining real estate at the new site, as well as, for obtaining a pipeline easement. The FFCA provides a legally mandated plan and time frame to achieve and maintain compliance with the NPDES permit. This suggested alternative cannot be achieved within the time frame constraints of the FFCA. Thus, this alternative is not consistent with the purpose and need of the project. Untimely or non-implementation of the FFCA would result in undesirable consequences impairing the Aqueduct's ability to provide water to its customers and continuing the practice of returning residuals to the Potomac River. EPA granted the Aqueduct an extension to the FFCA milestone to develop and notify EPA of the engineering and best management practices to be implemented to achieve compliance with the NPDES permit and a schedule to implement those practices with the understanding that the Aqueduct would not request an extension to the implementation schedule. In the project meeting described in 5.2.8 of the EIS, EPA ruled out extensions to the FFCA implementation schedule. Although there is no tangible evidence such a site is available, assume, for discussion, that there is a tract of land available in some location	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.1.2 Alternatives That Do Not Require Continuous Trucks from the Dalecarlia WTP Complex (see Alternative 8 write-up)

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		adjacent to the Beltway. If the Washington Aqueduct were to consider this tract for residuals processing it would first have to get a commitment that this land would be available for the intended use. In the case of private land this would mean that the land would have to be purchased. After securing the property the new alternative would need to be evaluated in the same manner as the alternatives considered to this point. This would involve everything from studying the engineering feasibility of getting the liquid residuals to the processing point to assessing all environmental impacts associated with the alternative. In any case, the cost would include most or all costs associated with the current alternative E plus the cost of securing land for the facilities and the right of way to get there and the time it would take to accomplish this would be many months to years. Many of the recent alternatives suggested by the public have involved transporting liquid residuals in a dedicated pipeline installed within the raw water conduit that connects the Great Falls Potomac River intake structure with the Dalecarlia Reservoir as a means to avoid the time and cost associated with acquiring a dedicated right-of-way for the liquid residuals pipeline to a processing site near the Beltway. The potential schedule and cost benefit afforded by using the existing raw water conduit as a “carrier” pipe for a residuals pipeline cannot be taken full advantage of unless a residuals processing site can be identified immediately adjacent to or near the existing raw water conduit. In order to provide a benefit from a residential neighborhood impact perspective, this site must also be located along a major trucking route (i.e., non-residential street) that connects to the Beltway without requiring trucks to drive on neighborhood streets. The Carderock alternative provided one of these two potential benefits – it is located adjacent to the raw water conduit. However, processing residuals on the Carderock site would have still required dewatered residuals to be hauled through residential neighborhoods serviced by 2-lane subdivision roads no more suitable for truck traffic than similar haul routes proposed for residuals Alternative E. This suggested alternative also included speculation that a direct Beltway interchange could be constructed. Creating a direct Beltway interchange is a remote, costly and time prohibitive possibility. It would require basic changes in legislation and policies of other federal and local agencies, such as the National Park Service, which would be likely to result in protracted debate and possible litigation of their own. In addition, a residuals processing site located near the Beltway would still have the	

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		round trip residuals haul distance of approximately 140 miles (versus the 150 miles assumed or the Dalecarlia WTP alternative. We are not aware of any site, nor has any site been suggested adjacent to the raw water conduit that is available for use and also serviced by roads that are any more suitable for residuals trucks than the routes proposed for Alternative E.	
DM	COE hasn't adequately investigated other piping alternatives	The Washington Aqueduct has investigated over 120 piping alternatives to a variety of potential residuals processing locations. In all cases, the owners of the potential processing locations have declined to allow Washington Aqueduct to site residuals processing facilities on their site. This renders all such alternatives infeasible. Any other possible piping alternatives not already addressed in the EIS and discussed in topic DL above would have common components that make them infeasible.	EIS Volume 4 - Engineering Feasibility Study Compendium
EA	Residuals disposal method	Marketing of residuals as a "soil conditioner" is evaluated in the EIS. It can be concluded that the market for the land disposal of water treatment residuals is viable. Water treatment residuals are generally not suitable to apply as a fertilizer or use in composting operations because their organic content is quite low. Alum-based water treatment residuals typically have some ability to bind phosphorus, such as present in runoff. However the phosphorous binding characteristics of water treatment residuals vary from site to site. The water treatment residuals disposal market is not currently focused on taking advantage of this characteristic of alum-based water treatment residuals. However, given the level of concern associated with excess phosphorous being discharged into the Chesapeake Bay, it seems likely that this could change in the future. Washington Aqueduct remains interested in exploring a beneficial reuse disposal option for their water treatment residuals if it can be implemented cost effectively and reliably. The application of water treatment residuals to agricultural land is different than discharging it to the Potomac River because the solids contained within the residuals do not return to the river. Land application rates are regulated by the States to prevent runoff from containing excess solids. One potential residuals disposal method under consideration by Washington Aqueduct is to allow a cement plant to use the residuals in	EIS Volume 1 – Section 4.16 Land Application of Water Treatment Residuals

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		the manufacturer of cement. A sample of residuals was provided to Lehigh Cement for their evaluation so that they can determine if this option is cost effective. The public comments received to date suggest disposing of dewatered residuals at multiple sites. Depending upon the contractors that are awarded disposal contracts, multiple sites may or may not be used. Using the dewatered residuals to create a residuals island in the Potomac River or the Chesapeake Bay cannot be recommended as the preferred alternative given EPA's opposition to continuing to discharge the residuals to the Potomac River. It is also unlikely that the permitting activities associated with such an endeavor, assuming that EPA would consider it, could be accomplished within the schedule imposed by the FFCA. The disposal of dewatered residuals in a landfill is considered a feasible alternative. Based on our discussion with various residuals disposal contractors, land application on agricultural land may be preferable to landfilling from a cost perspective. Specific residuals disposal locations have not been identified in the EIS because disposal locations vary by residuals disposal contractor. Specific land application sites are also expected to change over time, as regional development transforms agricultural land uses into suburban land uses.	EIS Volume 4 – Engineering Feasibility Study Compendium section 3.2 Alternative P84 discussion. EIS Volume 1 – Section 4.16

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
EB	Residuals processing method and impacts	Plasma heat treatment of residuals is one of the alternatives (Alternative 26) that were considered and screened in May 2004 following the Scoping Meeting. Alternative 26 was found inconsistent with screening criteria, proven methods, reliability and redundancy and economic considerations and is therefore not carried forward for detailed evaluation in the EIS.	EIS Volume 4 - Engineering Feasibility Study Compendium Section 3.1 – May 2004 Alternatives Screening
		Alternate temporary residuals storage locations, such as the Dalecarlia Reservoir, are evaluated in the Engineering Feasibility Study Compendium.	EIS Volume 4 – Engineering Feasibility Study Compendium Section 3.2.2 – Public Alternative P82 discussion
		Some public comments suggest alternate residuals processing methods to reduce the number of trucks per day required to haul residuals to a remote disposal site. The number of trucks required per day is directly related to the dryness of the residuals cake being hauled. Thirty-percent cake dryness is currently envisioned for the trucking alternatives. Grinding residuals into a finer material as suggested in one public comment would not have an impact on the density or dryness of the residuals and, as a result, would not reduce the number of trucks required to haul the residuals.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.
		Alternate residuals dewatering technologies, such as centrifuges and belt filter presses, will be evaluated further during the design phase of the project. Both technologies can fit into the proposed residuals dewatering building described in the EFS. Neither technology has an environmental impact advantage because they dewater the residuals to essentially the same dryness and generate similar noise levels outside of the dewatering building.	
		Chapter 4 of Volume 1 of the EIS describes the environmental impacts of 4 alternatives plus the No Action alternative. This information allows the public to compare the relative impacts of various alternatives.	EIS Volume 1, Chapter 4

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
EC	Residuals Quantities	The quantities of residuals that require disposal varies considerably from alternative to alternative because some alternatives anticipate pumping thickened residuals at 2-percent solids while others assume that dewatered residuals at 30-percent solids will be trucked offsite. Less concentrated residuals (such as thickened residuals) require a much larger volume of water to be pumped or hauled away to remove the same number of pounds of solids. This is why the number of trucks of dewatered residuals is not directly comparable to the number of gallons of thickened residuals without adjusting for the extra volume of water associated with the thickened residuals. An example residuals volume calculation has been added to the appendices of the Volume 4 of the EIS – Engineering Feasibility Study Compendium to help explain this conversion. The impacts associated with each residuals processing alternative are discussed in Section 4 of the EIS.	EIS Volume 4 – Engineering Feasibility Study Compendium, Appendices and Sections 2 and 3. EIS Volume 1, Section 4.
FA	Construction Schedule	See transcripts for responses. A bar chart schedule showing the estimated durations of the EIS preparation and review, design, and construction periods for the residuals project is provided in the Executive Summary section of the EIS. This schedule describes how the residuals project will be completed in conformance with the FFCA milestone deadlines defined by EPA.	EIS, Volume 1, Section 2.3 EIS Volume 1, Executive Summary
FB	EIS Schedule	A discussion of the Washington Aqueduct's NPDES permit and associated FFCA is provided in the Background and Project History section of the EIS Executive Summary. The EIS schedule is driven by the need to meet milestones associated with the overall compliance with the FFCA. The alternatives screening process also included compliance with this schedule as one of the criterion for determining whether an alternative was consistent with the purpose and need for the project. The objectives defining the purpose and need were listed in the Notice of Intent, which was published in the Federal Register on January 12, 2004. The final EIS contains an updated project schedule which reflects the extensions granted in the interest of public involvement during the EIS process. The schedule indicates that the project can still be completed within the FFCA schedule milestones without taking any extraordinary	EIS Volume 1, the Executive Summary lists the objectives defining the project's purpose and need and provides a project schedule. EIS Volume 1, Section 2.3 describes the screening criteria, including the one to meet the FFCA schedule. EIS Volume 2, A copy of the FFCA schedule is included under the Regulatory Information tab. EIS Volume 4, Engineering Feasibility Studies Compendium provides a complete description of the screening evaluation and results.

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		measures.	
FC	Compliance performance	Alternatives that would otherwise be feasible but cannot be implemented within the timeframe stipulated within the FFCA schedule were eliminated from consideration as the recommended alternative because the FFCA schedule is a legally binding requirement. The FFCA provides a legally mandated plan and time frame to achieve and maintain compliance with the NPDES permit. Thus, these alternatives that are not compatible with the FFCA are not consistent with the purpose and need of the project. Untimely or non-implementation of the FFCA would result in undesirable consequences impairing the Aqueduct's ability to provide water to its customers and continuing the practice of returning residuals to the Potomac River. EPA granted the Aqueduct an extension to an internal milestone in the FFCA deadline to develop and notify EPA of the engineering and best management practices to be implemented to achieve compliance with the NPDES permit and a schedule to implement those practices with the understanding that the Aqueduct would be held to the final compliance deadlines in 2008 and 2009. In the project meeting described in 5.2.8 of the EIS, EPA ruled out extensions to the FFCA implementation schedule.	EIS Volume 2 – Appendices, Regulatory Information Section
FD	Short-term or Temporary alternatives	The 20-year life defined for the monofill is consistent with the planning period adopted for the EIS as a whole. It is also consistent with planning horizons used in engineering feasibility studies. The consideration of short and long-term alternatives within the Engineering Feasibility Study Compendium is limited to residuals options such as the use of alternate coagulants, etc. In general, two-phased residuals processing alternatives (i.e., truck for a short period of time followed by the Blue Plains alternative) are not recommended because they could result in residuals processing facilities that are required for the initial phase having to be abandoned in the second phase. Alternate two phase residuals processing suggestions offered by the public, such as hauling wetter residuals initially followed by "a better long term solution" in the future, would result in a significantly larger number of trucks being required to haul wetter residuals in the short term – worst case average in excess of 300 trucks per day to truck thickened residuals. Most residuals dewatering technologies are capable of producing a dewatered residuals cake with a solids concentration of 30-percent or greater (i.e., 70-percent water and 30-percent solids). Technologies that	EIS Volume 4 – Engineering Feasibility Study Compendium Sections 3 and 4.

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		produce a wetter material, such as gravity thickening, tend to produce a liquid residual product. Gravity thickening is currently envisioned as the first step in the residuals handling process, followed by centrifuge dewatering. Gravity thickening is capable of reliably producing a 2-percent solid product. The trucking alternatives discussed in the EIS anticipated producing 6-8 trucks of water treatment residuals per day on average. Six trucks per day of dewatered residuals (at 30-percent solids) is equivalent to approximately 85-90 trucks per day of thickened liquid residuals (at 2-percent solids).	
FE	Public comment period	Four public comment periods were provided prior to the issuance of the FEIS: 1. The Scoping Period - January 11, 2004 through February 11, 2004) 2. The first extension of alternatives identification period (September 10, 2004 through November 15, 2004) 3. The second extension of the alternatives identification period (December 23, 2004 through February 14, 2005) 4. The DEIS comment period starting with the publication of the Notice of Availability of the DEIS in the Federal Register on April 22, 2005 and ending on July 6, 2005. This period includes a 30 day extension to the original 45 day DEIS comment period.	EIS Volume 1 - Section 5 Public Involvement
FF	EIS review period time extension	The Notice of Availability for the DEIS was published in the Federal Register on April 22 2005, and the 45 day public comment period was initiated. The public comment period was extended to 75 days, or to July 6, 2005.	EIS Volume 1 - Section 5 Public Involvement EIS Volume 3 – Comments and Responses – Document 120
FG	EPA grants interim FFCA schedule milestone extension	In response to various requests for additional time to review the DEIS, Washington Aqueduct requested that EPA extend their intermediate milestone deadline for submission of the Record of Decision to November 2, 2005 (paragraph 22 of the FFCA). This request was granted by EPA in a letter dated June 27, 2005. Although additional time was granted by EPA for DEIS review by the public, the 2008 and 2009 deadlines defined in the FFCA for removing part or all of the residuals from the Potomac River remain unchanged.	EIS Volume 3 - Comments and Responses – Document 120

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
GA	Trucking, neighborhood impact	Unless the water treatment residuals are returned to the Potomac River or are stockpiled locally at Dalecarlia in a monofill, there will necessarily be trucking of the residuals from the dewatering facility whether newly constructed or at an existing location to an eventual land application site. Those trucks will transit public streets and highways. Alternatives B and E thoroughly evaluate impacts of trucking on nearby neighbors, from two different residuals processing locations (B- Northwest Dalecarlia Processing Site, E- East Dalecarlia Processing Site) For alternatives that rely on hauling residuals to a remote disposal site trucking operations will meet all requirements established for the use of trucking routes including weight limitations, if any, permitting, etc. Following the issuance of the DEIS, numerous comments were received from the public regarding the worst-case number of trucks per day predicted during extremely wet conditions (anticipated to occur for approximately a 2-week duration on a frequency of 2 out of 11 years). A 132-truck-per-day value is defined in the public comment correspondence, but this value is not correct. In the DEIS, Washington Aqueduct committed to a maximum of 33 trucks per day (inbound) and 33 trucks per day (outbound) under worst-case wet-weather conditions. The discussion below explains why these peak truck-per-day values have now been reduced to 25 trucks per day (inbound) and 25 trucks per day (outbound) for the final EIS. A complete listing of predicted residuals truck loads associated with a variety of river turbidity conditions are provided in the Engineering Feasibility Study Compendium. Truck load estimates have been prepared for two sets of conditions, loads associated with long term (11-year) average conditions and loads associated with wet year conditions. The highest river turbidity conditions are associated with wet year, design conditions and the lowest river turbidity conditions are associated with the long-term annual average conditions. A maximum of 33 truck loads per day (based on hauling peak residuals quantities 5 days per week) were predicted for worst case conditions that are expected to occur no more than approximately 14 days every 11 years. This number has been reduced to 25 truck loads per day for worst case conditions. See discussion below. A more typical maximum truck load value of 13 trips per day is predicted for up to 30 days each year. The average number of	EIS Volume 1 - Sections 3 and 4, throughout EIS Volume 4 – Engineering Feasibility Study Compendium, Table 3-6. EIS Volume 1 – Section 7 Cumulative Impacts and Mitigation

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		truck loads predicted over an annual period is 8 per day. **Impact of residuals equalization on truckloads per day:** Based on the public's concern about the peak number of residual trucks identified in the DEIS, Washington Aqueduct re-analyzed whether the peak number of truck loads could be further reduced within the current project budget. The peak residuals truck load values listed in the DEIS (i.e., 33 truck loads per day during the maximum design wet year) assumed that a portion of the water treatment residuals generated in the Georgetown Reservoir would be stored within the reservoir temporarily before pumping them to the residuals thickening and dewatering facility. This approach lessens the peak theoretical dewatered residuals truck loads per day predicted for this worse-case event. Due to the nature of the existing basins and the proposed residual removal equipment, liquid residuals cannot be similarly stored in the Dalecarlia sedimentation basins. However, the gravity thickeners located downstream of the sedimentation basins provide some opportunity to further equalize residuals flows. This capability was not taken into consideration in the DEIS analysis. Limited temporary storage of thickened residuals is possible in the gravity thickeners if they are deepened slightly (approximately 1 foot) and operated such that some thickener storage volume is reserved to store the peak residuals quantities associated with storm events. Consideration of this additional residuals flow equalization capability could allow the peak number of anticipated dewatered residuals truck loads per day to be lowered from 33 truck loads per day (maximum design year wet weather conditions) to a maximum design wet year rate of between 20 and 25 truck loads per day depending upon the demand for finished drinking water. Washington Aqueduct is committed to providing this additional thickener depth and operating the thickeners is such a manner so as to restrict the peak number of truck loads leaving the dewatering site to a maximum of 25 truck loads per day. The increased depth should be able to be designed so that is does not increase the overall height of the thickener structures. **Start-up year versus design year truck trips per day:** Practically speaking, the peak number of trucks listed above will be further reduced during the initial years of operation of the residuals thickening and dewatering facility. This is possible because the residuals truck loads	EIS Volume 4 – Engineering Feasibility Study Compendium – Appendices EIS Volume 1 – Section 7 Cumulative Impacts and Mitigation

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		listed in the DEIS are based upon water demands projected for the design year (i.e., the end of the 20-year EIS planning period). An average design year water demand of 220 mgd was used to estimate the residuals quantities listed in the DEIS. The historical average Washington Aqueduct water demands have been significantly lower than 220 mgd, ranging between 175 and 180 mgd, or approximately 80-percent of the design value used for the DEIS. The 11-years of historical data analyzed for the DEIS also indicates that the Washington Aqueduct average water demands have remained stable or declined slightly over the last 11 years, indicating that the water demand values used in the DEIS are quite conservative. When the current demand factors are applied to the 33 peak residuals truckloads predicted for the wet year, initial start-up peak truckload values of 26-27 truck loads per day are predicted (i.e., 33 truck loads/day X 0.8 = 26.4 truck loads per day at system start-up). Assuming that the gravity thickeners are used to temporarily store start-up peak residuals quantities as described above, the 26-27 peak truck loads per day predicted for initial start-up wet years would be further reduced to approximately 20 truck loads per day. In all cases described above, the use of the gravity thickeners as temporary storage vessels would reduce only the peak number of loads produced at the Washington Aqueduct residuals facility. The total volume of material requiring disposal (i.e., the total number of truck loads required) would remain unchanged. The stored residuals would be hauled as part of future activity when the volume of residuals requiring removal is reduced. **Listing schools along truck routes:** Although the EIS lists some of the schools along the proposed truck routes, the intent of the EIS was not to identify all schools along each route. Rather, the intent was to identify typical types of facilities along the truck routes. Additional schools, located along the proposed truck hauling routes, were added to the EIS text following the receipt of the DEIS comments. **Truck accidents along proposed truck hauling routes:** The number of truck accidents on proposed truck hauling routes is not	EIS Volume 4 – Engineering Feasibility Study Compendium – Appendices] EIS Volume 1 – Section 3.10

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		anticipated to increase as a result of adding an average of 8 truck loads per day to these roads. The accident rate along roads is only partially related to the volume of traffic. Other road and intersection design criteria are potentially more important than truck volumes given the relatively small truck volume increase proposed for the neighborhood roads with this project. The truck haul routes under consideration on this project generally have existing trucks counts ranging from approximately one hundred trucks per day to 2,000 trucks per day. The contract terms for the potential residuals haulers will require full disclosure of each haulers accident record. This information will be considered as one of the selection criteria for the haulers. Accident reporting as response procedures will also be required as part of the hauling contract to ensure that accidents are responded to quickly. **Trucking mitigation measures requested by the public:** Repave Dalecarlia Parkway with sound deadening asphalt: Washington Aqueduct does not know the basis of the pavement deign used by the District of Columbia for Dalecarlia Parkway that has resulted in the concrete surface. The current roadway will (as will all roadways on routes considered for trucking) properly support the loaded weight of the trucks. Washington Aqueduct will address the surface noise concern to the DC Department of Transportation, but must defer to the Department for their determination of the appropriate surface for this road. Reimbursement for truck related damage to Montgomery County roads: The public roads exist for personal and commercial use. State and local jurisdictions are responsible or maintenance of roads. Each jurisdiction funds road maintenance and repair within its budget often through permitting, taxes, etc. Speed limit and warning signs: All employees and contractors of Washington Aqueduct using the public roads in accordance with their duties at Washington Aqueduct are responsible to operate their vehicles in a safe and courteous manner. That operation will be commensurate with the speed and caution postings of the local jurisdictions. At the exit point from a residuals facility constructed on Washington Aqueduct property, a prominent sign will be erected reminding drivers to cover their loads, avoid tracking mud on to the roads, and to drive in accordance with law, regulation, and common courtesy. Additional speed monitoring and enforcement by the police: Washington	

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		Aqueduct will cooperate with any speed-monitoring program initiated by police agencies. Any driver found to violate speed limits will be disciplined. Neighborhood reporting system for excess truck noise, speeding trucks, etc.. Washington Aqueduct management will periodically attend neighborhood meetings to receive general feedback on its operations in general and respond to any questions relating to trucks serving the needs of Washington Aqueduct. Management will also respond to any direct inquires. Sound barriers along truck routes: Trucks hauling residuals from Washington Aqueduct do not change the service classification of the routes identified. The additional few trips per day on any of these roads do not warrant installation of sound barriers. Improved signaling at Dalecarlia Parkway/Little Falls Road intersection: It is anticipated; in order to facilitate the proposed expansion at Sibley Hospital, that minor realignment of the intersection of Little Falls Road and Dalecarlia Parkway will take place. Washington Aqueduct will coordinate with Sibley Hospital on these improvements to their private road to ensure that they also meet residuals hauling truck needs. At this time there is nothing in the data that suggest that the addition of our routine traffic is significant. However, the Washington Aqueduct is very aware of the public concern over traffic and intends to pay very close attention to the operation of this part of the project. **Residuals falling from the trucks:** Residuals hauling trucks will be equipped with fabric covers to prevent residuals from blowing or falling off trucks and gasketed tailgates (to prevent dripping). **Truck vibration impacts on neighborhood homes:** The average number of additional residuals trucks proposed for this project represents a small fraction of the current number of trucks traveling many of the proposed haul routes. The routes were selected because they are designed to function as truck routes. Any current home foundation issues associated with existing traffic loads on the proposed routes are not anticipated to be worsened as a result of the additional	EIS Volume 1, Section 7.2 EIS Volume 1 – Section 4.11

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		trucks proposed for this project. **Truck impact on neighborhood ambience:** No significant impact on neighborhood ambience is anticipated to be associated with the additional trucks proposed for this residuals handling project given the relatively large number of trucks and vehicles that currently make use of the proposed trucking routes. **Trucking impact on traffic congestion in an already congested area:** The analysis in the EIS shows that none of the feasible routes would have traffic flow or congestion impacts that reduce the level of service on the route due to the project's trucking operation, with the exception of route A. Trucking hours will be restricted on Route A to between 9:30 AM and 3:00 PM to reduce any potential impact on this route. Routes F and G are designated as emergency use only due to pedestrian traffic and security issues related to the use of Constitution Avenue. The use of these two routes, F&G, for this project would not change their level of service but will require a permit from the National Park Service. **Incomplete response to Montgomery County Planning Board letter:** Responses to the individual comments contained within the June 1, 2005 letter from the Montgomery County Planning Board (document 125) are discussed in the applicable topic categories summarized herein.	
GB	Trucking alternative	Under all of the feasible alternatives selected for evaluation in the EIS, pipelines would convey water treatment residuals from both the onsite sedimentation basins and the Georgetown Reservoir to the Dalecarlia thickening facility. Trucking from Georgetown to Dalecarlia is not under consideration for detailed evaluation in the EIS. Trucking at night was suggested by the public as an alternative to daytime trucking. While potentially favorable from a traffic standpoint, night trucking would likely result in more noise impacts on the surrounding neighborhoods due to lower ambient nighttime noise levels. Moreover, the residuals receiving facilities typically do not operate at night. Trucking dewatered residuals to offsite disposal is a common practice in the water and wastewater treatment industry, including the other two large water treatment facilities in the region (the Fairfax Water Corbalis WTP	EIS Volume 4 – Engineering Feasibility Study Compendium Section 3 – Screening of Alternatives EIS Volume 1 – Section 4.16

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		and the WSSC Potomac WFP). Other, more uncommon processing options, such as plasma treatment of residuals cannot be recommended as the preferred alternative because they are not considered proven and are not cost effective, although, even these technologies, typically result in a byproduct that is commonly trucked away to an offsite disposal site. **Alum Recovery:** Reference a memo discussing alum recovery included in the Appendices of the Engineering Feasibility Study Compendium.	EIS Volume 4 – Engineering Feasibility Study Compendium - Appendices
GC	Trucking, noise	**Noise impacts from facility and trucks:** Noise impacts associated with the proposed residuals thickening and dewatering facility are evaluated in the EIS. In general, the dewatering building is not anticipated to contribute noise to the surrounding neighborhood due to the distance from the facility to the neighbors and the use of sound absorbing building materials. Truck noise entering and exiting the dewatering facility will be minimized by prohibiting idling before loading, providing enclosed loading bays, and providing berms around the loading area that will function similar to sounds walls along area interstates by directing noise away from neighbors. With this mitigation, noise impacts are determined to be not significant. **Truck noise mitigation measures:** Noise mitigation measures will include selecting building materials that absorb noise associated with the enclosed dewatering equipment, enclosing truck loading bays, constructing earthen berms around the dewatering building to deflect/absorb truck related noise, and providing storage hoppers on the intermediate floor to act as sound buffers that prevent noise associated with the dewatering centrifuges (located on the top floor of the building) from reaching the truck loading area. Noise mitigation along residuals trucking routes will be accomplished by reminding truck drivers to drive responsibly and to be considerate of the residential neighborhood impacts that their trucks could have by posting a sign at the exit from the site.	EIS Volume 1 – Section 4.3 Noise EIS Volume 1 – Section 7.2
GD	Trucking routes	One of the alternatives suggested by the public, which was found to be consistent with the screening criteria, involves a new site at the Dalecarlia Reservoir, located adjacent to Little Falls Road, for the residuals	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.2.3- Description of Public Alternatives Consistent with Screening

TABLE 1
Comments and Responses by Topic

Topic / Sub-topic	Summary	Response	See EIS section
		thickening and dewatering facilities. This alternative is carried through for detailed evaluation in the EIS as Alternative E. It offers some advantages from a trucking perspective because it does not require trucks to travel loaded with residuals to travel uphill on Loughboro Road.	Criteria
		One of the alternative truck routes considered, but subsequently eliminated, involves constructing a new access road from the Dalecarlia WTP site to the Clara Barton Parkway. This route was eliminated from consideration because the National Park Service does not allow truck traffic on the Clara Barton Parkway.	EIS Volume 4 – Engineering Feasibility Study Compendium, Table 3-7 Alternative P79
		Using smaller trucks to dispose of dewatered residuals offsite would not increase the number of available of haul routes through the area surrounding the Dalecarlia WTP. The proposed routes were selected based upon their suitability for truck traffic. This criterion does not change if smaller trucks are proposed.	
		Trucking route maps are included in the EIS.	EIS Volume 1, Section 3.
		MacArthur Boulevard appropriate as a truck route?	
		Some members of the public expressed concern about the appropriateness of using MacArthur Boulevard as a truck haul road, indicating that trucks are not allowed on this road. There are no special weight restrictions on MacArthur Boulevard in the District of Columbia. Weight restrictions exist in Maryland due to the raw water conduits under the roadway.	
		Do trucks traveling to Westmoreland Circle immediately access Dalecarlia Parkway?	EIS Volume 1 – Figure 3-8
		Yes, truck access routes near the Dalecarlia plant are shown in Figure 4-1.	
		Single truck route proposed in DEIS:	
		In the Draft EIS we evaluated eight truck haul routes, not one or two routes as stated in the comments submitted by the public. All of the routes evaluated, except route C, can be used to haul residuals. A permit from the National Park Service would be required to haul residuals on routes F and G. All routes were selected because they followed high volume roads designated for truck traffic keeping with DC DOT's truck route policies and recommendations. Although five of the original eight routes studied can	EIS Volume 1 – Section 7.2

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
		be used without restriction and without causing a significant impact, the Washington Aqueduct may choose to study and propose additional routes to replace the three that were found to have limitations or restrictions. In this case the Washington Aqueduct would provide appropriate supplemental documentation in the future. **Quantify Impact of Trucks on Neighborhood Roads:** The proposed number of residuals trucks is relatively small when compared with the daily truck volume on the proposed haul routes. As a result, truck impacts are expected to be relatively small and well within the range of impacts taken into account in the design of urban truck routes. The public roads exist for personal and commercial use. State and local jurisdictions are responsible or maintenance of roads. Each jurisdiction plans for and funds road maintenance and repair within its budget often through permitting, taxes, etc. **Limit trucks through Montgomery County to those delivering to Maryland disposal sites:** Because limitations could have the effect of higher contract costs, limitations will not be included. However, it is logical to expect that elevated fuel and maintenance costs associated with lengthy haul distances will encourage residuals haulers to follow the most direct haul route to their destination. **Truck dispersal plan needed:** Distributing residuals trucks on all feasible proposed routes is not cost effective. The total haul distance could be increased by up to 30-40 miles if trucks are evenly distributed on all routes. For example, some trucks destined for a disposal site in Maryland would have to travel southeast to the Beltway and then travel around the Beltway on the east side of the City. This practice would increase hauling costs and increase traffic congestion within the District of Columbia and on the Beltway in Maryland or Virginia. If a disposal contractor did have disposal sites available in several directions he would choose the best routes to get to those sites but to commit to evenly distributing routes would be impractical and would have undesirable consequences. In all cases studied, concentrating	

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Topic / Sub-topic	Summary	Response	See EIS section
		trucks on one route would not decrease the level of service of that route. See topic GA for a discussion of schools along trucking routes.	
GE	Trucking frequency	See transcripts for responses and topic GA for additional information on 132 trucks per day. The number of truck loads required to haul dewatered residuals offsite is summarized in the Volume 4 of the EIS. **Adverse impacts of 132 trucks per day through a residential area:** With the proposed mitigation implemented (as described in topic GA), the maximum number of truck loads per day required to remove residuals from the Dalecarlia WTP under worst case wet year conditions is 25 truck loads per day based upon 20-ton trucks. The 132 truck per day value suggested in the public comments corresponds to a theoretical maximum number of times that a truck could pass by a given house if all trucks used the same route entering and exiting the site on the maximum residuals production day (expected to occur 2 weeks every 11 years) anticipated in the design year and if 10-ton trucks were used. The 132 truck per day number is not an accurate representation of the number of trucks that will typically be traveling through the neighborhoods surrounding the Dalecarlia WTP. It represents an extreme peak operating condition. It also does not consider: - lower water production rates historically produced by the Washington Aqueduct - the planned use of 20-ton trucks versus 10 ton trucks to reduce operating costs - the potential for reducing peak truck loads per day by equalizing peak residual processing rates In addition, it does not represent the number of trucks, but rather, one way truck trips. **Trucking Schedule:** See discussion under topic GK.	EIS Volume 4 – Engineering Feasibility Study Compendium, Tables 2-1 and 3-6 EIS Volume 1 – Section 7.2 EIS Volume 4 – Engineering Feasibility Study Compendium, Appendix E contains water treatment residuals calculations used to predict the anticipated number of residual truck loads per day.
GF	Trucking Air Pollution	The emissions associated with trucking residuals to a remote disposal location result in an emission increase that is less than *de minimis* levels	EIS Volume 1 - Section 4.4.3.2

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Topic / Sub-topic	Summary	Response	See EIS section
		and, therefore, present no short or long term impact on air quality. **Will trucks use alternate fuels?** Washington Aqueduct will require their hauling contractors to use low-sulfur diesel fuels. The use of low sulfur fuel will reduce hazardous air pollutant emissions from diesel fuels. Alternate fuels, such as natural gas, although now being used in commuter buses in urban environments are not typically being used in vehicles as large as 20-ton trucks. As the market for alternate fuel trucks develops, their use will be considered in developing hauling contracts at that time. **Will newer trucks be used to reduce emissions?** Regardless of age, all trucks will be required to be maintained in a safe operating condition, consistent with the vehicle inspection and emission standards established for the State in which they are registered. **Will trucks be retrofitted to reduce air quality impacts?** Washington Aqueduct is committed to use low sulfur fuels as stated above. However, trucks similar to those anticipated to be used by residuals hauling contractors are not currently required by regulators to be retrofitted to reduce air quality impacts. The immediate implementation of vehicle modification requirements could increase hauling costs or restrict the number of haulers willing to bid on the hauling contract. In order to avoid this outcome, additional truck modifications, beyond the use of low sulfur fuels, will be considered as modified vehicles become more common in the marketplace. **Monitor fuel used by trucks:** Washington Aqueduct does not plan to monitor the individual fuel usage of each residual disposal contractor's truck. The competitive bid nature of the residuals disposal contract should provide sufficient incentive to minimize excess fuel consumption. **How can 132 trucks per day not have an impact on the environment?** The environmental impact of trucking is analyzed in Section 4 of Volume 1 of the EIS. As explained in topics GA and GE, 132 trucks is not an accurate characterization of the transportation impacts of this project.	EIS Volume 1 – Section 7.2.1 EIS Volume 1 – Section 7.2.1

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Topic / Sub-topic	Summary	Response	See EIS section
		You did not adequately consider the air impacts of the preferred alternative: The impacts of the proposed action (or environmentally preferred alternative) are presented and then analyzed in Sections 3 and 4, respectively, of the EIS. The air emission sources of the proposed action (Alternative E) are truck traffic, operation of residuals processing facility, and construction of the residuals facility.	EIS Volume 1 – Sections 3.3 and 4.4
		Construction emissions for the dewatering facilities are deemed to be less significant than the emissions associated with the operation of the facility. The impacts of the proposed action are negligible with respect to the *de minimis* threshold limits, and the construction emissions are less than that of operating the facility via any alternative, the construction emissions are negligible. Therefore, it is appropriate not to quantify emissions from construction activities associated with all alternatives. Needs work – also need to reference Section 4 EIS for additional information text regarding the relative number of diesel engine hour/miles during construction versus operation and the relative acres of earthwork disturbed with the proposed action versus the monofill option.	EIS Volume 1 – Section 4.4
		Regional air quality and air pollution in the Metropolitan Washington Interstate Air Quality Planning Region is regulated by U.S. Environmental Protection Agency (USEPA) using two sets of criteria: National Ambient Air Quality Standards (NAAQS) and General Conformity. These two regulations are described in general below: <u>National Ambient Air Quality Standards</u> The Clean Air Act (CAA) and its associated 1977 and 1990 amendments established NAAQS for six criteria pollutants: lead, carbon monoxide (CO), nitrogen dioxide, sulfur dioxide, particulate matter (PM) and ozone. The NAAQS established primary standards at concentrations that protect human health and secondary standards that protect the public welfare—particularly vegetation, livestock, building materials, and other environmental elements. These standards are periodically reviewed and revised, if necessary, as is currently being done for particulate matter and ozone. The Washington, DC area is in attainment for lead, CO, nitrogen dioxide particulate matter (PM10) and sulfur dioxide and in non-attainment for	

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
		ozone and fine particulate matter (PM2.5). The 1990 amendments to the CAA categorized the nation's non-attainment ozone areas into five groups, based on increasing severity of exceedance of the standard: marginal, moderate, serious, severe, and extreme. The DC area is designated a severe nonattainment for the 1-hr ozone NAAQS and moderate nonattainment for the 8-hour ozone NAAQS. An interstate planning area was developed called the National Capital Interstate Air Quality Control Region (AQCR) to reduce ozone concentrations and bring the Washington, DC area into compliance. To bring the AQCR into compliance the states and district included in this area are tasked with developing a plan by November 17, 2005. The implementation plan must outline specific measures to be taken and a means of monitoring progress toward attainment. State Implementation Plans (SIPs) prepared by the State of Maryland, the Commonwealth of Virginia, and the District of Columbia include control strategies to reduce volatile organic compounds and nitrogen oxides that contribute to the formation of ozone. On April 5, 2005, designations under the NAAQS for fine particle pollution or PM2.5 became effective. Fine particles are those less than 2.5 micrometers in diameter which are unhealthy to breathe. The Washington, DC-MD-VA metropolitan area has been designated as non-attainment for fine particulate matter. States designated as PM2.5 nonattainment areas must submit plans that outline how they will meet the $PM_{2.5}$ standards. These plans are due to EPA by April 5, 2008. <u>General Conformity</u> Section 176(c) of the 1990 CAA amendments requires that federal actions conform to applicable state implementation plans, ensuring that the actions do not interfere with strategies developed for NAAQS attainment. The USACE Washington Aqueduct management alternatives for water treatment plant residuals are considered a federal action. This action must not interfere with the National Capital Interstate AQCR's established plans to attain ozone ambient air quality standard compliance. If the total direct and indirect emissions calculated for each non-attainment area pollutant are below the *de minimis* threshold levels established in 40 CFR 93.153 of the State Implementation Plan (SIP), the project is presumed by EPA to conform to the regional implementation plans. As *de minimus* threshold	

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Topic / Sub-topic	Summary	Response	See EIS section
		limits have not yet been established for PM2.5 non-attainment areas, EPA guides the action to compare calculated emissions to the PM10 *de minimus* threshold level established in 40 CFR 93.153. Conformity is a planning process used to determine if a federal action will prevent state from meeting air quality plan. The mobile sources, such as truck traffic, associated with an action are evaluated in a conformity analysis by calculating the average emissions for the worst case year. In the case of the USACE Washington Aqueduct management alternatives for water treatment residuals, a conservative average of 20 truck trips by a 10 ton truck is used to calculate annual emissions from mobile sources. The average number of water treatment residuals loads per a day is 8 trucks as stated in the EIS. The conservative estimate of average trucks used to calculate emissions from trucks for the conformity analysis can provide an allowance for average water treatment residuals and the few construction related vehicles and Forebay residuals (if included in the project). <u>Emissions Inventory for Washington Aqueduct</u> The most recent air emissions inventory for the Dalecarlia Reservoir and Little Falls Raw Water Pump Station as filed with the EPA (Table 3-2, Section 3 of the EIS) shows that the existing facilities are a minor source of air emissions, contributing less than 1 ton per year for all pollutants, with the exception of volatile organic compounds, which contribute less than 3 tons per year. Ozone is not listed in this table because it is not emitted, but rather forms in the atmosphere as a reaction between nitrogen oxides (NOx), volatile organic compounds (VOCs), and sunlight. Consequently, two of its primary precursors are measured: nitrogen oxides and volatile organic compounds. The *de minimis* threshold levels for the region's SIP, is listed in 40 CFR 93.153. If the total air emissions (the sum of all individual sources) of an alternative are less than the *de minimis* level, that alternative is presumed by EPA to be in conformance with the state implementation plans and will not adversely affect plans to bring the region into compliance with the NAAQS. A *de minimus* threshold for PM2.5 has not yet been established. Until such action occurs, EPA recommends application of the PM10 *de minimus* threshold to PM2.5 total air emission calculations. State Implementation Plans (SIPs) prepared by the State of Maryland, the Commonwealth of Virginia, and the District of Columbia include control	

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
		strategies to reduce volatile organic compounds and nitrogen oxides that contribute to the formation of ozone. <u>Air Quality Significance Criteria</u> The project is presumed to conform to the regional implementation plans if the potential increase in emissions is less than the *de minimis* thresholds. By using these criteria, the following levels of impacts were identified: *No Impact* If implementation of the action causes an increase in air emissions that is less than the *de minimis* threshold levels, the alternative is considered to have no impact. *No Significant Impact* If implementation of the action causes an increase in air emissions that is greater than the *de minimis* threshold levels but has been accommodated with the existing regional implementation plan, the action has no significant impact. *Significant Impact* A significant impact occurs if the potential increase in emissions is above the *de minimis* thresholds and requires a demonstration of regional significance to determine whether an adverse air quality impact would result. Significant impacts may be reduced to no significant level by implementing appropriate mitigation measures. Impact Evaluation by Alternative and Option The Washington Aqueduct must determine if their proposed actions exceed *de minimis* thresholds listed in the regulations (40 CFR 93.153) and specific to the pollutant attainment status of the National Capital Interstate Air Quality Control Region (AQCR). If they do, they will have to take additional steps to demonstrate whether the proposed emissions are regionally significant in order to assure conformance with the region's	

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
		SIP. To make this comparison, a conservative air pollution scenario was developed to represent the largest emission factors from the components of the various alternatives. Two scenarios were developed: one for Alternative A, which includes a monofill, and one for Alternatives B, C and E, which all involve the construction of residuals thickening and dewatering facilities and rely upon trucking dewatered residuals to a remote dewatering site. The location of the dewatering site and the direction that the trucks take on the highways is somewhat different for Alternatives B and E versus Alternative C, however, the net impact on air pollution is similar. Stationary facilities and mobile sources (such as trucks) are included in these estimates. Alternative E represents the air quality emission estimates for the proposed action. The primary sources of air emissions include exhaust from trucks used to transport residuals to onsite or offsite disposal areas, use of natural gas for dewatering building heating, and fugitive dust from the onsite monofill. Not all of these activities are included in each of the action alternatives. The potential air emissions from this alternative are quantified in Table 4-2 of the EIS. The results are that VOC is at a maximum of 4.3 tons/year, Carbon Monoxide at a maximum of 21.4 tons/year, Nitrogen Oxides at a maximum of 20.5 tons/year, Particulate Matter from diesel fueled trucks at a 0.21 and 0.17 tons/year for PM10 and PM2.5 respectively, Particulate Matter from low-sulfur diesel fueled trucks at 0.18 and 0.14 tons/year for PM10 and PM2.5 respectively, and Sulfur Dioxides at a maximum of 0.41 tons/year. Constructing and operation of Alternatives E would increase air emissions to a degree less than the *de minimis* threshold levels and therefore present no short term, long-term, direct, or indirect adverse impacts to the affected resources. A full set of air quality emissions calculations and model output is provided in Appendix 2A. These calculations provide the basis for the air quality analysis for each proposed alternative as presented in Section 4 of the EIS. The analysis of the air emission impacts from each facility involved in the operations of the alternatives – Northwest or East Dalecarlia Processing Site, Trucking Routes, Georgetown Reservoir, Dalecarlia Sedimentation Basins, and Monofill. Supplemental analysis has been provided since the completion of the	

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Topic / Sub-topic	Summary	Response	See EIS section
		draft EIS to address the recent establishment of the Metro WA area as non-attainment for PM2.5. Currently there is no established threshold *de minimus* level for PM2.5 in the SIP. EPA has recommended that the *de minimus* level for PM10 in the SIP be applied to PM2.5 emission calculations for determination of compliance. The supplemental analysis conducted quantifies the emissions from mobile sources (i.e. trucks) for the criteria air pollutants. It also allows one to quantify the air emission effects of using different types of fuels for vehicle classes. The AP42 analysis presented in the draft EIS provided conservative estimates for all criteria pollutants, but was not designed to calculate particulate matter emissions from truck trips. This new analysis, MOBILE6.2 provides air emissions estimates for all criteria pollutants, and does not change the basic conclusion of the previous analysis (i.e., air emissions remain below *de minimus* threshold levels for all (attainment and non-attainment) areas and there is, therefore, no impact and the action is inconsequential. The results from the new analysis, MOBILE6.2 is provided in Section 4 along with the existing AP42 analysis. MOBILE 6.2 is a computer model approved by EPA for SIP development and transportation conformity analysis to estimate emissions of various air pollutants typically emitted from vehicle exhaust, brake and tire wear. Also see topic BJ for a discussion of dust and dirt control during the construction phase of the project.	
GG	Trucking Safety	The truck routes studied in the EIS generally conform to the proposed District of Columbia truck traffic management plan. The proposed number of residuals trucks does not negatively impact the level of service of the proposed routes. The selection criteria for residuals contract haulers would include their safety track record. Washington Aqueduct places high priority on operating a safe water treatment facility. This philosophy would extend to a residuals contract hauling operation. The non-toxicity of the water treatment residuals is discussed in the EIS. Based on the testing conducted in 1995, and again in 2004, the water treatment residuals are suitable to apply on agricultural land disposal sites. A similar practice is used by two other large regional water treatment utilities also using Potomac River water (Fairfax Water and	EIS Volume 1 - Section 4.11 – Transportation EIS Volume 1 – Table 4-11

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Topic / Sub-topic	Summary	Response	See EIS section
		WSSC). Safe operation of the residuals hauling trucks associated with some of the proposed alternatives would be addressed by considering the safety track record of each hauler during the contracting phase and monitoring their safety record throughout their contract period. Safe hauling of residuals would be a high priority to the Washington Aqueduct if a hauling alternative were selected. Minimal dust is typically associated with the dewatering and transport of alum residuals because the aluminum hydroxide present in the residuals limits the dryness of the dewatered cake to about 30-percent solids (or 70-percent water). Alum residuals also tend to retain their moisture more than topsoil or other types of residuals. As a result, they do not dry out quickly while being transported. Based on these factors, dust issues associated with the transport of alum residuals are anticipated to be minimal. **Safety implications of 132 trucks per day through MD/DC residential neighborhoods:** As explained in topics GA and GE, 132 trucks is not an accurate characterization of the transportation impacts of this project. Regardless the proposed residuals hauling activities are not expected to negatively impact neighborhood safety. Residuals will be hauled in a lawful, considerate manner. An average of 8 truck loads per day and a maximum of 25 truck loads per day of residuals are anticipated to be hauled on the routes designated in the EIS. This number of additional trucks is not anticipated to create a negative safety impact given that the proposed haul routes are designated haul routes that currently handle many more trucks per day than proposed by Washington Aqueduct. There are schools in the vicinity of each of the truck routes. Because each route is an established truck route, and the level of service will not be decreased as a result of the proposed residuals hauling operation, existing traffic controls and child safety measures currently in place would be no less effective than they are currently. **Additional traffic accidents anticipated with more trucks on the road:** The accident rates on the designated haul routes are not anticipated to increase as a result of the proposed residuals hauling activities. The accident rate for a given road or intersections typically influenced by	

TABLE 1
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Topic / Sub-topic	Summary	Response	See EIS section
		several factors, only one of which is the volume of vehicles. Other factors related to the design of the road or intersection frequently has equal or greater impact on accident rates. In addition, the relative increase in vehicles planned as a result of the residuals hauling project is quite small.	
GH	Trucking Vibration	The average number of additional residuals trucks proposed for this project represents a small fraction of the current number of trucks traveling many of the proposed haul routes. The routes were selected because they are designed to function as truck routes. Any current home foundation issues associated with existing traffic loads on the proposed routes are not anticipated to be worsened as a result of the additional trucks proposed for this project.	EIS Volume 1 - Section 4.11 - Transportation
GI	Trucking Costs	Residuals hauling costs were estimated based on hauling costs provided by neighboring water and wastewater treatment utilities of similar size. Non-cost issues, such as noise, light, and pollution were assessed based on their environmental impact rather than by assigning them a dollar value. **Seriously mischaracterized the true cost of trucking:** Concern was raised about whether the draft EIS contained all costs associated with the trucking alternative. A comparison was made to previous Washington Aqueduct residuals reports that estimated residuals hauling and disposal costs using different methods. The residuals hauling and disposal costs included in Table 4-7 of the draft EIS were based on similar residuals hauling bid costs received from neighboring utilities. Following receipt of the draft EIS comments, these costs were verified through discussions with residuals hauling contractors responsible for disposing of water treatment residuals in the Washington metropolitan area. The $30.00 per wet ton hauling and disposal cost assumed for dewatered residuals in the DEIS was confirmed as appropriate. The present value of the residuals hauling and disposal cost was changed in the final EIS to add an additional measure of conservatism to the haul distance anticipated to be required by the end of the 20 year planning period and ensure consistency with the haul distance assumed in the air section of the EIS. A round trip residuals disposal haul distance of 150 miles has now been used as the basis of both the air emissions	EIS Volume 1- Section 4 throughout EIS Volume 1 – Tables 4-7 and 4-8

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Topic / Sub-topic	Summary	Response	See EIS section
		calculations (no change from the draft EIS) and the present value of the residuals hauling cost. This change increases the present value of residuals hauling alternatives B or E from $76,200,000.00 to $82,100,000.00. This change does not change the relative cost rankings of the dewater and monofill, dewater and truck from Dalecarlia WTP, or dewatering and truck from Blue Plains alternatives. All alternatives except the "No Action" include trucking costs. Alternatives B, C, and E would require similar hauling distances. **Include the cost of trucking forever (versus 20 years):** Some members of the public commented that truck hauling costs should be assumed to continue forever in the present value analysis. The approach taken in the EIS (i.e., to define capital and annual operating costs for the planning period and calculate associated present value costs for that period) is more typical for NEPA analyses and treats all alternatives in the same manner. **Use Combined Trucking and Operating Costs to Screen Alternatives:** One of the public comments suggested modifying the cost screening criteria from capital cost to the sum of 20 years of operating costs plus the capital cost of an alternative. This approach to cost evaluations is not typical and does not address the primary cost issue of concern to the wholesale customers (capital cost) Combined capital and operating costs were evaluated in the EIS by comparing the present value of each alternative. This method of comparing combined capital and operating costs is more traditional and does not unduly weight the operating portion of the cost. The two cost comparison methods used in the EIS confirm that dewatering and hauling residuals to a permitted offsite disposal site is a cost effective alternative when compared with the other alternatives.	
GJ	Existing Dalecarlia Parkway vehicle/truck volumes	**What are the current vehicle/truck volumes on Dalecarlia Parkway?** Vehicle and truck counts were conducted on Dalecarlia Parkway on June 16, 2004 and June 17, 2004. This data is summarized in the EIS Volume 2B – Appendices. A summary of the data is provided below:	EIS Volume - 2B - Appendices, Transportation Section

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<table>
<tr><th>Topic / Sub-topic</th><th>Summary</th><th>Response</th><th>See EIS section</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Date</th><th>Total Vehicles per day</th><th>Trucks per day (3 or more axles)</th></tr>
<tr><td>6/16/2004</td><td>15,013</td><td>70</td></tr>
<tr><td>6/17/2004</td><td>15,789</td><td>99</td></tr>
</table>
</td><td></td></tr>
<tr><td>GK</td><td>Trucking Hours</td><td>
DEIS has conflicting information on trucking hours,

MNCPPC letter recommends trucking between 9:30 AM and 4:00PM

The EIS has been revised to reflect consistent information regarding trucking hours.

Trucking operations will meet all requirements established for the use of trucking routes. Washington Aqueduct anticipates that the dewatering facility will typically be staffed between the hours of 7:00 AM and 7:00 PM. These are the hours during which trucks will typically be loaded.

The analysis in the EIS shows that none of the feasible routes (B,D, E,F&G (with permit), and H) would have traffic flow or congestion impacts due to the action’s trucking operation that would reduce the level of service with the exception of route A. Trucking will be allowed on Route A only between 9:30 AM and 3:00 PM.

Because trucking restrictions could have the effect of increased contract costs, further restrictions will not be included, however, it is logical to expect that a trucking company would minimize costs by concentrating trucking during optimal periods. Considering the relatively small amount of residuals generated on a daily basis and the hours of operation, there is sufficient opportunity for a company to truck mainly during the off peak periods

Also see response to topics GA and GD.
</td><td>EIS Volume 1 – Sections 4.11 and 7.2</td></tr>
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HA	Barge, preference	Barging residuals via the Potomac River (not C&O Canal) to Blue Plains is one of the alternatives (Alternative 6) that was considered and screened in May 2004 following the Scoping Meeting. The C&O canal is a National Historic Landmark and is therefore not suitable for accepting barge traffic. Alternative 6 was found inconsistent with screening criteria, and is therefore not carried forward for detailed evaluation in the EIS. Constructing an above grade conveyor or buried pipeline to a Potomac River barge loading station located within land controlled by the National Park Service would create a significant impact on the park and would not receive approval from the park service.	EIS Volume 1 -TABLE 3-9: May 2004 Alternatives Screening Results Summary EIS Volume 4 - Engineering Feasibility Study Compendium Section 3.1.2- Alternative 6: Thicken Water Treatment Residuals at Dalecarlia WTP, Then Transport by Barge to Blue Plains AWWTP
IA	Preference	Comment or preference noted.	EIS Volume 1 – Section 5, Public Involvement
IB	Useful Life of Alternatives	The 20-year life defined for the monofill is consistent with the planning period adopted for the EIS as a whole. It is also consistent with planning horizons used in engineering feasibility studies.	EIS Volume 4 – Engineering Feasibility Study, Section 3.
JA	River Discharge	The return of silt and water treatment residuals back to the river after they are removed is generally prohibited by the Clean Water Act. Given the long track record of EPA requiring water treatment utilities throughout the country to remove their residuals from the rivers, from which they withdraw water, it is unlikely that this regulation could be successfully challenged.	

JB	Discharge during spawning season	The NPDES Permit was issued on March 14, 2003. The Federal Facilities Compliance Agreement was signed on June 12, 2003. The spawning season is defined in the NPDES permit as February 15 through June 30. There have been no discharges to the Potomac River during the spawning season since the issuance of the NPDES Permit in March 2003. Discharges were made on the following dates: <u>From Dalecarlia</u> 7/1/03; 7/7/03; 7/14/03; 7/28/03; 10/10/03; 10/20/03; 10/21/03; 1/12/04; 1/16/04; 1/20/04; 2/8/04; 7/14/04; 7/24/04; 7/25/04; 8/2/04; 8/8/04; 10/27/04; 11/30/04; 1/26/05; 2/1/05; 2/7/05; 2/10/05; 7/4/2005; 7/10/2005; 7/12/2005; 7/18/2005 <u>From Georgetown</u> 7/20/04; 8/10/04; 8/19/04; 12/2/04; 2/2/05; 7/12/2005 In accordance with the NPDES permit, before each discharge, Washington Aqueduct has made notifications to the agencies described in the permit. There is no general public notification because the discharge itself does not put the public in any personal danger and the exact timing is dependent on operational conditions at the treatment plants.	
KA	Impure water quality, raw water intake	Converting the existing surface intake on the Potomac River to a well-based intake was considered in the Engineering Feasibility Study Compendium and subsequently screened out from consideration. Options that involve reconfiguring the existing raw water intake structures are evaluated in the Engineering Feasibility Study Compendium. In general, these options are found to be inconsistent with the screening criteria for the project.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 4.5 and Table 3-7
KB	Monitoring water quality and safety	Residuals deposited in the Forebay portion of the Dalecarlia Reservoir and water treatment residuals produced in the sedimentation basin of the Dalecarlia WTP were tested to determine their potential to leach toxic substances if applied to land of landfilled. Residuals samples were also tested directly to quantify the concentration of key regulatory constituents. The results of this testing indicated that the residuals are non-toxic and suitable for land application on agricultural land or landfilling.	EIS Volume 1 - Section 4-17: Public Health
KC	Residuals quality	The water treatment residuals produced by the Washington Aqueduct are considered non-toxic by regulatory agencies responsible for overseeing their potential application to agricultural land of deposition in a landfill. Specific toxicity testing was performed on the Washington Aqueduct residuals as part of this DEIS effort. These tests confirmed that the residuals are non-toxic. These results agreed with similar previous testing conducted in the mid-1990's.	EIS Volume 1 - Section 4-17: Public Health

KD	Health Impacts of Diesel Truck Traffic	The 1990 Clean Air Act amendments require that federal actions conform to applicable State Implementation Plans (SIPs) to ensure that the action will not interfere with strategies developed for attainment of National Ambient Air Quality Standards (NAAQS). Federal actions conform to the SIPs if the action's emissions do not exceed the *de minimis* threshold for the criteria pollutants. These actions are termed "inconsequential" by the CAA regulations. The *de minimus* threshold for each criteria pollutant represents a small fraction of the state inventory of emission from all air sources in state. All alternatives evaluated in the EIS produce emission estimates below *de minimus* for all criteria pollutants. Therefore, these emissions will not cause or contribute to an exceedance of NAAQS. The NAAQS are developed and periodically reviewed based on human health and welfare criteria and include factors such as frequency of asthma cases, respiratory impairment, and health of children and elderly with adequate margin of safety. Our decision making as an agency will be based on the regulations that apply to the area in which our proposed action will take place. Our hauling operations will always comply with applicable air quality regulations.	EIS Volume 1 – Sections 3.3 and 4.4
LA	Suggested processes	Alternate treatment processes that minimize or change the form of the residuals (such as MIEX, ultrafiltration, etc.) were evaluated in the Engineering Feasibility Study Compendium. These alternatives were screened out based on concerns related to unproven technology, cost, and compliance with the FFCA schedule.	EIS Volume 4 – Engineering Feasibility Study Compendium Section 3.2.2 – review of Public Alternative P99.
MA	EPA mandate	EPA is not obligated to perform NEPA analysis for a permit enforcement action. The obligation to perform this analysis belongs with the Federal Agency being regulated by EPA, Washington Aqueduct in this case. In cases where the water treatment utility is not operated by a federal agency, a NEPA analysis is not required.	
MB	FOIA requests	See transcripts for responses. Washington Aqueduct has provided written responses to FOIA request letters. These responses are available in the administrative record.	Administrative record.
MC	Conflict of interest	CH2MHill filed a disclosure statement in accordance with 40 CFR Section 1506.5(c) which is included in the project's administrative record. The Baltimore District Corps of Engineers has no basis to believe that CH2MHill has a financial or other interest in the outcome of this project that would cause a conflict of interest. Any future procurement to implement this project will be in accordance with applicable statutory, regulatory and policy provisions regarding conflict of interest.	Administrative record.
MD	Agency Recommendations on DEIS	Changes were made as requested by US Department of Interior (Document 122). Response to Montgomery County Council letter (Document contained in	EIS Volume 1 - Section 3.4.1 Dwarf Wedge Mussel EIS Volume 1 - Section 3.5.1 Terrestrial

		Appendix Volume 2A.. Response to the individual comments contained within the June 2, 2005 letter from the United States Senate (document 118) are discussed in the applicable topics summarized herein. Responses to the individual comments contained within the May 10, 2005 letter from the Council of the District of Columbia (document 119) and the June 1, 2005 letter from the Montgomery County Planning Board (document 125) are discussed in the applicable topics summarized herein. Responses to the individual comments contained within the June 2, 2005 Commonwealth of Virginia letter (document 124) are discussed in the applicable topics summarized herein and below: • Open Burning and Dust Control: The referenced requirements will be followed. • All impacts to historical structures and archeological resources will be considered as required. • George Washington Memorial Parkway: See topic DH. • The requested life cycle cost analysis will be performed as part of the residuals facility design. Residuals processing equipment will be tested as necessary during the design phase of the project to confirm performance. Consideration will also be given to previous testing performed on Dalecarlia WTP residuals. • Costs were verified as part of the final EIS preparation effort. Costs will continue to be evaluated throughout the design phase to ensure that ongoing fluctuations in materials and labor cost factors are properly considered. Responses to the individual comments contained within the July 5, 2005 District of Columbia Department of Health letter (document 157) are discussed in the applicable topics summarized herein. A traffic study was completed for the EIS, the results of which are contained within EIS Sections 3.10 and 4.11 and Appendix Volume 2B. The air quality analysis conducted for the DEIS was expanded to include additional emissions information on truck traffic. The results of this analysis are presented in EIS Section 4.4. The model data from which this data was derived is provided in Appendix Volume 2A. Responses to the individual comments contained within the June 27, 2005 EPA letter (document 182) are discussed in the applicable topics summarized herein. In addition, several suggestions designed to enhance the clarity of the EIS were also made. These suggestions were implemented where practical.	Special Status EIS Volume 1 – Section 3.10 Transportation EIS Volume 1 - Section 4.5.3 Impact Evaluation by Alternative and Option EIS Volume 1 - Section 4.6.3.1 Hay's Spring amphipod EIS Volume 1- Section 4.6.3.2 Alternative B EIS Volume 1- Section 4.6.3.3 Impact to Special Status Species EIS Volume 1- 4.6.3.4 Special Status Species EIS Volume 1- Section 4.11 Transportation

NA	NEPA Process Understanding	The intent of the public meetings held in September and November 2004 was to inform the public of the status of the alternative evaluation process as it was proceeding, as well as, inform the public of how this information would be considered within the context of the NEPA process.	EIS Volume 1 - Section 5.0 Public Involvement
NB	Screening criteria and Scoping Meeting	The screening criteria were developed prior to the January 28, 2004 Scoping Meeting. Public input on the screening criteria was received during the Scoping Period, which ran from January 12, 2004 through February 11, 2004. The alternatives were screened by the Washington Aqueduct EIS project team. A summary of the initial alternative screening results was presented in the Engineering Feasibility Study dated May 2004. This document was placed on the Washington Aqueduct project website following its completion. The Engineering Feasibility Study was subsequently updated to include additional alternatives submitted by the public. This updated document is provided as Volume 4 of the EIS. The EIS evaluates a total of 4 alternatives plus the no action alternative. This number is not unusually low when compared with other EIS's and therefore, is not considered an indication that the screening criteria should be revised. The screening criteria include cost because the proposed action must be economically feasible to the wholesale customers.	EIS Volume 1 - Section 5.0 Public Involvement and EIS Volume 4 - Engineering Feasibility Study Compendium, Section 2.2 Development of Alternatives EIS Volume 4 - Engineering Feasibility Study (original and updated Engineering Feasibility Study Compendium – Volume 4 of the EIS)
NC	Communication	Prior to each public meeting related to the residual project, starting with the January 28, 2004 Scoping Meeting, the public was notified of meeting, date, time, and location. This was typically accomplished by placing display ads in the Washington Post and at least one local paper. A notice was also placed in the Federal Register prior to the Scoping Meeting. The alternative screening approach and alternative screening results were also presented during subsequent public meetings at the request of the public. The public meetings held between September and October 2004 included a progressive discussion of the environmental evaluation of new public and screened alternatives. Following the DOPAA public meeting held on May 26, 2004, three additional opportunities for public input were provided on September 7, 2004, September 28, 2004, and November 16, 2004. Two additional opportunities for the public to submit alternatives were also provided in September/October, 2004 and January/February, 2005. Numerous public comments were received regarding the shortcomings of the forum chosen for the September 7, 2004 project update meeting. The larger than anticipated number of attendees rendered the selected format ineffective. A different format was chosen for subsequent meetings to	EIS Section 5.0 - Public Involvement.

		address this issue.	
ND	NEPA Process	The NEPA process has been followed to the letter and the intent of the law. Additionally, several public meetings, not required by NEPA, have been held in order to address the high level of public interest in this project. See topic FC for a discussion of the FFCA schedule and its role in the screening process. In the mid-1970's and the mid-1990's, in response to EPA intentions to issue an NPDES permit that would have caused Washington Aqueduct to recover and dewater and dispose of the water treatment residuals in lieu of returning them to the Potomac River, Washington Aqueduct investigated methods of accomplishing that. In both of those instances, coordination with the government of the District of Columbia resulted in a declaration that the Washington Aqueduct water treatment residuals would not be permitted to be sent to the Blue Plains advanced waster water treatment plant. In both of those instances a concept to recover and dewater the residuals at Dalecarlia for trucking to an off-site location for disposal was developed. EPA in both occasions made decisions that did not require Washington Aqueduct to complete action on the residuals process at that time. In the mid-1990's Washington Aqueduct also was directed by EPA to dredge the Dalecarlia Reservoir. That process was a very high intensity but of limited duration. It did generate many loads of sediment that were removed by truck. To do it safely and with the minimum effect on the surrounding neighborhoods, Washington Aqueduct worked very closely with the neighborhood groups and local officials. It was from that experience that Washington Aqueduct became well aware of the sensitivity of trucking to the surrounding neighborhoods on the traffic routes. Therefore when the current NPDES permit and FFCA were issued in the first half of 2003, Washington Aqueduct decided to take a completely fresh look at alternatives that might be employed to comply with the permit and the FFCA. Washington Aqueduct had no preconceived notion of what alternative it preferred when it started the NEPA evaluation of residuals alternatives in late 2003. What came out of the screening process and the follow-on extended public comment periods were ideas that had never been analyzed in connection with the two previous studies. Specifically, the monofill option was presented as a means to alleviate trucking for at least a 20 year period. Other ideas to transfer the residuals in a liquid form to off site processing locations such as McMillan and other water treatment plants and sites where no current dewatering facility existed were also	

		considered.	
NE	Limited number of alternatives evaluated in EIS	A total of 160 residuals alternatives plus eight treatment options were evaluated for this project. A total of 135 of these alternatives, plus eight options were submitted by the public during three public involvement opportunities. The alternatives were screened by a set of criteria developed to reflect the project's purpose and need, as described in the Notice of Intent published in the Federal Register on January 12, 2004. It is not anticipated that additional alternatives exist that could be implemented within the Aqueduct's FFCA compliance deadline and meet the remaining screening criteria.	Section 2.0 Selection of Proposed Action and Alternatives contains a summary of the process followed to identify and screen feasible alternatives. Volume 4 Engineering Feasibility Study Compendium contains the complete description of the screening process and results
NF	Institutional constraints screening criteria	The many piping alternatives are dependent upon the willingness of the receiving facility at the other end of the pipe, whether to process and dispose of the residuals, or simply to supply space for the Washington Aqueduct to do so. None of the agencies involved, whether it be the DC WASA, WSSC, Fairfax Water, the Central Intelligence Agency (CIA), the United States Navy, the City of Rockville, or the Federal Highway Administration, are able or willing to provide processing capacity or facility space. Neither the United States Army Corps of Engineers, the United States Army, nor the Washington Aqueduct has any authority over any of the agencies. Trucking is still involved in some degree with each piping alternative. It is worth noting that the David Taylor facility at Carderock is surrounded by the Clara Barton Parkway and MacArthur Boulevard, both of which have truck weight limitations. Despite how close the Capital Beltway may appear to be, processing residuals on the Carderock site would have still required dewatered residuals to be hauled through residential neighborhoods serviced by 2-lane subdivision roads no more suitable for truck traffic than similar haul routes proposed for residuals Alternative E. This suggested alternative also included speculation that a direct Beltway interchange could be constructed. Creating a direct Beltway interchange is a remote, costly and time prohibitive possibility. It would require basic changes in legislation and policies of other federal and local agencies, such as the National Park Service, which would be likely to result in protracted debate and possible litigation of their own. Given the highly developed nature of the area, finding a new site at the discharge end of a residuals pipeline would involve years of acquisition time and without sufficient land for disposal on-site would still mean the same amount of trucking away from that site. Furthermore, our analysis for Alternative C, while specific to that particular route, illustrates generally	EIS Volume 4 - Engineering Feasibility Study Compendium, Section 3.

		that pipelines are not without significant environmental and cost impacts.	
NG	Restart NEPA process	The NEPA process has been carefully and dutifully followed. The EIS process included six public meetings and at least 20 consultations or conversations with interested individuals, groups, or agencies. Through this process 160 alternatives and 8 options were identified; 135 of these alternatives and all options were identified by the public. These alternatives span a range of approaches for the management and conveyance or water treatment residuals. These were screened to determine feasible options by a set of criteria that reflect the project's purpose and need.	EIS Section 2.0 Selection of Proposed Action and Alternatives contains a summary of the process followed to identify and screen feasible alternatives. EIS Section 5.0 - Public Involvement. EIS Volume 4 - Engineering Feasibility Study Compendium, Section 3.
NH	Regional approach to NEPA	A regional approach has been taken for the evaluation and decision making process: the National Capital Planning Commission is a Cooperating Agency. NCPC provides overall planning guidance for federal land and buildings in the National Capital Region, which includes the District of Columbia; Prince George's and Montgomery Counties in Maryland; and Arlington, Fairfax, Loudoun and Prince William Counties in Virginia. Federal, state (VA and MD) and local agencies were all consulted during the development of the DEIS and the impact analysis is both regional and site specific, depending on the requirements of the particular subject area. Regionalization specific to water and wastewater is discussed in topic DJ.	EIS Sections 3.0 and 4.0 for descriptions of existing conditions and impact evaluation. EIS Section 5.0 for public involvement and Agency Consultation
OA	Alternate coagulants – continued river discharge	The current NPDES permit does not allow the Washington Aqueduct to switch to an alternate coagulant and continue to discharge residuals to the river. The intent of the NPDES permit is to remove essentially all residuals from the river. Washington Aqueduct is planning to evaluate the use of alternate coagulants, such as polyaluminum chloride, in the future. This coagulant has the potential to reduce the quantity of residuals requiring processing and disposal. However, additional testing is required to confirm that it does not reduce the quality of the drinking water in other areas, such as organics removal, lead corrosion, etc. EPA approval would also be required before an alternate coagulant could be used.	EIS Volume 4 - Engineering Feasibility Study Compendium, Section 4.3 for a discussion of alternate coagulants that could be used to reduce the volume of residuals that requires disposal.
PA	Residuals Handling in Other Metropolitan Areas	Other large cities dispose of their water treatment residuals using a variety of methods including land application, sewer disposal, landfilling, etc. Neighboring water treatment utilities, such as Fairfax Water and WSSC dispose of their residuals by land application, quarry disposal, and discharge to the sewer.	
PB	Residuals studies throughout the world	To make sure we were evaluating alternatives within the appropriate regulatory constraints and geographical issues, the Aqueduct's residuals management evaluation is based largely on the experience of water	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 2.0 for a discussion of

		providers in the domestic United States in general and in the National Capital Region in particular. Approaches that work in one part of the country (or world) are not necessarily applicable to the Aqueduct's situation. For example, sewers are used with some frequency throughout the country for residuals disposal, but that is not possible here for a variety of reasons detailed in the evaluation. Wherever in the world water treatment residuals are being generated, management approaches must all address the common questions of collection, processing, conveyance, and final disposal. The alternatives identified and evaluated in this project represented a range of different approaches for resolving each type of issue.	the proposed action and alternatives.
QA	Public Residuals Alternatives	160 residuals alternatives and eight options are evaluated in the Engineering Feasibility Study Compendium. Approximately 135 of these alternatives were identified by the public.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.2 Alternatives P-1 through P-27
QB	Environmental assessment	The analysis in the EIS includes detailed descriptions of the existing conditions for each of the five alternatives. This includes land use, noise, air quality, aquatic resources, biological (terrestrial) resources, cultural resources, hazardous, toxic and radioactive substances, soils, geology, and groundwater, infrastructure, transportation, visual aesthetics, socioeconomics including environmental justice. Note that these existing conditions include the natural as well as the human environment (pre-historical resources, historical resources, the built environment and demographics, employment and economic analysis.) The potential for each alternative to impact these existing conditions, both short term and long term was carefully evaluated and is described in the EIS. The impact of the proposed action in concert with one or more other past, present, or reasonably foreseeable future actions or projects was also evaluated. In EPA's detailed comments on the DEIS dated June 27, 2005, EPA disagrees with the conclusion in Section 4.5.3.4 that implementation of Alternative D, the No Action Alternative, would have no significant impact on Aquatic Resources. EPA asserts that implementation of the NPDES permit will "reduce pollutant loading to the Potomac River…". Based on previous studies, the Washington Aqueduct observes that its historical practice of returning residuals solids removed during the water treatment process to the Potomac River does not result in significant detrimental impact. However, elimination of this practice, in compliance with the NPDES permit, will meet the CWA requirement that water utilities use the best available technology. See topics GA, GD, GF and GI for additional information regarding trucking.	EIS Volume 1 – Section 3 for a discussion of existing conditions, Section 4 for a discussion of potential impacts, Section 7 for a discussion of cumulative impacts and mitigation.

QC	Northwest (alternate B) versus east (alternate E) residuals processing sites	The Aqueduct recognizes that each of the alternatives under evaluation necessitates developing infrastructure in an urban setting, characterized by natural and man-made resources. All alternatives to meet this federally mandated action will carry some degree of impact. Please see section 6 for a discussion of the Aqueduct's rationale for recommending Alternative E as the proposed action.	EIS Volume 1 – Section 6 for a description of the selection of the preferred alternative.
QD	Residuals processing site near Beltway versus Dalecarlia WTP site	See responses to topics DL, NE, and NF.	EIS Volume 4 – Engineering Feasibility Study Compendium, Section 3.

Document 1

1 DEPARTMENT OF THE ARMY

2 CORPS OF ENGINEERS

3 ---------- -X

4 IN RE: Intent to Prepare a Draft :

5 Environmental Impact Statement :

6 for a Proposed Water Treatment :

7 Residuals Management Process for :

8 the Washington Aqueduct, :

9 Washington, D.C. :

10 ----------X

Wednesday, January 28, 2004

11 Washington, D.C.

12 Oral statements and questions of interested parties were

13 taken at St. Patrick s Episcopal Church and day School at

14 4700 Whitehaven Parkway, N.W., Washington, D.C. 20007

15 from 7:00 p.m. to 9:00 p.m.

16

17 Comments from different individuals are separated by the following symbol " ********** "

18 Names of respondents have been removed from the transcript to protect individuals privacy.

19

20

P R O C E E D I N G S

* * * * * * * * *

1-1-GA

: Considering the alternatives, I hope very much that the Washington Aqueduct Division and the Army Corps of Engineers take into consideration the environmental impact that trucking would have on the communities involved, their near neighbors.

* * * * * * * * *

1-2-EB

: I have a few comments or suggestions, One on the processes for dealing with the sediments. I would suggest that you include an examination of the so-called plasma technology. You have listed various other conventional ways of dealing with the processing of the residuals. Here is a potential high tech way of reducing the -- at least the volume of the sediments and, thus, making it more easy to get rid of them.

1-3-GA, GD

As you know, I am adamantly opposed to trucking for environmental -- because of the potential environmental impact on residential neighborhoods. But, if you do go to trucking, I think that you should include a provision for hardening the Little Falls Parkway so

that it could handle trucks carrying the sediments. That way you are taking the trucks out of the residential areas of the Palisades. You would then go down Dalecarlia and out Massachusetts and over River Road and out to the beltway or wherever you re going.

And I think that would be a very useful step in making any truck program compatible with the needs of the Palisades neighborhood.

I also would hope that we would get assessments of the costs of the various approaches and

1-4-AA

their potential -- and some estimates on the potential impact on the rates that water users will pay in the District and elsewhere. I gather that you do contemplate doing that after going through the briefing process.

I don t know how much emphasis I would place on the barge in the C&O Canal. I offered that more

1-5-HA

or less as a joke. I m somewhat startled to see it down as a serious alternative at this point.

Any rate, there is a potential there for taking these sediments, dehydrated sediments, back up to

1-6-EA

the upper stretches of Montgomery County where you have sod farms and so on and replenishing the soil. I gather that this sediment that is of good quality that one

alternative is to mix it with the sewer sludge and produce a form of fertilizer. That calls for a kind of cooperation with WUSA and so on that I m not sure is possible. At any rate, I offer that as an idea.

I had one other thought. That s it for now. I ll try to put it all down on paper, but, any rate, there are some thoughts. Thank you very much for listening.

(Pause.)

: One other thought -- again.

One other thought is I hope that when we consider Georgetown Reservoir we do not contemplate trucking the sediments out of there back up to some central disposal point, perhaps the Aqueduct on MacArthur Boulevard. That would really raise hob with the neighborhood to have the trucks passing up MacArthur Boulevard and up through the central heart of the Palisades. And I gather you do -- there are possible alternatives of piping it inside your other big pipes and I would just urge that you do that.

Thank you.

1-7-GA

CERTIFICATE OF NOTARY PUBLIC

I, Linda M. Kia, a Certified Verbatim Court Reporter and a Notary Public in and for the District of Columbia, the officer before whom the foregoing deposition was taken, do hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn by me; that the testimony of said witness was taken by me by Stenomask and thereafter reduced to typewriting under my direction; that said deposition is a true record of the testimony given by said witness to the best of my knowledge and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto; nor financially or otherwise interested in the outcome of the action.

_____

LINDA M. KIA, CVR
Notary Public in and for
the District of Columbia

My Commission Expires:
March 31, 2008

Document #2

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS

----------X

IN RE: Washington Aqueduct Open House for :

the Draft Environmental Impact :

Statement for a Proposed Water :

Treatment Residuals Management Process :

----------X

Tuesday, September 7, 2004

Washington, D.C.

Oral statements and questions of interested parties were taken at the Dalecarlia Water Treatment Facility, 5900 MacArthur Boulevard, N.W., Washington, D.C. 20007 from 6:30 p.m. to 9:00 p.m.

Comments from different individuals are separated by the following symbol ******

Names of respondents have been removed from the transcript to protect individuals privacy.

LMK-211-04

C O M M E N T S / Q U E S T I O N S

* * * * * * * * * *

2-1-CA

[redacted]: I'm [redacted], President of Spring Valley West Homeowners' Association. That is consistent of 157 family homes, single home dwelling. And we are opposed to the landfill, dump. Thank you.

* * * * * * * * * *

2-2-NB, NC

[redacted]: My name is [redacted] And my comment is regarding your screening process. I have looked at the material, which has been posted on the internet and it's very useful and it's very comprehensive; however, it presents a screening process of something like 20 or 25 alternatives and simply says that a certain number of them met the screening and certain didn't. It doesn't say who decided that they met the screen.

And I want to be sure I understood -- so, therefore, the information that's on the web about what the alternatives are and which ones met the screen, why certain ones met the screen and certain didn't was not clear to me. I know that there is a matrix that shows by a whole series of criteria which ones met it, but it

really doesn't -- it's not clear about why certain checks were in certain boxes and who made the decision about which box to check.

So my comment is that I think you should make that information available. Otherwise, the information you're got on the internet is very easy to access. It is very well done. It's very helpful. But it's not clear how alternatives were chosen to meet certain screening criterion or not. And that may be a technically complex subject, but still think that's key, because my reading of it was that many of the criterion met the screening. That's all. That's my comment.

* * * * * * * * * *

2-3-BA

[redacted]: I think it's dishonest to show pictures of the trees without saying what season the pictures were taken because the buffering is going to be a lot less in winter. The pictures, having lived in the neighborhood, I'm quite sure the ones taken along Dalecarlia Parkway were taken in summer when the vegetation is very thick. So the EIS is terribly misleading to people who might be within sight of the monofill because maybe we'll see it in the winter while they might not see it -- see it as much in the spring or

1 summer. It's really a serious flaw in the EIS.

2 * * * * * * * * * *

2-4-CA

3 [redacted]: I'm [redacted] My
4 wife and I live in Spring Valley and studied Alternative
5 A and we both are vigorously opposed to it as
6 environmentally unsound and an unnecessary intrusion on
7 the residential quality of the neighborhoods abutting the
8 aqueduct. Thank you.

9 * * * * * * * * * *

2-5-DA

10 [redacted]: I would like to -- very
11 much would like to approve C. I think C does far less
12 damage to our houses than any other.

13 * * * * * * * * * *

2-6-DA

14 [redacted]: I think the option number
15 three is by far and away the best solution to the
16 problem. The areas under which the project this project
17 would take place are filled with a great lot of dense
18 population, including older people and lots of children.
19 And, given that situation, it seems to me that it would
20 be far better to truck this waste material some place
21 else and not build anything which would be 80 feet tall
22 in the neighborhood.

23 * * * * * * * * * *

2-7-NC

[redacted]: I am a native Washingtonian. I am distressed by the poor management of this. The acoustics are terrible. I cannot hear clearly what he is saying. Moreover, the questions of the audience are terrible. He mentions we can go on email and can get some information. Why couldn't that have been printed out here for information here. Instead, we come here and then you have to call in later on and hopefully we can get some in sent to us. It is very, very poorly done. I hope there will be some better way to establish this.

* * * * * * * * * *

2-8-GA, GG, GH

[redacted]: I'm [redacted] from the Western Avenue Citizens' Association. I think to add trucks to the roads will affect the foundations of our homes and our roads, which has been fixed by the District of Columbia already. The Western Avenue Citizens' Association will feel it will have to sue to protect our property if sludge is transported by trucks. That the trucks will present a safety concern which is not been addressed. There are a lot of pedestrians on Western Avenue and there have been a lot of accidents there. These trucks will present a tremendous safety risk.

1 Thank you.

2 * * * * * * * * * *

2-9-NC

3 [redacted]: My name is [redacted]

4 This meeting arranged at the treatment plant is a

5 disaster. I want to hear what my neighbors have to say

6 and I want them to hear what I have to say. And the

7 process leaves a lot to be desired. We're all standing

8 in a big hall. I can't hear the questions and so it

9 makes the whole proceeding useless. And I think it ought

10 to be done again and provide for adequate facilities, not

11 in an echoing hall where nobody can hear the questions.

12 I don't blame the Director, but somebody

13 has lack of foresight here.

14 * * * * * * * * * *

2-10-NC

15 [redacted]: I would like to have

16 another meeting where we can all sit down in an

17 auditorium. It's impossible to hear the questions

18 because of the echo. We don't even understand the

19 speaker 30 percent of the time. We have to stand. And

20 this meeting is very unsatisfactory. Would you please

21 hold the same type of meeting in a proper auditorium and

22 then ask the people to line up with their questions so

23 they can be given in an orderly way? In other words,

like any decent meeting. It doesn't have to be segmented, quote, unquote, just a well-run meeting, period. Thank you.

* * * * * * * * * *

2-11-IA

[redacted]: I favor Alternative B because it is the most equitable distribution of the costs and the exposure over the entire weight-base, not just one portion of the area.

* * * * * * * * * *

2-12-CA, CB

[redacted]: My name is [redacted], from Bethesda. The criteria seem to be weak. For example, we hear that the District, the Metropolitan Area, has a shortage of trees and yet you're now saying you're going to take a minimum of 30 acres of trees and possibly more. This doesn't make sense. When I asked your staff about drainage, they had no decent answers. But you will have toxic drainage from there. The Blue Plains alternative offers access by barge to transport the material so it makes it a permanent solution, not temporary. Also, be aware that many states consider this substance hazardous material.

* * * * * * * * * *

[redacted]: Well, we just wonder if they

2-13-NC

1 considered that there was an impact on the neighborhoods,
2 because, of course, this is a meeting of 400 outraged
3 people and we feel that they tried to make it through.
4 Nobody had any word of this until late July and they've
5 been working on it, obviously, for many, many months.
6 And then -- [redacted] has a question.
7 We suggest that the next meeting, which
8 should be fairly soon, be in a local school that has a
9 decent auditorium so you don't have 400 people standing
10 up, a lot of whom are elderly and they're having trouble.
11 So we think there should be another meeting very soon in
12 which they can take the comments of the neighbors.
13 * * * * * * * * * *

2-14-BB

14 [redacted]: Have you considered the fact
15 that you're going to have a major hospital in your
16 backyard?
17 * * * * * * * * * *

2-15-CA

18 [redacted]: My statement is the
19 monofill will go in Dalecarlia over my dead body.
20 * * * * * * * * * *

2-16-CA, FD, IB

21 [redacted]: The landfill and the
22 trucking are short term solutions. Piping is the only
23 viable solution because it's long-term and it's safe and

it gets it out of our neighborhood. Period.

* * * * * * * * * *

2-17-BB, DA, 1B, GF

[redacted]: The option of cutting down 30 acres of trees that have taken more than 30 years to grow for a short-term solution seems a little odd when by piping everything to Blue Plains, it could not only be stored there, it could be moved from there to other uses, as far in the future as we can see. Otherwise, you will ruin the air quality around here and they're going to just have to go pipe it to Blue Plains anyhow. So it doesn't provide much.

* * * * * * * * * *

2-18-GB, DA, GF, GG, GH

[redacted]: My name is [redacted] and I live off of MacArthur Boulevard. And I am very concerned about the trucking option, as it would endanger the children on our block, as well as pollute the air, as well as shake the foundation of our house and our neighbors' houses. And our retaining wall is already showing damage and our house is cracking from trucks that currently run up and down the streets. And we're very -- I'm very in support of -- very much in support of the pipeline, as I feel like it's the most cost-effective solution over a long period of time. And that is all.

* * * * * * * * * *

2-19-GA, DA, GG, GF

[redacted]: I'm [redacted] I live on MacArthur Boulevard. I'm against the trucking option for the damage and the pollution and the danger to the neighborhood. I am for a long-term permanent option, such as the pipeline and would be more than happy to support it, whatever means I could do. Thanks. Thanks a lot.

* * * * * * * * * *

2-20-DA, GA, BA, IA, CA

[redacted]: I just wanted to reiterate the two points I made tonight. The first is that it is not right to say to the people in the District who are concerned about transportation and the people in Maryland are concerned about the sludge shop. People in both areas are extremely concerned and strongly opposed to both of those alternatives. It will have a major impact on our whole area, as well as the environment that is somewhat preserved within that area.

My complaint -- my second point was to ask why the Corps had not stated the maximum height for the sludge dump or a maximum number of acres to be clear-cut. I think the 80-foot height and the 30-foot clear-cut is staggering, but at least we should know if it can be

1 worse than that. And I believe the answer was that it
2 was not possible to state the maximum. And I strongly
3 object to that. Thank you very much.
4 * * * * * * * * * *

2-21-GB, HA

5 [redacted]: I have a suggestion. Why
6 wouldn't you truck at night?
7 Another suggestion. Truck at night to the
8 river and barge it down to the Blue Plains plant. Okay?
9 * * * * * * * * * *

2-22-DA

10 [redacted]: I was wondering what the
11 reason is for not just going ahead and doing the Blue
12 Plains stream-in facility. It seems to me that unless
13 there are some tremendous reason for not doing that, that
14 is just a no brainer given the topography of Dalecarlia
15 Parkway; that they should use the long-term solution
16 though it might cost more in today's dollars and just get
17 the sludge out of here.
18 * * * * * * * * * *

2-23-CA

19 [redacted]: Hi. I'm [redacted] and
20 I'm adamantly opposed to the monofill and I want it
21 stopped now.
22 * * * * * * * * * *

23 [redacted]: I've looked at the three

2-24-DA

alternatives and two of them pose long-term environmental problems and one poses all of the environmental problems only during it's construction, which is moving the material away to Blue Plains via pipeline. So, from a resident's point of view, this is a no brainer, because we're concerned about the long-term environment. If the only risks are whether in the short-term it can be built in time, that's a risk we think the Washington Aqueduct should be willing to take because that is the one scheme that doesn't pose long-term questions and issues for our environment and our children. Thanks.

* * * * * * * * * *

2-25-CA, DA

[redacted]: I am absolutely opposed to the monofill. I think the only real solution is the pipeline. If you look at the monofill, it's a very short-term solution relatively speaking. Even at a substantial cost differential, the pipeline is a better investment for achieving the goals of moving the material back into the Potomac.

* * * * * * * * * *

2-26-BA, CB

[redacted]: I think it is unconscionable to take 30 acres worth of trees, including the deer and the foxes, and then to create -- then for the chemicals

to stay there and for children to be -- or anyone for that matter to be exposed to those chemicals. That's all.

* * * * * * * * * *

2-27-CA
IA, IB, FD

[redacted]: I have two things. The first is that if you go on record, there was no official announcement of a sign-up sheet to register how many people were here. So this is not reflective, the sign-up sheet does reflect the total number of people that were here.

My comment is on the monofill plan, it shows an outline for the monofill; however, discussions with the moderator there, he recognized that you would have to have berms and holding ponds and everything like that. I'm assuming that's going to be around a bigger parameter, so you're not showing the whole thing. And so it's a larger area than what is shown.

The second thing is, also on the monofill plan, it shows that this would give us 20 years to have technology catch up. So it gives you that false sense that technology is going to provide a better plan at the end of 20 years when you've completely decimated a forrest with the monofill, as well as all of the berms

1 and the holding ponds and everything. And, yet, when I
2 go over to the trucking guy, I find out that the
3 technology that they are anticipating having at the end
4 of 20 years is the trucking option, which you need to --
5 they need to be more specific and answer questions,
6 anticipate questions and not give half-baked information.
7 * * * * * * * * * *

2-28-CA, KC, NC

8 [redacted]: My name is [redacted]
9 [redacted] I live at [redacted] Yumas Street, Northwest. I am a
10 31-year resident of the District of Columbia and a 10-
11 year resident of Spring Valley. I just spoke with one of
12 the professional representatives here this evening who
13 informed me that if the monofill option is used that
14 there will be residuals of aluminum hydroxide. This will
15 be in an area that is highly congested with residents,
16 particularly elderly residents and next door to a
17 hospital and it's in an area where we, the residents,
18 well know we have underground munitions left over from
19 the Army, plus there is a network of underground springs.
20 That's why they call this Spring Valley. So it would be
21 important to know, number one, when these materials leach
22 out of the monofill, as they inevitably will, into the
23 ground, what health effects will that have on the

1 residents and the patients in the hospital. And the same
2 concern would be for the dust in the air in a city which
3 is very polluted which has a higher cancer rate than
4 almost anywhere in the country. I myself am a victim of
5 cancer. I would have to move out of the neighborhood if
6 this proposal were to come to pass. I would much prefer
7 to see a more sensible alternative that can result in the
8 sludge being removed to an area where it does not put any
9 residents at risk.
10 This is [redacted] again. I wanted to
11 note that despite the fact that I am active in the
12 neighborhood and a member of the Spring Valley West
13 Citizens' Association, I was totally unaware of this
14 proposal until approximately a week ago, which indicates
15 to me that the Corps of Engineers had not done an
16 adequate job of providing the public with notice of their
17 proposals and an opportunity to comment.
18 * * * * * * * * * *

2-29-DA, AC

19 [redacted]: This area has one of the
20 most valuable real estate values in practically the whole
21 country. If they need the money to build the pipeline,
22 they will be better off selling the existing land and
23 putting in residential areas and using that money for the

pipeline. It would be very good for the tax revenue of D.C. and it would not destroy the whole community. This landfill would destroy a whole area and it would only solve the 20-year problem.

* * * * * * * * * *

2-30-FE, NC, NA, NB

[redacted]): I think the format for this meeting was absolutely awful. Nobody could hear anything and there was no reasonable forum for any kind of discussion that anybody could participate in. And I think that very few people up until the last few weeks were even aware that this process of any kind was going on. There has been virtually no notification of the whole process and when one looks at the schedule of accomplishments that is proposed, we are very near the end of the draft EIS period and then it goes into a 60-day public comment period and there is virtually -- I'll bet you that 90 percent of the people that were here won't even know what a draft EIS and what it can do and what it can't do and how it is to be used in decision processes.

I think that there are a lot more people here than they anticipated and they are not prepared in any sense to deal with this. And I think that unless

they -- unless the Corps of Engineers, or whoever is dealing with this, turns around and starts over again with their outreach to the public that they are going to run into a fire storm from the people in the immediate neighborhood and the people that are going to be affected by any of the alternatives.

One of my big concerns is that they had -- they apparently started with 23 or 26 alternatives and virtually nobody knew about them and nothing has been published about any of these, to my knowledge or to the knowledge of anybody that I've talked to here. And that screening process of going down from 26 down to the 3 alternatives that they're now talking about is -- is not -- it's not understood by anybody and nobody is going to have any confidence in it.

And I think a process -- a whole program like this really depends on getting good public participation and good public -- good public acceptance. They may not agree with everything, but at least they know something has to be done and they want a voice in looking at the alternatives. And that has not been provided yet. And I believe that that's going to cause the Corps of Engineers a lot of trouble until they get

that sorted out.

And one of the ways of starting to get that sorted out is to have a public meeting that is meaningful in a facility that is conducive to answering questions and starting at time zero and telling people what they're doing and why they're doing it and what the process is and how they came to the -- why they came to the schedule and the decision that they reached. They haven't done any of that and I would hope they would consider that as they go ahead.

* * * * * * * * * *

2-31-CA, IA, GB, IB

[redacted]: I don't know exactly what I'm allowed to say, but I am very much against the dump being developed on the ground adjacent to Dalecarlia Parkway. I think it was a tremendous environmental effect and it's not the highest and best use for the ground. The people, such as myself, who bought homes in the area didn't expect industrial uses to be developed around our homes and I think it's a short-term fix and something that should be corrected now, not later. And I think we're not comparing apples and apples as far as the cost. If what is driving this is cost, we're looking at the cost to develop a dump that is only going to

alleviate the problem for 20 years. And comparing that to the pipeline and the other alternatives, we're not comparing apples and apples because you're not capturing the additional cost after 20 years to come up with a new solution after the dump is full. That's all I have to say.

I believe Alternative B is the best solution because after 20 years and after filling up the dump adjacent to our homes on Dalecarlia Parkway and after destroying all of that acreage of green space we're going to have to revert to Alternative B anyway. We're going to have to convert the whole program to Alternative B where we're trucking the waste out of the area instead of concentrating it. I think that they ought to just bite the bullet now and go to the Alternative B as a solution to this problem.

* * * * * * * * * *

2-32-MA, IA, GA, DA, FD

[redacted]: My first comment -- question as to whether EPA conducted a NEPA process considering these impacts when they made their decision as to what conditions they would put on the permit that they had issued and whether or not, if EPA did not do that, whether they need to go through that type of

process now or if they should be a cooperating agency with the Corps of Engineers and have their permit be one of the options or conditions on that permit be subject to consideration of options for that permit as part of this NEPA process.

As far as the three alternatives that the Corps of Engineers is considering, I'm concerned that any alternative that has a 20-year maximum life is not really a useful or not a viable or patentable alternative because by the time we're finished with construction and implementation of that project we would still be where we are now 20 years from now, still looking for another permanent solution.

As far as Alternative B, which would be to truck everything out, I think the neighborhood impacts of 10 to 20 trucks of that size a day going through relatively neighborhood-type streets would be a significant impact on the community and also on the local roads as far as maintenance on the road and all of the impacts of the truck traffic.

Alternative C seems to be the one that has the least impact on the community as far as piping it to Blue Plains. It certainly has the least impact on the

neighborhoods of Northwest Washington and nearby Maryland. Understanding the cost is somewhat more, but from what I heard today the cost did not sound significantly more than the cost of the alternatives that had much greater impacts. Thanks.

* * * * * * * * * *

2-33-CA, KB, IA

[redacted]: I am [redacted]. I live off of [redacted] Street here in Washington, D.C. I just wanted to register my significant concern over this proposed monofill alternative for moving -- for the deposit of the sediment from the river. I think it has been described in somewhat benign terms, but I can't help feeling that this is an industrial by-product that may have significant long-term health consequences for the neighborhood that lives near it.

I don't believe that I have seen in the materials presented on the floor here or in any discussions with folks from the Army Corps of Engineers that addresses the issue of whether sediment that they are depositing in the monofill is, in fact, likely to be free of so many of the chemical by-products of agricultural run-off of the various fertilizers and anti-weed control products and various other chemicals used in

1 agriculture significantly up river.
2 They describe -- I suppose it's fair to
3 say that the monofill will be quite unsightly and they
4 used the tree screen as a way to mollify people's
5 thinking on the subject. However, it is my belief and,
6 in fact, we may be doing what we did with the World War I
7 munitions, which is to put a significant potential
8 environmentally hazardous by-product in close proximity
9 to a heavily developed dense city populated residential
10 location. And until I hear a strong response to that
11 concern, I am definitely not in favor of this
12 alternative.
13 * * * * * * * * * *

2-34-NC, DA, IB

14 [redacted]: Hi. This is [redacted]
15 [redacted]. And I have been at this meeting since 6:30 this
16 evening. At one point, because of the size of crowd, it
17 was decided that Mr. Jacobus would go into the hall, the
18 seated area, the little auditorium, and was to address
19 questions that we might have and as of 8:10 this evening,
20 he has not gone there. It is 8:35 and he has not ever
21 come into that room. And I just wanted to point out that
22 quite a few citizens were sitting in there waiting for
23 him to come in and address our concerns and they've got

nothing left and the room is now empty at 8:35.

So I want to say that this was a public relations fiasco. I feel as a citizen of Montgomery County that essentially the Washington Aqueduct has thumbed its nose at the citizens, it's neighbors, by saying essentially that they don't care about the process, that they don't care about involving us at an earlier stage in the game when there are more alternatives on the table, some of which we might actually like or may have some contribution to make.

In essence, I feel shut out of the process. Except for the Blue Plains alternative, I don't really want to comment on either of the trucking alternative or the monofill alternative. I think that they are both untenable, short-term solutions. To me they seem to be 19th century solutions to a 21st century problem. I think we need to be looking more into the future in terms of recycling and addressing our waste products in a long-term fashion. Thank you for this opportunity to speak.

* * * * * * * * * *

[redacted]: My name is [redacted] and I had two questions, basically, for the

2-35-GE, GD

1 process. One is in the August 12, 2004, letter from the
2 Department of the Army, on the residuals processing
3 alternatives, Alternative A noted that on average six on-
4 site truck trips per day six days per week would be
5 required to transport residuals. And Alternative B, that
6 an estimated average number of trucks for handling the
7 residuals is approximately ten per day during the five-
8 day work week. I wanted to know why the discrepancy
9 between 36 truck trips and 50 truck trips on a weekly
10 basis.
11 My second question was in the truck route
12 alternative site proposal there was absolutely no
13 inclusion of the Clara Barton Parkway as an access point
14 to 495 and, clearly, the most direct route from the water
15 treatment plant would be down MacArthur to Arizona and
16 onto Clara Barton Parkway. If it's a matter of getting
17 an exemption or some change in designation for parkway
18 usage, it know that certainly needs to be considered.
19 * * * * * * * * * *
20 [redacted]: Hello. This is [redacted]
21 [redacted] I live in Spring Valley. And my concerns are
22 two-old. One, that we're looking at a short-term
23 solution and, obviously, this is something that is a

2-36-CA, IB, GB, GD

long-term problem, a long-term issue that we need to be finding an environmentally-friendly solution for, getting rid of the residuals.

The short-term solution, especially the monofill, I think is the worst possible solution of the three that we have been faced with here, for one reason, obviously, an environmental standpoint and, just from an aesthetic standpoint, having an 80-foot high, eight-story high monofill the size of 30 football fields is not something that I want in my front or back yard.

Secondly, from a traffic standpoint it seems to also be the worst possible solution, and not a solution at all. You have six trucks a day that are continually and constantly going down the same route.

Whereas, in the alternative that is allowing the material and the residuals to be trucked out, you would not only be able to properly disseminate the residuals across large areas, you would also have less traffic burden due to the fact that you would have more routes.

I also don't under the fact that you can't have a more direct route out, which is the route down Arizona and down the Canal area toward Clara Barton.

Obviously, that is something that needs to be looked into. But it definitely offers more traffic solutions.

Lastly and finally, it's just the fact that we need to really be thinking more in long-term environmentally friendly solutions. In the short-term we know that there are problems and it's something that we're going to have to deal with, but let's not destroy our neighborhood in the process. Thanks.

* * * * * * * * * *

2-37-FD, CA, IB

[redacted]: Hi. I'm [redacted] I'm on the Spring Valley Board of Directors. And one of my concerns, there are many, but the short-term solution -- I mean, 20 years from now, what is going to happen? We're going to need to address the situation all over again. The other thing is living in Spring Valley we've already dealt with the Corps of Engineers, the arsenic and the munitions. And my understanding is the monofill is going to be built on an area that has munitions in it and they are yet to be discovered. So this is even more problematic than has been publicized.

* * * * * * * * * *

[redacted]: My name is [redacted] and I would like to express my opposition to the landfill. A

2-38-CA, BA, GB

1 couple of points, we say this is a short-term solution,
2 which is somewhat true. The problem is once you have
3 created this thing, it's going to be a long-term landmark
4 and an eyesore for the community and possibly a health
5 hazard.
6 The trucking option, I would be in favor
7 of.

8 * * * * * * * * * *

2-39-CA, IB

9 [redacted]: One of the factors
10 driving the decision is cost. And from the cost
11 estimates that I've seen, the landfill seems to be the
12 cheapest one. I wonder if the cost of the landfill takes
13 into account that this is a temporary solution and in 15
14 year's time they going to have to do another project.
15 So, on a short-term basis, a landfill may be the cheapest
16 one, the least costly alternative, but on a long-term
17 basis, the fact that it has to be done twice once the
18 landfill gets filled up may drive the cost up so that it
19 becomes actually the most expensive alternative, as
20 opposed to the other three. Thank you.

21 * * * * * * * * * *

22 [redacted]: My name is [redacted]
23 and I'm hoping that we could resolve this in a way that

2-40-DA

we don't have to do the same thing twice. And so, hopefully, we could go to Alternative C which seems to be the most reasonable way to not create a new problem by trying to solve another problem. And maybe we could just do a financial study and see what it would take to get this set up and get it done in a way that will be of long-term positive results. So my button would read vote for C and forget A and B. All right, thank you.

* * * * * * * * * *

2-41-DA, CA

(The following are handwritten comments provided by [redacted] to the Stenographer.)

[redacted]: 9/7 Comments.

Alternative C is the best alternative as it is already a processing facility and away from residential areas and drinking water supply.

Please do not proceed with the monofill. It is too close to a public water supply and may have air quality issues, it could end up back in the water. Also, the sheer enormous size is very disturbing and unsightly to the Maryland residents with absolutely no cover from the view of the monofill. It should not be built in this area.

[redacted] Chalfont

1 Place, Bethesda, Maryland 20816, _____.

2 * * * * * * * * * *

3 (The meeting ended at 9:00 p.m.)

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CERTIFICATE OF REPORTER

I, Linda M. Kia, the Stenomask Reporter who was duly sworn to well and truly report the foregoing proceedings, do hereby certify that they are true and correct to the best of my knowledge and ability; and that I have no interest in said proceedings, financial or otherwise, nor through relationship with any of the parties in interest or their counsel.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 2004.

_____
Linda M. Kia
Certified Verbatim Reporter

Document #3

-----Original Message-----
From:
Sent: Sunday, September 12, 2004 10:50 AM

Subject: Re: Follow-up to Washington Aqueduct's September 7 Public Meeting

Thank you for responding to the concerns of those who attended the meeting at the Washington Aqueduct. I do have two questions that may have been raised by others but have not been addressed.

1) Is there another thickening agent (floculent) that would meet EPA guidelines for flushing into the Potomac River? 3-1-OA

2) How do other metropolitan areas handle the disposal of water treatment residuals? 3-2-PA

Document #4

From:
Sent: Tuesday, September 21, 2004 4:23 PM
To: Peterson, Michael C

Subject:

http://www.environmental-expert.com/technology/orica/SAWaterAUSOzwater00a.pdf

Dear Mr. Jacobus,
Dear Mr. Peterson,

thank you for your presentation the other night and we look forward to the next one.

in response to your letter inviting the affected neighbors to provide suggestions i am going to try. the city of Adelaide, Australia appears to be going forward with a system that does not generate residuals, i have attached the link below. Rather this design calls for the following(please note this is direct from their publication):

4-1-LA

· Treatment process - preferred process train is Magnetic Ion Exchange Process (MIEX®), microfiltration (immersed) and GAC filtration (in existing sand filters) utilizing the existing infrastructure to the optimum degree

Of note is the innovative treatment process combination which is unique and which represents the future direction for water treatment.
· MIEX® - this process will remove the majority of DOC which is the major problem - causing parameter in Adelaide's source water
· Microfiltration - MF will efficiently remove almost all particulates, including Cryptosporidum and Giardia
· GAC filtration - with a much reduced organic load, will remove taste and odour, synthetic organic chemicals (SOC's) and generally 'polish' the water

This process train has many advantages:
· no chemicals are dosed into the water being treated (fluoride and chlorine will be added in low doses prior to distribution);
· following on, no solid residuals (sludge) or dissolved residuals (aluminium, disinfection by-products, monomers) are formed. There are reject streams from the MIEX® process, and the microfiltration units and GAC will generate backwash streams but these are relatively minor; and
· it can be retrofitted into the existing infrastructure more readily than other process combinations evaluated.
In the opinion of SA Water the process 'train' discussed which is essentially chemical free, residual free and environmentally friendly is the future direction for water treatment.
KEY WORDS
water, organics, retrofit, MIEX®, microfiltration, ozone, GAC

could this be an viable alternative? was it considered?

thank you in advance

The information transmitted is intended only for the addressee shown above.
Any design information (calculations, drawings, etc.) included in this
transmission or any attachments is/are intended for the sole purpose agreed upon
with Morrison Architects, PLLC. If this information is to be
used for any other purpose or transmitted to any other persons, prior
consent must be received from Morrison Architects

Document #5

From:
Sent: Wednesday, September 22, 2004 3:46 PM
To: Peterson, Michael C WAD

Subject: residuals

5-1-OA

Dear Mr. Peterson,

Continuing my research into alternatives that might be added to or considered in addition to the three present schemes, could you please advise if other coagulants were considered which as a result might reduce the residuals to a degree that the rejected disposal alternatives, or other disposal means such as using the wastewater system might be completely viable? as well it seems they reduced their overall operating costs

For example attached please find another interesting link that notes a water treatment plant in Cleveland switched from alum as a coagulant to another which as a result produces, at a reduced cost, ONE THIRD of the sludge or residuals. therefore if the trucking option was considered it would theoretically reduce the trucks by a third.

They switched to CAT-FLOC liquid cationic as a coagulant. was this considered by the aqueduct. Some excerpts

"Alum-Related Problems

Alum was the only coagulant aid used during the first year and a half of operation at the water plant. Alum was added continuously to the rapid-mix tanks at a dose of 18 mg/L. Several inefficiencies and cost concerns associated with alum use led to investigations and selection of a polymer coagulant product. Alum-related problems included

* high sludge generation with a low 6.8 percent sludge solids content,"

and after switching

"Enhanced Plant Performance

Sludge Reduction. The water plant has been producing only one third as much sludge since the new coagulant was introduced (down from 186,000 gallons per month to 50,000 gallons per month). Sludge reduction also cut in half the number of times that sludge hauling trucks from the county's wastewater treatment plant had to remove waste."

Thanks for your time

Peterson, Michael C WAD

From: WWW [www@wfpub.usace.army.mil]

Sent: Saturday, September 25, 2004 1:45 PM

To: Peterson, Michael C

Cc: Schultz, Paula

Subject: Comments on Proposed Water Treatment Residuals Management Process

6-1-BB

Specific Comments	September 25, 2004 Mr. Thomas P. Jacobus Mr. Michael Peterson Your September 17 letter says that you will accept ideas for additional alternatives to be screened. Many people have been surprised that you have failed to include partial or total relocation among your 26 alternatives. Please consider, as an alternative for the current alternatives for the Water Treatment Residuals Management Project, the relocation of (1) some of, and (2) all of, the water treatment and sludge disposal facilities and functions to other sites. Your self-selected criteria have apparently excluded these alternatives. Nevertheless, this the public is entitled to know what such obvious alternatives would entail. Whether or not you recommend relocation or consider it too expensive compared with the temporary sludge dump, I believe it must at least be considered. Thank you,
Name	
Agency	
E-Mail Address	
Telephone Number	
Please Contact	ContactRequested

Document #7

Peterson, Michael C WAD

From: WWW [www@wfpub.usace.army.mil]
Sent: Saturday, September 25, 2004 2:39 PM
To: Peterson, Michael C
Cc: Schultz, Paula
Subject: Comments on Proposed Water Treatment Residuals Management Process

7-1-CC

Specific Comments	September 25, 2004 Dear Mr. Jacobus: At the September 7 meeting, you said that it was not POSSIBLE to calculate the maximum height of the proposed sludge dump or the maximum acreage to be clearcut. That seemed incredible; do you simply want a blank check? Does your answer mean, for example, that the actual height might be 90', or 100', or even more? Similarly, what does a 30-acre
Name	
Agency	
E-Mail Address	
Telephone Number	
Please Contact	ContactRequested

Document #8

Edits to this verbatim transcript by Patricia A. Gamby, Environmental Engineer, Washington Aqueduct are indicated as "<<"

1 DEPARTMENT OF THE ARMY

2 CORPS OF ENGINEERS

3 ----------X

4 IN RE: Washington Aqueduct Open House for :

5 the Draft Environmental Impact :

6 Statement for a Proposed Water :

7 Treatment Residuals Management Process :

8 ----------X

9 Tuesday, September 28, 2004

10 Washington, D.C.

11 Public Comment and Question/Answer Session and Technical

12 Presentation on Alternatives Identification and Screening

13 Process public meeting was held at Sibley Memorial

14 Hospital, Ernst Auditorium, 5255 Loughboro Road, N.W.,

15 Washington, D.C. 20016 from 6:30 p.m. to 10:15 p.m.

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22 LMK-226-04

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P R O C E E D I N G S

MR. JACOBUS: Ladies and gentlemen, thank you for coming out on a rainy night. We're glad you're here. I'm Tom Jacobus.

Before we begin our program here this evening, we have several people I would like recognize, some elected officials and some of their staff members.

First of all, Councilman Howard Denis is here from Montgomery County representing District 1.

Staying in Montgomery County, we have a representative of Council President, Steve Silverman, who is Peggy Fitzgerald, there.

And representing Congressman Chris Van Hollen is Joan Climan.

And Dean Lazeroff is here representing Senator Paul Sarbanes.

And Dr. Gail Street is here representing Senator Barbara Mikulski.

Have I missed any representatives for -- in the State of Maryland or Montgomery County? Okay.

For the District of Columbia this evening here we have Penny McDonald here this evening. Penny is the chief of staff for Kathy Patterson, who is Ward

Three.

Not here at the moment, because I haven't seen her, but should be joining us shortly, will be June Phillips who is staff to Carol Schwartz in her capacity as Chair of the District of Columbia Council of -- Committee on Environment and Public Works.

So I believe those are the elected and officials represented the elected officials who are here this evening. So we're very glad that they could come out and be with the rest of you here to be with us this evening.

If anyone did not pick up an agenda on the way in and would like one, please raise your hand and one of our folks will get one to you if you would like one.

Good. Thank you.

Also, out in the lobby, at the last meeting and in other meetings we've, we've collected a lot of names and addresses of people who would like to be on a direct mailing as a part of these proceedings. If you have already -- If you got a letter from us that had your full name and address and it didn't say dear neighbor, then you're on our list and in our database.

If you got a dear neighbor letter and

would like to get a personal letter in the future or don't have either and just here because you're interested, please leave your name and address out in the lobby. We'll be happy to add you to that database for future notifications we make to the public.

This meeting tonight is basically the reverse of the meeting the other night. This is not us telling you about our project. This is you asserting your concerns and any questions to us.

But I think it will be useful if you will allow us to take a very few minutes at the beginning of the process to go through a few elements of the project, to tell you a little bit about the National Environmental Policy Act and how we allow its provisions to shape our screening process and our scoping to get us where we are.

We also want to tell you where we are so far in the alternative analysis of the three alternatives being evaluated to show you some of their strengths and shortcomings and how that will affect will our work forward.

In addition to that, what I would like to do is -- When we met last time, it was clear to me that many of the folks who attended wished they had a chance

to be involved in the project and to offer more input to the project. And in the letter I sent out immediately after that meeting to everyone whose name we knew and the thousand or so neighbors, we suggested that the -- we said that we would certainly accept any additional screening alternatives -- alternatives to be screened up through 30 September.

We looked at the time available to us in our schedule. And one of the things that I want to say that where we have an area where we have a disagreement between how we see ourselves going forward and how some of you may see us going forward, is we believe that we are bound to our schedule as outlined in our Federal Facilities Compliance Agreement which sets the parameters for how we will comply with the permit which allows essentially no discharge to the river.

And so we are going to continue in this process bound by the permit conditions and bound by that schedule.

But, within the schedule, we have looked at opportunities to move a few things around and still say in compliance. And we are offering the public an opportunity, any of you and anyone who you wish this pass

this to -- an extension of that period of time that -- in talking to some of the community leaders and others, to offer an alternative to extend that until the 15th of November.

So we will continue to receive alternatives to be screened in accordance with our criteria up through the 15th of November and that will still give us sufficient time to work through the other elements of the process.

If any of those alternatives are screened that meet the criteria and we could carry it forward, we will add those to the three already under consideration and work those through the environmental impact statement and continue to report on those as we go through.

I do look forward to listening to you this evening. This is, as I said, your meeting to talk to us tonight. But, before we get to that part in a few minutes, I want to introduce the moderator for this evening, who is Mr. Jed Campbell. Jed is representing the firm of CH2M Hill. CH2M Hill is an internationally respected engineering firm who was brought on for this project as consultants for us. He has significant expert -- the whole firm has significant expertise in the water

treatment industry. And Jed Campbell's specific area of expertise is environmental planning.

He will give us a short overview of the meeting agenda and then we'll get into a couple short presentations and then we'll turn it over to you.

Thank you very much for coming.

MR. CAMPBELL: Thank you, Tom.

Good evening everybody. My role as the facilitator for this meeting is to really make sure that we have the best communication as possible this evening, given some of our constraints, which includes the weather, it might include some of the acoustics in this room. It might include the high level of concern that a number of people have about this project and about some of the alternatives. It also would include some of the complexity of the issues that we'll be dealing with tonight.

And, in fact, as Tom said in his letter that went out after our September 7th meeting, we might need a series of meetings to work through some of the -- to work through the radiant issues associated with this project. We'll get as far as we can on those tonight.

To have the best communication possible,

we wanted to make sure that everybody here tonight who wants to speak gets a chance to speak. And we want to make sure that the Aqueduct and the staff members of the project all get a chance to hear the range of concerns and questions and suggestions and issues related to the project.

Also, to have the best communication possible, we're going to need to present a little bit of information. And, as Tom said, we have some information to present up front and we have very purposely kept that very short so we can move into a mode of listening to questions or statements and answering those and then we want to be able to move into a question and answer process.

If you look on you'll agenda, you will see that at the bottom of the page we've reserved some of the more detailed discussions about all of the alternatives and the screening criteria and how specific criteria related to these specific alternatives was put at the end of the evening only because that is a very kind of detailed set of presentations and we didn't want to talk too long up front.

Now, we can certainly dig into that

information and bring it up forward and just kind of see how it goes, but we bumped that back toward the end.

So, without further adieu I would like to proceed with two short presentations. The first one is Patty Hambey. She has eight or nine slides that talk about the federal process for solving problems with the NEPA process that we've talked about, what is it, how does it come up with the screening criteria, what is that all about. That's about five minutes.

And then I'm going to take about five minutes to share some information about the alternatives very specifically related to the possibility of being able to implement them or not. And I think we need to get that information on the table at the beginning of the meeting because it will us inform our suggestions throughout the rest of this meeting.

So with that said, I'll just turn it over to Patty.

MS. HAMBEY: Okay. Again, like Jed said, I'm just going to run through the NEPA process and I'll be as brief as possible. If I go too fast, I'll be around afterwards for questions or we can get -- you can get in contact with me through the website or email.

As most of you know, the Washington Aqueduct is a division of the Baltimore District U.S. Army Corps of Engineers. We are a federal facility.

All federal agencies must follow a specific process to pursue an action that involves federal land and federal money or a federal permit. That process is known as the National Environmental Policy Act, or NEPA.

It mandates a full and objective analysis of the potential implications to the environment, the implications of our project to the environment. It's a multi-disciplinary evaluation, including both natural and human environment.

NEPA is a structured process. Under the NEPA process, the agency, that's us, is required to consult with other resource agencies. We're also required to solicit participation of the public and other stakeholders.

NEPA is a process of evaluation, but it does not mandate selection of the environmentally preferred alternative. It doesn't mandate the environmentally preferred alternative, the most popular alternative. It requires us to go through the process,

make the evaluation, and disclose the impact of the selected alternative.

NEPA studies could be performed at a various levels of detail. The three are listed here in increasing order of detail: First, categorical exclusion; second, environmental assessment; and, third, environmental impact statement.

For this project, at the very beginning we made the decision to go directly to environmental impact statement because it is the most rigorous evaluation process.

Okay. The environmental impact statement examines all issues and involves the public and regulatory agencies.

On the right of this slide is the resources to be evaluated. I'm going to run through them because it's a little small and it's important.

Air quality, biological resources, cultural resources, cost, geology, ground water, hazardous materials and waste, implementation uncertainty, land disposal, land use, noise, public health, socioeconomic resources, soils, solid wastes, service water, topography, transportation, utilities, and

visual.

We also have to assess the cumulative and secondary effects of these resources.

Now, on this slide, you'll see a step by step -- step by step map of the NEPA process. On this slide everything that is shown in yellow is a public input step. So I'm going to go ahead and step through the process starting here with notice of intent.

Notice of intent describes five objectives for our overall project. The five objectives are: Allow the Washington Aqueduct to achieve complete compliance with our NPDES permit. Design a process that will not impact current or future production of safe drinking water. Reduce, if possible, the quantity of solids generated by the water treatment process. Minimize, if possible, impact on various local and/or regional stakeholders and minimize impact on the environment. Design a process that is cost effective in design, implementation, and operation.

These are the five objectives.

We recognize at this point there will not be an alternative that has no impact. So we have focused on these five objectives for our project.

Now, back to the step by step process. From notice of intent, the next step is develop screening criteria, then a public scoping period followed by identify and develop alternatives and screen alternatives.

From the notice of intent, we developed the screening criteria and held the public scoping period. At this public scoping period, the public had the opportunity to comment on the screening criteria that were developed, as well as giving us ideas of alternatives to carry forward in the analysis.

8-1-FB, NB

UNIDENTIFIED SPEAKER: When was that?

UNIDENTIFIED SPEAKER: When was that?

UNIDENTIFIED SPEAKER: Nobody knew anything about that.

MS. HAMBEY: The date was January 19th.
<< The correct date was January 28th.

UNIDENTIFIED SPEAKER: How come I didn't -- I didn't receive any notice?

MR. CAMPBELL: I forgot to mention something. If you would bear with us, hold onto the questions that everybody has associated with this. We are very, very well aware of that.

I would ask you, please, we just have

limited our presentations to be very short. Let us finish and then you can have at us with all of these questions.

UNIDENTIFIED SPEAKER: Tell the truth.

UNIDENTIFIED SPEAKER: Well, tell the truth, then.

UNIDENTIFIED SPEAKER: You should be able to comment on this while the slide is up there.

UNIDENTIFIED SPEAKER: Sure.

UNIDENTIFIED SPEAKER: I didn't even know -- I didn't happen -- I didn't happen to know about any of those meetings and I was at the first meeting, so I'm looking around at all of those empty seats. And I think a lot of people like me who have lived here for over 22 years didn't get notice of this meeting.

UNIDENTIFIED SPEAKER: Hurray.

UNIDENTIFIED SPEAKER: Hurray. That's true. That's what truth sounds like.

UNIDENTIFIED SPEAKER: Right.

MR. CAMPBELL: We have a lot to talk about tonight. One of our issues at the September 7th meeting is that people didn't feel like they were able to hear each other, there was a lot of disorganization. And we

would like to proceed in any organized manner. We have just a few things to present here and then you can just go into lengthy questions and answers. We want to take all comers.

And I would ask you to let Patty present this information first.

And the scoping was in January, and the exact date, I can't remember.

UNIDENTIFIED SPEAKER: It wasn't very --

UNIDENTIFIED SPEAKER: Where was it held and who attended it? Or don't you know that, either? Are you going to answer the question?

MS. HAMBEY: Screening is an approach commonly used to identify the alternatives that meet the purpose and need of the project. The screening criteria were drafted by the Washington Aqueduct team. The screening criteria was circulated for public review and comment as a part of the scoping and prior to the screening.

Screening ensures -- This is important. Screening ensures that the Aqueduct focuses only on alternatives that enable it to meet the project's objectives. That's where the screening comes in, it

8-2-NB

screens out the alternatives that won't allow us to meet the project's objectives.

Then once we screen out those alternatives, NEPA requires further analysis of those alternatives that are then feasible and reasonable.

UNIDENTIFIED SPEAKER: Screening criteria were never circulated.

MS. HAMBEY: Again, the feasible and reasonable alternatives must meet the purpose and need and the objectives of the project, comply with law, be institutionally possible.

I'm going to breakdown the screening criteria. They are listed to the right.

Meets the Federal Facility Compliance Agreement schedule, preserves reliability and redundancy of the system, uses design and processes proven in the water treatment industry, complies with NPDES permit, considers economic effect, avoids undue impairment of jurisdictional wetlands, confirms with the Endangered Species Act, avoids significant alteration of important cultural resources, and complies with existing plans and institutional considerations.

UNIDENTIFIED SPEAKER: No criteria on

impact to the neighborhood.

UNIDENTIFIED SPEAKER: Nor the transportation system, nor the --

MS. HAMBEY: The EIS examines all issues that involves the public and regulatory agencies. Again, we're back to the process.

Again, I'll just reiterate notice of intent to develop screening criteria, public scoping period, develop and -- identify and develop alternatives, screening alternatives, and then this point.

And that's where we are now. Many of you have seen this before.

No decision can be made on one of the reasonable and feasible alternatives until all impacts are evaluated. This is a picture that we've used to show, this is the universe of all of the alternatives that we looked at. When we screened them against the purpose and need of the project, we came out with four alternatives that have been identified to be carried into the EIS for detailed evaluation.

A decision has not been made. From these four alternatives we need to do an evaluation. And this shows some of the topics that we will evaluate. Air

quality, traffic, the visual, hazardous waste, ground water, et cetera.

From this evaluation, then the preferred alternative will be determined. It will meet the objectives of the project and it will be a balance of the trade-offs.

This right here is where we are now. We are evaluating these alternatives.

Mr. Jacobus said earlier November 15th. We will take ideas and go back and look at if there are any other alternatives that should be carried through this evaluation process and brought to the balance.

Okay, thank you.

MR. CAMPBELL: Hang in there with us for a moment. We've got, I think, seven slides to tell you the status of the alternatives where they stand right now in terms of analysis and where they stand right now in terms of their potential to be implemented or not.

I would like to walk you through those and then we will go straight to the question and answer session. And the reason I'm moving forward with this information is because I think it has a very direct bearing on the rest of the conversation. Otherwise, we

would just move straight into the Q and A session.

All right. In this little talk, I'm not going to talk about the mechanics of the alternatives, how they got there, which screening criteria apply or don't apply. We can go into that later in the meeting if people would like.

What I'm going to focus on what are the three alternatives and issues that we know right now that relate to their employability. That's all.

So the monofill is an obvious concern for a lot of people. I think most people are familiar with the general location and dimensions and parameters of the monofill, across MacArthur Boulevard from the Dalecarlia treatment plant on the land owned by the Washington Aqueduct, not far from where we're standing right now.

Go to the next slide, please.

Right now, as we're studying and developing a draft EIS we're going to show several likely significant impacts associated with the monofill, which is probably very obviously to you.

In an EIS a significant impact is a big strike against it.

Obviously, we're dealing with the issue of

visual impact. We've talked somewhat about that in our last meeting, how in some places you won't be able to see it, but in other places you will be able to see it quite clearly. This will indicate a significant impact on the EIS.

Land use is another area that will likely have a significant impact. The land use, obviously, is inconsistent with its current land use and is totally inconsistent with adjacent land uses in the community. That's something that we are evaluating. It makes total sense, that will be a significant impact.

There is another issue related to hazardous substances that I'm going to talk about in greater detail on the next slide that relates to the Spring Valley project, but what this does is it creates somewhat of an uncertainty about our ability to develop the monofill in the time frame necessary to meet our Federal Enforcement Act.

So let me walk you through that. What does that mean about hazardous substances?

Go to the next slide.

The Dalecarlia Reservoir site is programmed for a further investigation associated with

the Spring Valley project. Now, we've known that this area occupies the area historically known as Government Woods and it may indeed have been used for the American University's experimental station work.

What we are learning in further discussions with the Corps of Engineers associated with the Spring Valley project is that they are scheduling geophysical investigations to determine the potential for buried materials, determine if those exist.

Those investigations are scheduled to begin in year 2008. Now, that is just the start of the investigations. They collect data. The investigations take about a season. You collect data to determine what else to do.

Further, the findings of those investigations might be a cause for further work, for further investigation or even removal or clean up actions.

What does that mean for monofill alternative? That's the logical question. And let's go to the next slide.

What that means is that with this condition the Washington Aqueduct would be unable to

proceed with designing a monofill until Spring Valley project investigations are complete.

There were some questions last time about would you just bury unimploded ordnances. You know, with the monofill, the answer to that question is, no, we can't do anything until Spring Valley proceeds with these investigations.

So here is how this plays out, here is sort of the building blocks. Right now the Federal Facility Compliance Agreement, which is our Federal Enforcement Act that the Aqueduct has entered into under the Clean Water Act, mandates that the residuals management program be in place, that is designed and operational and up and running, by the end of 2009.

The Spring Valley investigations don't start until 2008. It might go two years. So you can see that there is a disconnect in terms of the schedule on those two agendas.

The conclusion right now in the current context of project is that the monofill alternative may not be feasible within the project's current schedule.

I just wanted to get that out on the table.

Now I'm going to talk through the next -- sort of in fair treatment with the next two alternatives and then I'll stop talking and we'll go into a question and answer mode and we'll use a lot of the other people here to help answer questions.

Next slide.

The next alternative, we call Alternative B, that's off-site disposal. That involves trucking the residuals to a remote location. There is a lot of concern about that too.

Essentially, what this means is that the Aqueduct would contract with licensed haulers and they would haul the material to a range of different kinds of permitted facilities. They might be agricultural applications. It might be a landfill. There are different ways to dispose of this.

Right now in the project we have a set of haulers that are being evaluated to understand the full << haul routes range of potential traffic impacts. From the very start, we learned about the very high concern about traffic impacts. We'll look into that very closely. We're not just looking at one or two << haul routes. We're looking at a wide range of them.

And the << haul routes that have been selected use high volume roads and correspond where possible with the emerging D.C. truck management strategy.

Let's keeping going. I have one more slide on this one.

The question is where are these << haul routes there's a map here. That's on the internet as well. Seven haul routes are being used to think about how to disburse truck traffic and reserve operational flexibility.

I won't go through each one of them, but they're up on there and that figure is available one the internet and we'll also mail it to you if you want it.

The other question, obviously, is, well, how many trucks are they talking about. Down here in this yellow box -- I'll try to walk you through this. The data we have are just Monday through Friday. No trucks on Saturday or Sunday. It depends on the size of the truck, obviously.

The left-hand column there says a 20-ton truck, which is a pretty average truck for around here, the current amount of water that is being produced by the Washington Aqueduct for distribution to its customers,

under that current amount of water, there would be nine trucks of residuals per day going on these haul routes.

By the 20-year projection, that means when the Washington Aqueduct generates more water to meet the growing population, that means more residuals, there would be an additional truck, up to ten trucks per day.

Then, obviously, if we go to a smaller truck, which is a ten-ton truck, it would go up to 16 trucks per day and under the current 20-year project, that means when the Aqueduct is making more water, it might go up to 20 trucks per day.

Let's go to the next slide.

So we disclosed what we know about the monofill so far. We've disclosed what we know about the trucking issues so far.

So far off-site disposal has fewer known impacts than the other two alternatives. I'm going to get, obviously, to the next alternative, which is Blue Plains. This is so far.

Licensed disposal, meaning the contractor's have to be licensed, to ensure that all of the environmental regulations are being met at the disposal location, which would be a remote location.

Truck volume, we've been doing traffic counts and that information isn't available tonight, but we can discuss that at a future meeting, will probably not exceed the existing level of service on selected roads.

Now, there are other things to think about with trucks. We understand that. But it's just that one measure, the truck volume will probably not exceed those. And the truck quantities might be reduced if new technologies can be implemented over time.

We're looking at alternative coagulants. Coagulants are materials used to bring the residuals together in a solution so they settle out and fall to the bottom.

And then we're looking at alternative Forebay residuals, dewatering. The Forebay is the place where the water from the Washington Aqueduct sort of lands before it goes into the reservoir proper.

Next slide.

So then Alternative C is the pipeline to Blue Plains. And this will mean building a new 12-mile pipeline from the Dalecarlia Water Treatment Plant, which you can see kind of right there in the middle of the graphic there, it's says in red Dalecarlia Water

Treatment Plant, to the Blue Plains Wastewater Treatment Plant.

This alternative has several benefits. One is that it eliminates trucking of residuals from the Dalecarlia Water Treatment Plant. However, the residuals still have to go somewhere and they would be down at Blue Plains and be trucked from there. So that's the general concept of the pipeline.

Now, I just have one more slide that I would like to show. We're looking at that in the same level of detail that we're looking at the others. The pipeline is not an easy thing to make happen.

The work to date is revealing that there will be likely significant impacts associated with the pipeline corridor. We've been meeting with representatives of different districts of the National Park Service. They have expressed concern to us about the presence of historical and archeological resources, particularly with effect to the C and O Canal, through Georgetown, through five national parks.

There is potential for the pipeline intercepting hazardous materials, particularly as it crosses across several military bases near the Blue

Plains treatment plant.

There are extensive land uses that we're crossing. That kind of goes without saying, in addition to the national and significant C and O Canal, we go right along the Jefferson Memorial through the Washington Mall and we cross, as I said a second ago, five national parks.

All of that creates some potential economic impacts that are associated with high construction costs. The Park Service has told us that we're going to have to dig, put this pipe underground. We're not going to be able to dig a trench and lay it. It's going to have to be what's called trenchless technology. That's possible. It's expensive. We're trying to figure all of that out.

There are the issues of securing right-of-way permits. Some might be federal. Some might be local D.C. You see the complexity there.

Just in general there are a large number of local and federal agencies involved that complicate and extend the approval process.

We had a meeting with the Attorney General for the District of Columbia last week to learn more

about that. I don't want to make too much of that, but I'll be very honest, there are a lot of issues that we're going to have to work forward with respect to the pipeline. And so that leads to some degree of implementation uncertainty. And that's something that we have to consider heavily as we think about whether it would enable the Aqueduct to meet its schedule of the very real thing of the Federal Enforcement Agreement.

I think that's all of my slides.

Why don't we do this? Why don't we have some lights in the room? The question and answer session, obviously, is tricky. Two things. One, the last time I understand that people were frustrated because they couldn't hear each other and I understand that.

If you have a question, I would ask that you come up to the microphone.

The next issues is we want everybody who wants a chance to talk to be able to be heard. So some of you may have lengthy statements and that's fine. We would like to hear those. If you have a long series of questions and if there is somebody behind you, I would ask that you ask two of those questions and let the one

behind you talk. If there isn't anyone, we'll just go through the questions.

And one other point. We have a number of slides to help us answer some of the questions. We'll just have to see how these questions go. So there might be some awkward moments as we say, excuse me, let's dig up the three slides that deal with that topic. So we would ask you the bear with us. There might be some pauses that help us communicate this information a little bit better. So that's all I have to say.

[redacted]: Okay. For the record, my name is [redacted] I live on the 6000 block -- Can you hear me?

I live on the 6000 block of Broad Street in Bethesda. So, like a lot of people in this room, particularly the ones from Brookmont, I'm your immediate neighbor. And I'm here representing the civic league tonight.

And I wish I had a good message or, you know, a positive statement to make, but I don't. Shortly, based on the type of response you're getting from your graphic, you're going to hear a lot of complaints about the disposal of residuals.

8-3-EA

I have a threshold issue which precedes that. That's why I sort of jumped up here to speak to you first.

At the heart of each of these proposals is the notion that a building will be constructed at the edge of our -- excuse me, at the edge of our property, at the edge of your property, which is basically a dewatering and thickening facility.

8-4-BA

The building is really quite objectionable in and of itself. While we support Westmoreland Hills and our colleagues in the District of Columbia civic associations fully and we support them in a way that they've laid out that they're attacking the process. As you can hear from the chorus, the process did not work.

It certainly didn't work for the residuals, but it worked less for the plans for this building. It suddenly appeared in your engineering feasibility study at the heart of each of these disposal issues. You can't dispose of residuals until you create them.

8-5-BA, BC, BF, BG

What you're proposing to do is create these residuals in a building that would tower 120 feet over our community. It will provide a visual intrusion,

light, noise, smell. In every possible way, it seems almost as if the design were come upon -- was developed in an effort to push the plant as close as you could to Brookmont.

As you look at the site plan on C-8 in the engineer's feasibility study, the plant is going to be built right up against the fence, the back fence, the west fence, of your property.

There is no attempt at buffering. No attempt at all at masking this monstrosity. In fact, rather to the contrary. What you're planning to do is to cut down -- clear-cut trees, which seems to be in a lead with your monofill project. You want to cut down a stand of white pine trees that were put up in the late seventies and replace it with a narrow road at the back of the plant so that any possible chance there would be -- that the sound, the smell, the sight of the building would be mitigated is lost.

And it's particularly ironic because in the late seventies a few of us, I wasn't among them, went to your predecessor and complained of a series of single-story buildings that were put back there that were providing light pollution into this area. That

management's response at that point was to put in a series of trees that now have grown to 40, 45 feet in height. They would provide some masking for 120-foot building, but not a whole lot. Your building is going to be 120 feet above our intersection at First and Broad.

But to do the plan as it has been laid out by your consultants, you would have to take these trees down. It's ridiculous.

The plans themselves makes no provision for mitigating its sounds. Rather, as a pre-made bay doors open from the base of the plant so trucks can go up and down the sewer plant, so we would have the -- the intrusion of the noise from the plant itself, truck traffic, the visual pollution.

There is nothing in here that was thought out at all. And to say -- the people are here have complained that there was no -- no citizen input into the disposal of the residuals, I'll have to tell you quite candidly that there was no discussion at all of this plant. And it's a little bit absurd.

We'll willing to talk to anyone and we have. And we were good neighbors with the plant when there was opportunity.

I have a formal statement which I would submit for the record. But I know there is a lot of people here who see the residuals issue as red meat and want to get to it immediately.

Let me take a quick look to see if there is anything thing I've missed on our list of complaints.

UNIDENTIFIED SPEAKER: Jim, make it clear where you live.

[redacted]: Actually, where I live is relevant, but it's relevant on a personal basis. This building -- I live on the 6000 block, or the 6,000 block, of Broad Street, 750 feet behind the plant.

8-6-FE

UNIDENTIFIED SPEAKER: And have you ever been invited to a public input session with these people?

[redacted]: No, of course not.

UNIDENTIFIED SPEAKER: Okay. Well, I just checking.

[redacted]: We went to a session in the mid-nineties, I think, at a hotel -- a government office building in Bethesda where there was a general discussion about the NEPA process. No mention of a building, particularly a building of this size and this ugliness, to be quite frank about it, and this intrusive. No

discussion at all.

If somebody is going to plan -- and the Army is telling everyone the discussion here is what we're going to do with the residuals. That's not the discussion. The discussion is how are we going to create the residuals and at what cost to the neighborhood behind you.

And I'll tell you people in our neighborhood are very, very concerned about this and are very, very interested in talking to their elected representatives and making a case that this was ill though out. It actually seems to be designed as a punitive measure to us. It's unbelievable, the design. It's an 80-foot tall building that's 170 feet long and 80 feet wide with no attempt at masking it. As I say, at the risk of repeating myself, there is not any masking. In fact, there is a removal of trees that would have provided a minimum level of site amelioration.

So we're -- we want this issue addressed and we want to talk to whomever. There is a loss of trees and the site itself which is absurd, the height of the building, the sound and the odor.

This is an issue not only for us, but for

everyone in Palisades and a few other places.

The engineers feasibility study doesn't really address this. I mean, there is a sop one way or the other to the issue, but it doesn't really -- it is hardly conclusive and it really doesn't provide any reassurance at all.

So, in conclusion, what I would like to say, we are one hundred percent united with the citizens groups in Westmoreland Hills and D.C. civic associations that are opposing the residual disposal option.

8-8-JA

I think the notion of trying to solve one ecological problem of dumping them out in the Potomac River by creating a more erroneous, objectionable type of environmental degradation, we can't support that at all. I don't think anyone can. I don't think we can.

And let me say finally, that's not the real issue. That's a major issue of burning concern for everyone in this room. But the threshold issue, the seeding question that has to be answered, what about this building that is going to create the noise, the smell, all of the rest of it, it's not addressed and we want to get it addressed. And we want that to be an open session where everyone gets some input, including our elected

representatives. Thank you.

MR. JACOBUS: Let me just very, very quickly respond to some of our points. Thank you very much for making them.

We have -- we are currently considering three alternatives. Two of those alternatives, the monofill disposal alternative and the off-site trucking alternative, do in fact require us to take material, the solids -- this bottle right here is the consistency of the solids that's in the basin -- and get them into a form where they can be transported in a solid, durable form.

So there would be the need for some kind of an industrial facility to be built, essentially a centrifuge or a press building or something, to satisfy the need to get from that form to a solid form to truck or dispose of in the monofill.

Recognizing that adding an industrial process at the Dalecarlia site is something that would obviously be a concern, that's why we put a number of alternatives into consideration, which was taking it in a slightly more condensed, but very much of a liquid form, and looking at an off-site disposal option that did not

involve the trucking, i.e., the pipeline.

So of the three alternatives we are evaluating, we have one that does not consider building a building and two that would, in fact, consider building a building.

Your input tonight here is very useful to us and we would look forward, as we continue with the identification of all of the building criteria, that we talked about, the noise, the visual, the odor, all of those things that are of a concern to you citizens who either live close by or who somehow interact with us, those must be considered as we evaluate what the preferred alternative is.

So we will be doing that and we're doing that right now. You're giving us input so that we will turn that around. So we have --

And let me say one other thing and then I want to get to the next question.

We are not here tonight able to walk away from the permit that EPA has issued or the compliance schedule EPA has issued to us. There is no one here from EPA tonight that I'm aware of.

Is anybody from EPA here? Oh.

Representing this project in some way? Okay.

EPA over the course of the last two years issued a couple draft and then a final permit. And whether any of you individual or collectively think it's a good idea or not, EPA has a regulatory responsibility invested in them under the Clean Water Act has issued a permit determining that the solids will not be sent to the river. That is totally out of our control.

We are here tonight to assess the best way of us proceeding forward given that permit. So I am unable to entertain any discussion here this evening about going backwards and writing a new permit. We are where we are.

So we would like to most the most of this evening to hear your input on the alternatives that we've put on the table and how we can and should evaluate during our EIS process that we're trying to undergo the kind of issues you brought forward here.

[redacted]: Just a brief follow up. Just a very quick follow up, and this won't take but a minute.

The options that have been laid out basically involve moving the material one way or the other. And each of them that the consultants -- I mean,

8-9-EA

your own consultants put out this. The ones that they've underscored require making the residual at Dalecarlia. There is mention of another option that was basically knocked down by the authors of the study.

So, basically, there is a misdirection to suggest that there is that option. There is that option, but it has been knocked down.

MR. CAMPBELL: He's very correct that all of the three alternatives presently being considered as these buildings as a comment element in one way or another.

We do have information that talks about those buildings. I think there's someone else who wants to talk now. But we can certainly go into that. We've got pictures that talk about what -- you've laid it out exactly really as it is.

We also have information to go into the other alternatives, creating the residuals, where could we do that, whether it's feasible or not feasible to do that. And we would be happy to go into that. We might hold that for a little bit later because it involves getting into something, but we are prepared to talk all about that issue and why we came to those conclusions.

I would like to go to the gentleman who has been waiting very patiently.

[redacted]: My name is [redacted]. I'm a 50-year resident of Westmoreland Hills and used to play in your woods illegally.

8-10-BB, CA

One of the things that I think fans the flames of opposition and the frustration which makes it seem like a joke to the neighbors is that we're talking about permanent damages, whether its a residuals building or the monofill for a temporary solution.

And if you say, oh, can I tear down your house because they need to temporarily store some things on your lot and so that is -- you know, you're not talking about a permanent solution. And if you say, oh, no, it is a permanent solution, what you're really saying is the trucking solution and the monofill solution because some days that's -- the excess has got to be taken away.

8-11-FD, IB

So that is a major thing to keep in mind, that this seems like an awful lot of disruption for something that is, I understand, a 20-year fix. It may be more, may be less. But, I mean, a temporary solution.

And I think that should be a major

8-12-EB, GA

criteria in the process.

The other kind of thing that sort of -- and all of us, unfortunately, now can get on the internet and we will look like experts with a little bit of Googling and all. And, apparently, you mention alternative coagulants and all. Apparently, there are places doing this in their water system now and I gather it cuts it a third or two third or something like that, which, of course, obviously would make this much better. Instead of nine truck, it would be three trucks.

It is just a feeling that I guess all of us are saying, it doesn't seem thought through and we weren't there when the process was going on. But the main one I think from that one alternative is if you're going to tear things down for -- I don't want to say major, but it is a temporary kind of thing. It's no more sensible than if you said to one of these people I'm going to tear down your house because we need to store some stuff there for while and we hope for another solution some day. Her house is already going. The roots are gone. The building is always there.

And I think that is -- you have got to keep that in mind. That is a -- should be a gigantic

1 screening issue. But it is not a solution.

8-13-DA, HA, GA

2 One of the joys about having -- however
3 you want to get it to Blue Plains is -- you have barges
4 that can come there and they can load. They can take it
5 off to whatever. And I am sure that someday we will be
6 going, wow, you know this stuff is gold, a farmer,
7 somebody is going to want this and they are going to want
8 to be able to use it. Well, you are not going to be able
9 to use it if it is in a pile in our temporary pile here,
10 because you're going to have to go trucking again.
11 So it makes sense that trucking is going
12 to be the solution no matter what. And there is a lot
13 that doesn't make sense to the average mind trying to see
14 it. And I think the temporary aspect, and it is a dead
15 end aspect too, should be a major disincentive for that
16 -- for that issue.
17 MR. CAMPBELL: If it is fair, I am going
18 to consider most of that a comment. You had some things
19 that are essentially questions. One would be alternative
20 technologies and their applicability here. We can
21 certainly talk about that.
22 Another one is the barge alternative,
23 which is something that we looked at in some detail

because it was suggested to us early one in the process.

[redacted]: Barge to Blue Plains.

MR. CAMPBELL: Yes, right down to Blue Plains. It seemed to be an elegant solution and we looked at the whole issue of navigability on the Potomac River in some length. And we're prepared to talk about both of those.

I guess I'll just suggest that if we have a lot of comments, we should proceed through those before we got into the alternative process. Does that seem to make sense?

[redacted]: Oh, absolutely.

MR. CAMPBELL: Okay. If you want to hang around and, if we haven't gotten to it, we can get into slides and dig into those two issues.

I'll go over here.

[redacted]: My name is [redacted] and I live in the District. I'm moving to Maryland. I have a comment and question.

First, I just want to thank Bob Sloan for making this facility available. Sibley Hospital is such a great neighbor. And I think we're all happy to be here.

The statement is real simple. I'm against

8-14-CA, IA

the monofill. I think that clearing 30 acres to create an 80-foot mound of dirt is just repugnant and I'm against it.

I think the pipeline would be wonderful, but I'm not going to comment on that because I don't know about the feasibility of that. I think everyone would like to see that.

8-15-GA, CA

But I am only going to comment on the other alternative, and that is the trucking. And I would say that compared to the monofill, 9 to 10 trucks a day, even 16 to 20 trucks a day, and seven routes does not strike me as objectionable an alternative as the monofill. And that is all I have to say.

[redacted]: My name is [redacted]. I live in Westmoreland Hills. I have a couple of questions.

8-16-CA

One is how did the monofill become one of the top of the three alternatives when, in fact, it seems to be a mute point given the Spring Valley problem which has to be started in 2008 and your solution has to be finished in 2009? How did that --

MR. CAMPBELL: I'll give a quick answer to that question.

First of all, it is not the top ranked alternative. Unfortunately, it is one of the three and, unfortunately, it is labeled number A, which makes it seem like the top ranked. It is one of the three.

The question is how did it get there in the first place.

[redacted]: When it seems to be a mute point.

MR. CAMPBELL: When it seems to be a mute point right now.

It got there in the first place because we listened to concern about truck traffic. We really wanted to be able to consider alternatives that did not involve continuous trucking from the Dalecarlia treatment plant.

At the screening level of analysis, which is not a detailed level of analysis, we just said what is feasible given all of this criteria, what meets our purpose and need, you know, could we built it, what is legal. We own the land. The Aqueduct owns the land. They could do it. What is institutionally possible. It met those criteria.

Now, when we move into the EIS, as Patty

was showing you, we look at things in greater detail. And so we dug into the issue of implementation in greater detail and said we need to really sit down with the Spring Valley folks and understand what their issues are, what the schedule is, how it might relate to our schedule.

And, in the course of those conversations, we learned that information. So that is how it gets to screening. We learn new information. And then we're sharing that with you as we -- as we see it.

[redacted]: Doesn't that negate the option entirely?

MR. CAMPBELL: Frankly, it is one that we're wrestling with right now. The short answer is we are going to continue that through the draft EIS. At this condition of the project, it will be not be identified as the preferred alternative because of all of the information that we have shown to you right now.

8-17-DA

[redacted]: Okay. Last, I just wanted to say that the metropolitan community has put in a wonderful subway system. It's a hundred miles of subway track underneath the ground. I think we can probably figure out at least ten miles of a pipe to get sludge

1 away to Blue Plains.

2 [redacted]: My name is [redacted]

3 [redacted]. I live in Washington, D.C., in AU Park and I grew

4 up in the neighborhood of Spring Valley.

5 I am an officer of the Army right now and

6 I have been working with the Army Corps of Engineers, the

7 EPA, and D.C. Health for about a year as a citizen, pro

8 bono, to try to work everybody through the Spring Valley

9 situation.

10 But I am going to bring something up right

11 now that is two-prong. The first is I want to ask

12 everybody here in the audience a question because the

13 gentleman, the facilitator, here is doing his job

14 tonight, a tough job, asked what -- he stated -- let me

15 restate that.

8-18-CA

16 He said he disclosed to everybody what was

17 involved with one of the alternatives. How many people

18 here in this audience did not know that the monofill

19 alternative involved potentially digging up buried

20 ordnance, chemical warfare ordnance, over in Dalecarlia?

21 How many did not know that?

22 Now, did you just hear -- it almost -- it

23 almost slid by, but it is very important, because I'm

lecturing the to Corps and I am going to ask them a specific question that may be answered ultimately by people not up here or by Corps members elsewhere in this room.

The Army Corps runs both the Aqueduct and it runs the cleanup process. But what you need to remember is he just said that they didn't know what was involved with their own alternative; i.e., that they might have to dispose of ordinance.

8-19-CA

So the question I ask back to the Corps is you don't really know what you're going to have to go dig, you may have to go dig something that may be weapons of mass destruction, maybe it is just straight up ordnance, along the reservoir, near our drinking water. So are you going to let this monofill drive or hasten or speed up the clean up which will affect the citizens of Spring Valley? That is my question.

You're showing confusion and you are saying that you may not want to hasten -- you're not going to postpone the date -- and you see even how I get this mixed up -- you are going to postpone -- you are not going to postpone the date, but you are going to maybe have to hasten the clean up in Spring Valley. Where are

you going to get the money for that?

MR. CAMPBELL: This wasn't the purpose to put the Spring Valley project folks on the spot, so to speak. However, as an employee of the Corps of Engineers, if there sort of a policy statement about the relation of these two branches of the Corps, I would like Tom to address that.

MR. JACOBUS: Yeah. Let me -- it is sort of a paradox. On the one hand, we say, yes, we know the Spring Valley was a former test site, so we say we're going to put a monofill there; yet, we don't think about the process as the beginning.

Clearly, we do have a close working relationship with other elements involved in the Corps of Engineers. We need to know what they knew that would affect us. We need to know they -- what we knew that would affect them.

As [redacted] says here, it is not our responsibility as the Washington Aqueduct, as the supplier of water to our service area and as a neighbor of yours, we are not trying to influence the federal expenditure of funds on the Spring Valley project, either to accelerate or to slow it down. We realize -- of

course, I believe it is true. I don't go to these meetings. But I believe it is true that in this pile of money called FDS, Formerly a Defense Site appropriation, a significant amount of that money has been drafted for the Spring Valley clean up of that site.

The emphasis now is on remediation of arsenic contaminated soils at the residences in the areas directly affect the people who are currently living there. It is not our intention in any way to suggest that the Army take the propriety away from those and add that money to a project here that would clear the area. We're not asking for additional money.

But what we're doing is we were looking for an alterative to trucking to see if we can find, other than the pipeline, because it has its own issues, an alternative to trucking that we can handle locally.

The monofill would meet that in a -- in an engineering sense. It may not pass muster through the EIS from a human resource -- or a human design sense. And we understand that. We want some input on that.

But we are not trying to affect the Spring Valley project. We're not ignorant of it. But we have to tell you, and we use the word reveal or whatever word

that we used, it's not a secret word, what we are trying to say is that even though it is a feasible option, we cannot begin that option until we get this clearance. And it is not clear that we can get that clearance from other federal sources until 2008; therefore, we can't responsibly go forward with that.

But I think it is important that we do complete the analysis of all of those environmental factors just in case there were a change in federal priorities so that we can clearly understand what the effects of that monofill would be environmentally on the community even though its current time schedule can't be less because of the ordnance.

So, as Jed said here, that cannot be the preferred alternative at the present time.

[redacted]: I'm [redacted]. I live in Westmoreland Hills. The Council on Environmental Quality guidelines, which I received a NEPA process, provides that a lead agency must analyze reasonable alternatives even if there is a court order or a legislative demand to act.

Why were so many alternatives prematurely dismissed because they did not meet the arbitrary

8-20-FB, MA

1 deadlines set forth in the Federal Facilities Compliance
2 << Agreement schedule? And, secondly, why are you unwilling
3 to try to renegotiate these deadlines with the EPA since these
4 deadlines are not imposed by a requirement of the law?
5 MR. CAMPBELL: I'll answer -- I'll answer
6 part of that question and then I'll let Tom answer that.
7 And, Tom, we had a few slides on these if
8 you would like to use them. If you want to pull up the
9 EPA slide, Jennifer.
10 You are correct in that alternatives have
11 to be -- or are required to be reasonable and feasible.
12 That means in a NEPA analysis the lead agency is not
13 required to look at any and all ideas, but those that are
14 considered to be reasonable and feasible.
15 One of the threshold criteria for
16 reasonable and feasible is the ability to meet the
17 Federal Facilities Compliance Act schedule. That is,
18 from my understanding, a federal enforcement at. It is
19 law. So that schedule is law under the Clean Water Act.
20 So it has -- the schedule was negotiated with the
21 Aqueduct, but that is taken very serious.
22 So then the question is can that
23 change or how did we get into that in the first place.

And I will ask Tom to talk about that using these slides so that they can flush that out a little bit. And why, under the Clean Water Act, that we're there in the first place.

Right now that is a driver, the Federal Facilities Compliance Act, is the driving force in answering -- in bringing the project.

MR. JACOBUS: I think this is maybe a chicken and egg thing. Let's assume that we were having this meeting to tell you that we, as the local water utility, thought as an operational advantage we wanted to recover the solids continuously and not periodically discharge them into the river. Let's assume that we didn't have a permit issue, that we were at the beginning of the permit that allowed us to go to the river and that we came up with this -- with this alternative because we thought it was a good idea, I think that is a different situation from where we are now.

We are under the permit and so -- and we don't have the option. I think that in the end you and I, whether we agree or disagree, or whether we just disagree, I think we are looking at this very differently.

I am not, in my capacity, attempting to act in any way frivolously or capriciously. I have personally signed this agreement on behalf of the Washington Aqueduct and the Corps of Engineers to be in compliance.

Since we had the meeting on the 7th and since we've had other communications with elected representatives and their staffs and other people, we have consulted with the EPA. And it is very clear to me that I am required to go forward as the operator, as the person who is initiating this action, to meet the project purpose and need. And the project purpose and needs is caused solely because there exists the Clean Water Act and they -- the EPA did, in fact, publicly announce and issue a permit that was not based on the quality of the water, the alum solvents to the river. We could demonstrate scientifically to our satisfaction and to many other's satisfaction, not everyone, but many others, that the solids did not have an adverse biological effect on the river; but, in fact, the other prong of the Clean Water Act requirement is simply that if there are technologies available to recover the solids, we would be required to do it.

And that was the basis for EPA's permit. It went to public comment. There were several meetings and several drafts and fact sheets. We are where we are on that.

And so I respect your questions. I understand your question. I have investigated your question to make sure I know where we are so that we can have an ongoing discussion on the water issue. But compliance with the discharge limitations of the permit, i.e., the amount of solids that are allowed to go to the river in whatever concentration is essentially none. And the timing is what is driving us to this decision.

And so our interpretation and our advice from our counsel and from EPA management is that we must proceed with this project. If you choose to oppose that in a way that caused EPA to change their mind, then we would be in a different situation.

So the -- we are trying to come up wit the best way to recover these solids and dispose of them. We know this is a difficult process for all of our neighbors because of where we are in such an urban environment.

So I'm probably rambling, so I had better stop.

MR. CAMPBELL: EPA has a fact sheet that they wrote on this permit describing why the permit exists, what is in it, what kind of input they had received. They had a public input involvement process in the permit.

I think we have got about 50 copies of that EPA fact sheet for those who are interested in it. Also, while that was up there, it is on their website. You can download it and we can give you that very long website address if you want to talk to them as well.

I think we will switch to the other side.

8-21-FE

[redacted]: I'm [redacted] from Westmoreland Hills. I would like to know a little more about the January meeting for the criteria. Certainly, I didn't receive any notification of it and I imagine from the response here that very few people did.

I would like to know what your -- how the meeting was advertised, what kind of an open meeting this was.

8-22-KC

And, secondly, we have a statement here that talks about residuals and everybody has used that word. I would like you to define what these residuals are so we can understand how toxic they might be or

1 whatever.

2 *Jed Campbell* : I'm going to spread the wealth

3 a little bit on these questions here. Glenn, I'm going

4 to come to you on the issue of residuals in a minute and

5 when we might go to you, Ed, on the issue of residual

6 toxicity, what do we know and what does that mean.

7 The first question is -- wait a minute,

8 I'm given these guys a warning.

9 The first question is what about the

10 scoping meeting, how come I didn't know about it, where

11 was it held, when was it held, all of those kinds of

12 questions.

8-23-NB, FE

13 UNIDENTIFIED SPEAKER: How many people

14 here received notice of the January meeting? If you

15 received notice raise your hand and let them know.

16 MR. CAMPBELL: The scoping meeting was

17 advertise in the Washington Post and in the Northwest

18 Journal. The scoping meeting was held in January at a

19 school not far from here.

20 What was the name?

21 MR. JACOBUS: Saint Patrick's Episcopal.

22 MR. CAMPBELL: Saint Patrick's Episcopal

23 Church. It was an open house format for three hours,

similar, obviously, to the one that we had on September 7th where we had more people than was appropriate for that format.

I can't remember how many people came, but not many. We had about 80 letters, don't hold me to that number, that went out to the existing Aqueduct mailing list with respect to -- mostly to other agencies.

At that time, we did not have alternatives for people to respond to. We did not know we had a monofill in this particular area. In fact, we were responsible to really all of the service territory for the Washington Aqueduct to make available to that meeting and that is why it was advertised broadly in those papers.

UNIDENTIFIED SPEAKER: How many days was it advertised?

UNIDENTIFIED SPEAKER: Yeah.

MR. CAMPBELL: About two weeks, I believe.

UNIDENTIFIED SPEAKER: How many people came to the meeting?

MR. CAMPBELL: I think about 20, I think. It was on a cold January night.

I would like to get to the next set of

questions, if I could, and that is --

8-24-NB, FE

UNIDENTIFIED SPEAKER: Could you clarify for the record, would you ask people to raise their hands if they did not get notice?

MR. CAMPBELL: We'll verbally put in the record most people raised their hands.

(Multiple members of the audience speaking at the same time.)

UNIDENTIFIED SPEAKER: Jed, explain the narrowing of the scope and the identifying, the ability to identify.

UNIDENTIFIED SPEAKER: -- identify people in the community like a zoning or planning board that requires anybody that has a project to go to the adjacent neighborhood and actively get the names of all people, say, within 1,000 feet; why didn't you do that? Or maybe a mile for this particular project.

MR. CAMPBELL: There is a narrowing associated with this. First of all, it's not a zoning process. It's a NEPA process.

8-25-NB, FE

UNIDENTIFIED SPEAKER: Well, I'm talking about you should adopt that process of notifying people.

MR. CAMPBELL: Well, I don't -- In

fairness to everybody -- in fairness to everybody, I'm not going to respond to questions that come shouted from the audience. I'm going to stick to our format.

To answer your question, the NEPA process narrows in scope. If we had known that we had a monofill alternative, like we did when we mailed out 1,000 letters to the people living all around here, we would have done that.

At that point, we just had a project. We did not even have alternatives on the table. We had a project. We had a screening process, which I know is of significant concern.

UNIDENTIFIED SPEAKER: Why don't you let the people talk instead of you talking to the microphone.

UNIDENTIFIED SPEAKER: Yeah.

UNIDENTIFIED SPEAKER: How many people are listening?

UNIDENTIFIED SPEAKER: It's a question and answer. That means he has got to answer the question you asked.

UNIDENTIFIED SPEAKER: He can answer the question. He can talk all night. I'm going to stay here and I'm going to ask my question.

UNIDENTIFIED SPEAKER: Well, that's fine --

MR. CAMPBELL: I am taking a shot at that answer. I'll go to --

MR. HARRIS: I would like an answer to my question.

UNIDENTIFIED SPEAKER: Yeah, exactly, answer his question.

MR. CAMPBELL: Thank you. I forgot.

Let's move on to the solids questions. And just refresh my memory. There were two. One was solids toxicity and I wanted you to address that. And there was another solids question.

8-26-KC

UNIDENTIFIED SPEAKER: Just the definition.

MR. CAMPBELL: Oh, what are solids. Glenn, do you want to talk a little bit about that?

MR. PALEN: We talked in the feasibility study about two types of residuals and that is because they separate out of the flow stream, the river, water source, at two different locations.

One type of residual is called Forebay residuals. Those are the sand and silt particles, if you

will, that come into the raw water conduit and literally settle by gravity in what is called the Forebay. This is the front portion of the Dalecarlia Reservoir.

The second -- and those are literally river dirt, if you will. No chemicals have been added to those at all. Those residuals have been periodically removed from the reservoir every five, seven, or ten year or whatever by dredging for a long period time. And those -- many of these alternatives, we presented a feasibility study and talk about handling those in a similar fashion to the way they've been handled in the past.

The second type of residuals we what we call water treatment residuals. About half of the river silt settles out by gravity in the Forebay. The other half, roughly, is still in suspension in the coagulant material and it goes into the water treatment facilities. There we add a coagulant. In this case it's is aluminum sulphate or alum. That enhances the coalescence of the material into bigger particles which then settles in the sed basins and are removed from the process, the treatment process there.

The water treatment residuals are also

approximately half river silt and half chemical solids resulting from the addition of this alum, or aluminum sulphate.

That hopefully answers your first question.

8-26-KC

UNIDENTIFIED SPEAKER: Toxicity.

MR. CAMPBELL: There was another part of the question which I believe was are these toxic or how toxic are they. I'll just ask Ed to address that. Do you want to use the slides for that or do you want to just talk about?

MR. FLEISCHER: I think I'll just talk about it.

Essentially, as Glenn mentioned, the coagulant that is added is aluminum sulphate. Once that reacts with the alkalinity of the water and other particles, it essentially becomes aluminum hydroxide or aluminum phosphate. That is really a soil-like material that is definitely viewed as nontoxic.

As part of this analysis of the EIS, we are going to be taking samples of the residuals and sending them out for analysis. What we will be doing is this procedure known as the toxicity character --

MR. CAMPBELL: Leaching.

MR. FLEISCHER: -- leaching procedure. And that is a procedure that is used for -- it is mandated by RTRA for anything that would be put in a landfill or a monofill, for example. And it is used to determine -- to define by federal standards whether something is toxic.

So what we do, we take the residuals, we run it through this process. Essentially, it simulates what would happen within a monofill or if those materials were applied to the land. And you collect the leachate and we analyze that. And what that does is give you an indication of how much of the material in the actual residuals would leach out. Okay.

So they analyze it for metals, heavy metals, lead, mercury, those types of things, and volatiles, semi-volatiles, pesticides.

These tests are done regularly. For example, for other water treatment plants in this area, the residuals are applied to agricultural lands. And, for example, in the State of Maryland, if you want to apply the residuals to agricultural lands, you do the test, it comes back negative and then you get a permit to

go ahead and apply. And that is what is being done, for example, at the Potomac plant down River Road.

So we're going to do the TCLP procedure for residuals. We're also going to be testing the residuals by themselves without doing the procedure for heavy metals. That's what we are going to do as part of the EIS process.

So, to answer his question generally, I am not aware of any situation where water treatment residuals have come up as being toxic.

MR. CAMPBELL: I think we're at this side of the room now.

8-27-FE, CA

[redacted]: I'm [redacted] of Spring Valley West. And one little comment, my kids go to Saint Patrick's and I still didn't even hear about that meeting.

And, as a member of Spring Valley, I am really disturbed about everything that is happening. I mean, the fact that the monofill would even be considered with the Corps having stuff, you know, buried under the ground, it is just unbelievable to me that there isn't communication within the Corps.

Maybe if there had been more publicity on

your part that, you know, hey, this public meeting is happening, maybe somebody from the other arm of the Corps would come to the meeting. At last, you would have found this out.

Because right now you have three options and if you are saying that the monofill isn't the -- isn't even really an option, why is it there? I mean, why isn't another option there instead.

I am familiar enough with the process to know that, okay, you can't just sort of throw it out, but it sort of means that you all didn't do your homework, that -- you know, this Spring Valley munitions has been in the news for a long period of time. I mean the fact that it is in Spring Valley, Dalecarlia is in Spring Valley, you know why was this even considered and why wasn't this -- you are missing an alternative that maybe would have been a more viable option than any of the ones you have. It just seems like sort of a -- I'm in a quandary about it.

MR. JACOBUS: Thank you. I don't think that by considering the monofill that took up the space of another alternative. As you said, in all -- all alternatives that passed through our screening criteria

were brought forward. We didn't have four just because we could only have four, one being a no action alternative. So would could have had four, five, or six.

So that isn't an issue. The fact that Spring Valley -- and we, of course, do know what is going on in Spring Valley. As I said earlier, and perhaps not clearly enough, that we wanted to try to find an on-site disposal option, wanted to further investigate what that potential would be at the Dalecarlia site. And, upon complete -- more complete review, looking at time schedules, what were the issues, and what was required, it now looks at this part of the process, we've been at this for six or seven months now, that that can be the preferred alternative. But we at least gave it a try to see whether or not it would bear out under the scrutiny that it was given to see if it could be an alternative to trucking.

So it was not an attempt to frighten the neighborhood or to demonstrate a lack of a general understanding. It was an attempt on our part to try to lay out some alternatives that met a full range of what we knew were concerns.

And, if we can't go forward with the

monofill alternative, we will have to continue study the other alternatives because, as I said to Deb Graham's question, we must find a workable substitute to returning the material to the river.

MR. CAMPBELL: We're going to switch sides now. You have been waiting there patiently.

8-28-DA

UNIDENTIFIED SPEAKER: I don't know how to talk into a microphone. I live in Palisades along the right-of-way. And I know that everybody thinks that like the whatever -- the pipeline thing is like -- seems really great.

So I am just wondering where exactly like is this going to be built, like what neighborhood this is going to impact on, because like I physically -- my house is in front of the right-of-way, which I assume would be the right-of-way that the pipe is going to be built along.

8-29-DA, CA

And like I know that you all think that this monofill is going to suck for you, but that pipe is going to suck for me. I am just wondering what the physical impact on the neighborhood is going to be with this like -- what neighborhood is it going to be built through if you know that.

MR. CAMPBELL: I am going to ask Glenn to answer that question to the best we know of right now. Also, Patty indicated that selection is a balancing act and there is no alternative that doesn't impact somebody, so thank you for illustrating that.

MR. PALEN: The short answer to your question probably is we don't know the detail of where the pipeline will go at this particular time. What we have been doing is talking to, as someone said earlier, all of the park agencies about the issues along the pipeline route. We now have to go through the process of looking at details of where the pipe could go, what the impacts would be. That ties together with how it would be constructed in those individual reaches or lengths.

The feedback that we've gotten from the Park Service, I think some places, and this might be your instance, we would be installing using some type of trenchless technology, a boring type of approach.

So in your immediate front yard there may or may not be an impact with the construction of the pipeline.

I guess the other thing I would say about this pipeline, sort of an aside comment, the pipeline

that is there now is a gravity sewer. This would be a force main. It would be a pumped fluid and the pipe would always be full of water or material. Not having a headspace it would not in general -- although I'm not going to promise that there will be absolutely no odor with this. In general, the residuals should produce dramatically less odor, and essentially none, compared to wastewater and raw sewage. There are some people are very sensitive to wastewater odors. That might be an issue that is near your house. That is what is in this pipe right now that is going by your house.

So the pipe is a different type of pipe. It's a forced main. It is carrying a different type of material. It is also a smaller pipe. The exact alignment of where we go relative to your existing pipe is not known. It would be close, however. I would guess within 10 to 20 feet of the alignment.

UNIDENTIFIED SPEAKER: But it would probably go through that right-of-way.

MR. PALEN: Most likely that would be something that would be seriously considered, yes.

MR. CAMPBELL: He has been waiting.

[redacted]: My name is [redacted] I live

8-30-FE

in Brookmont on Broad Street, right opposite the proposed facilities. For the record, I was never informed by anybody in January, February, March, April, May, June, July, and August is when I found out that you were proceeding with this project.

My first thing I would like to ask is the text of the ad that was published in the newspaper, could you please post that text on your website so that I could read it?

MR. CAMPBELL: Certainly.

8-31-FE

[redacted]: Okay. And the second thing is would you post also the attendance? I'm sure you took attendance at that meeting. I would like you to post the public attendance, not only who of you were present at that meeting, but who of use was at that meeting and post that on your website, please.

Okay. That shouldn't be difficult. That's part of your record keeping. As professionals, you keep records. Correct?

MR. CAMPBELL: We have records of the number of people who attended.

[redacted]: You didn't keep track of the public people? You didn't have a sign-in?

MR. CAMPBELL: There absolutely was. And I don't know -- I do not think that we will post that because I'm not sure that is a matter of public records. We would have to review that.

[redacted]: Why would it not be?

MR. CAMPBELL: Someone's personal choice as to whether they wanted to come to a meeting or not --

[redacted]: No. No, no. A game face. Okay. You said no. The answer is, no, they will not tell us who was at the meeting. Ok.

I'm an architect --

MS. HAMBEY: We don't know.

MR. JACOBUS: Sir, we didn't say no.

[redacted]: We will take that under advisement. Thank you for your question. We will publish for sure the --

[redacted]: The text of the --

MR. JACOBUS: The text of the thing.

[redacted]: Very good.

MR. JACOBUS: If I can get your name afterwards, I'll communicate directly with you on --

8-32-NC

[redacted]: I would like to be communicated with as a group. In other words, this is a

group meeting. I don't want to be talked to personally by you.

MR. JACOBUS: Thank you.

[redacted]: I would like to have you address us as a group.

MR. JACOBUS: And I will make a -- we will make a public announcement as to how we will handle the answer to your question.

[redacted]: No, that's fine. And that is a good answer because that basically makes you obligated to respond here. Thank you.

Now, the question -- I guess it is a statement first, a question second.

I'm an architect and when I have a client who has a project that is not a matter of right project, in other words one that would engender opposition from its neighbors due to the nature of the project, I am obligated to notify the adjacent property owners in writing and invite them to a public hearing. It is not an ad I put in the newspaper. I actually have to go down to the courthouse and I have to research who owns the property and then I have to notify them. And I have to provide proof that I've done that.

8-33-NC

In absence of either the proof to do it or the fact of doing it could lead to the disallowing of my project being heard on the public forum. In other words, I wouldn't be allowed to go forward.

Are you exempt from that kind of rigor? And I address this to HUK, or whom ever your professionals are. Who is your architect or design firm here.

MR. CAMPBELL: The name is CH2M Hill.

[redacted]: Okay. Are you exempt from that kind of rigor?

MR. CAMPBELL: We have a separate kind of rigor that is laid out in the National Environmental Policy Act that requires a public scoping process. It requires public comment on a draft EIS. That is all that it requires. And all of these meetings, and we're going to be having more meetings, are in addition to that.

MR. JACOBUS: You know, I don't want to publicly make an incorrect statement. I don't know. Let me tell you what I do know we're responsible for. Is when we come to the point of designing a facility that would be positioned on our property, wherever it would be, there are two agencies who we consult with which are

a matter of public record. One is the National Capital Planning Commission and the other is the Commission of Fine Arts.

So we must receive a hearing either in front of the entire board or the executive director, as that would probably be the best --

[redacted]: (Inaudible.)

MR. JACOBUS: So that process is very much a part of our requirement whenever we have a structural undertaking.

[redacted]: But notification of the adjacent property owners precludes all that.

MR. JACOBUS: I don't believe we have that requirement, but I believe in the spirit of what we were trying to do, we would try to let those adjacent to what we are going to do, especially if we were to construct a dewatering facility in the back, we certainly --

I think there was an error in understanding here. I don't know exactly what the gentleman was looking at, but the ideal would be to mass the building and pull it as close and tight into our facility as possible, not push it out the other way. So maybe there could have been an error on the drawing. We

need to look at that.

But we would definitely want to look at residuals as they would be perceived by others because we recognize that while we have a duty to provide safe drinking water, we also are part of the neighborhood and part of the community. And, if we put up a structure that is going to affect you in a visual way and perhaps noise, perhaps visually through lighting, then we would want to come to a balance between our requirements of securing operational efficiency and your ability to carry on your life in an undestructive sort of a way.

And so we will definitely make every attempt, both within the letter of whatever regulations that apply to us, plus going beyond that to come into a level of understanding with those who live adjacent to us on what we're doing because we think that is the right thing to do.

[redacted]: I appreciate that. I thought that. I only can suggest that you actually do it. In other words, that there actually be the dialogue with us, because the opposition that you are sensing here -- and I hope you're sensing it -- is because the ball has been dropped by your professionals, by your staff. Whoever

1 advised you that this was the way to develop this
2 project, obviously has an alternative -- or an ulterior
3 motive or they are incompetent. And I don't know what it
4 is.

8-34-GA, GE

5 The final thing I would like to ask is the
6 truck estimates in terms of the number of vehicles that
7 go in and out, does that include the coagulants and all
8 of the other materials necessary to create the residue or
9 is that just the trucking for the removal of the residue?
10 MR. CAMPBELL: That's is coagulants also.
11 [redacted]: My question --
12 MR. JACOBUS: Let me just tell you what I
13 think the answer to your question is. There have been no
14 -- that is the additional trucking that would be required
15 to remove the solids. The coagulant that comes into the
16 process now and goes into the basin, there will be a
17 little bit of additional coagulants to coagulate the
18 solids from this form to the other which might add a
19 small portion to the alum we already receive on-site, a
20 small portion of the lime. Those lines that show the
21 trucking away of the disposal of solids.

8-34-GE

22 [redacted]: And what about the balance of
23 the industrial gases and the balance of the industrial

chemicals that we take delivery of right now, will that increase or is that going to remain the same?

MR. JACOBUS: That will remain constant and the only addition would be a little bit more lime and a little bit more of some kind of coagulant to get them to solid and get them ready for whatever kind of process that we're going -- that, comparatively speaking to the volume of the solids having to be taken away, would be very, very small.

8-35-IB

[redacted]: So the overall truck traffic as represented by your traffic studies presented in your public documents represents the total number of vehicles that this would create over the next 20 years? That's a fact?

MR. JACOBUS: Well, our water production levels are fairly constant. As the District has more citizens moving in, we have to produce more water for the increasing demand, that demand is rising pretty slowly, so we don't expect to produce many more residuals three years from now than we do now. But we are putting a little bit of factor in there for increased production so that the 20 trucks or so -- the 10 to 20 trucks, little trucks, that is really based on what we would haul out in

the way of residuals.

In that slide, we have not included any additional trucks coming in. We can certainly -- we will have that. That is very important. I appreciate you bringing it up. It will be small, but we will certainly account for additional chemicals having to come in to create the solids.

8-36-KA, KC

[redacted]: And, as part of that, you will also describe the kinds of chemicals that are coming in?

MR. JACOBUS: Oh, of course, absolutely.

[redacted]: Okay. Thank you.

[redacted]: My name is [redacted] I represent the Spring Hill Civic Association in Bethesda. The gentleman ahead of me asked some of the questions I have about trucking, because our neighborhood borders on at least one, if not more, routes that you will be taking to get rid of these residuals.

8-37-GE, GA

And my concern was that your slide shows right now a current need of nine trucks. Does that mean nine trucks coming in and nine trucks going out?

MS. HAMBEY: Yes.

[redacted]: Or are we just talking nine trucks total?

MS. HAMBEY: Nine round trips.

MR. JACOBUS: Tine round trip trips.

[redacted]: Nine round trips.

8-38-GA, GC, IB

Plus, I think it is very interesting that the slides show just up to 20 years. Does it stop after 20 years or is this a long-term -- having a long-term effect on my neighborhood, because we have increased noise pollution, increased air pollution. And I think our community will be concerned about what kind of compensation do we get for having to suffer with this increased noise and air pollution.

MR. JACOBUS: As the water production goes up -- the 20 years -- you said in 20 years, do you think there will be more water being produced to have more solids. But let's be perfectly clear, that once we start collecting the solids we will always collect the solids, so there will always be the addition trucks in perpetuity as long as the water treatment plant continues to operate, the solids will have to be removed. If the decision is remove them by truck, every day, five days a week --

[redacted]: Starting at what time of the morning and ending at what time?

MR. JACOBUS: Oh, that is completely undetermined. One of the things we will do in our analysis is to evaluate the routes through D.C. and other jurisdictions. Most likely that trucking will be during the day. Obviously, we would look at -- if we get to that one of the factors to look at is how will that trucking be as gentle as possible on rush hour and other times. We had a great experience with this a few years ago when we did a major dredging of the Dalecarlia Reservoir, just the solids. We put out literally thousands of trucks over a couple-year period and we worked very closely with the neighbors on routing and time and cleanliness and quality of the trucks. And all of that will be considered if the trucking option is eventually accepted.

8-39-GA, NC

[redacted]: So you will contact all of the neighborhoods that would be affected if the trucking option is the one considered?

MR. JACOBUS: Well, I don't -- I don't know if that would -- because these routes, how far out. We certainly what to maintain a dialogue with the immediate area in what we would service between here and the beltway on the Maryland side along these routes and

we would be very happy to communicate with all of the neighborhood associations along all of those routes to keep them apprised of what we are going to do.

Once the solids get to the beltway, then I don't think we would necessarily go beyond that.

[redacted]: I just want the neighborhood safe.

MR. CAMPBELL: Glenn, do you want add anything to the trucking issue and the 20 year time?

MR. PALEN: I think the only thing I can just tell you -- The only comment I'll add, which is a brief one. The 20 years is a planning period that we have used for the draft EIS to examine all of the alternatives. It is a fairly common planning period for any type of project. It is certainly not meant to imply that something changes after 20 years. It is just the period of time we have chosen to examine.

MR. CAMPBELL: Switch to the other side of the room, sir.

[redacted]: My name is [redacted] and I live in the Westmoreland Hills area. I just want to clarify and make sure it is clarified, I'll attempt to, and then ask the question about the critical meeting

in January 2004 which you advertised, because I'm not sure the record was accurately made.

I would like to ask everyone here, how many of you actually received notice to come to a meeting in January of this year, at this scoping session? If you received notice, raise your hand.

How many of you did not receive notice of that meeting?

8-40-NC

You said most people did. It is a fair characterization, I think, that no one in this audience received notice of that meeting.

UNIDENTIFIED SPEAKER: I don't recall if I did or didn't.

[redacted]: There is one person who doesn't recall.

MR. JACOBUS: I will say that the political representatives offices in this room all received notice of the meeting as part of our duty and our desire to communicate with the public officials at the very beginning of the process. But you're correct, I am sure that on an individual level a letter was not sent to every individual in this room.

MR. AARONSON: No, that is not what the

record is, sir, because no one said they got the record when I asked to raise your hand if you got notice. I didn't see anybody raising their hand.

Would you please raise your hand again if you actually received notice of this January 2004 meeting? Please raise your hand.

I know one person can't recall. If you actually received notice.

Now, sir, I don't see any hands up.

[redacted]: His point is there are people in politics, political representatives or people who work for representatives in this room who are not raising their hand. But to be fair and make sure his question is put down correctly.

MR. JACOBUS: We understand his question. Go ahead.

8-40-NC, FE

[redacted]: Now, my other question. How many persons in this room actually attended that meeting in January 2004? One, two.

And I believe your website shows 14 or 15 people attended. You just said you thought it was 20. I know that is a minor difference, but just in terms of making the record clear.

But then my follow up question is, you say you advertised. Do you feel that was effective notice given the turn out and the importance of that meeting?

MR. CAMPBELL: I think for the stage in the project it was an appropriate notice. Whether it was able to attract enough people because the project was interesting at that time, clearly that wasn't the case.

[redacted]: But would you say it was effective notice?

MR. CAMPBELL: I will say it was appropriate notice.

8-40-NC

[redacted]: So you won't answer whether you think it was effective.

MR. JACOBUS: I'll answer, sir. I would say it was effective, because look at what we're doing here tonight, we're continuing as we -- as we narrowed the alternatives, we have broadened the interest. And so we went to that meeting --

We went to that meeting with no -- with no set of predetermined alternatives. We were looking to see -- we wanted to make a public notification. Which we have done this process before, in 1976 and in 1994. We had a very extensive collaboration over the -- some of

the trucking options. We wanted to get away from just pure trucking. We wanted to start the process over.

As we -- we received a couple of ideas at that meeting and that generated a total of 26 and then we starting making some of the -- making it more concrete.

The first meeting was very embryonic. It was just, okay, we're here, we've got solids to get rid of and here is our process, we want the people to understand this. It is not surprising to us that we didn't get a huge turn out to help us, direct us, or solve the problem at that point.

And so the point that we're here tonight and we are focusing on some specific alternatives, getting a lot of specific input on things that are feasible, I think is quite effective and appropriate and it is very helpful to us and the people who have to be responsible for this project.

8-40-NC, NB

[redacted]: But in terms of effectiveness and appropriateness -- in terms of the NEPA process that you showed us these slides again for, wasn't the January 2004 meeting the critical and perhaps only formal meeting at which citizens could attend where you identified the 26 and then narrowed it down to 3? So,

when you narrowed it down to three, all of these meetings right now, it's too late because you have narrowed it down to those three. So wasn't the critical NEPA meeting that January 24th meeting in terms of identifying the number of options, the options that were left out, and then in terms of narrowing it down to three options?

MR. JACOBUS: That's not what we did. The January meeting was a critical meeting because it was the first official meeting -- required meeting of the NEPA process for an undertaking such as we were about to do, but there were no alternatives at that meeting. We were just looking for ideas. And, from the couple of ideas that we got and we put our ideas together and then screening them -- because the screening criteria really guide us to meet the operational needs of the treatment plant.

And the state we're in now where we are looking through all of the EIS objectives to determine if these alternatives which are feasible to meet the projects purposes and needs, how do they affect the public. And that is why tonight is so valuable to us. If you think we have missed an alternative, we are quite open to the idea, I don't know if you were here at the

very beginning, sir, but we said we will continue to receive alternatives to be studied in the process to be added to the EIS up through the 15th of November.

So I think we certainly caused a lot of people concern and interest. And I think that I'm unhappy about the concern, but I'm very gratified about the interest. And we look forward to continuing to work along here.

8-40-NA, NB

[redacted]: So you're giving a month to six weeks to suggest these alternatives. Would you be willing to reopen the process and get this wonderful input that you're so happy to have and find out if there is any in addition to the 26, if there is other alternatives that should be there, to discuss your screening criteria that you used to narrow it down to 3 and to see if there is any other formal alternative that should be part of the formal impact statement that is already largely done because you said you're going to post it by the end of October or early November. Are you willing to restate the NEPA process at which these alternatives are reviewed and the screening process --

MR. CAMPBELL: Let's just take one answer to this and respect everybody else and the woman who has

been standing there very graciously that has to be her turn.

I will let you answer this question.

MR. JACOBUS: The answer is, no, we're not going to reopen the process. The original scoping process allowed and offered the public a 30-day period to give their comments as we went in. We are now giving you more than that right now and so I think that if there are good ideas, let's get on with it and hear them so we can do the right thing by the community.

[redacted]: I'm [redacted]. I live in American University Park and I work on the street by the center, a medical building.

8-41-KC, KA

And my question is regarding safety. I am very concerned about the safety. I'm very happy to have the people discuss other aspects of it, the building, trucking, et cetera. But mine is very safety. I heard that aluminum sulphate is not toxic. I'm a little bit concerned because I know that it is toxic. It is not highly toxic, but it is toxic. Of course, the concentrations are important. And this building, whatever you are going to do, the pipeline, and trucking, et cetera, is going to have a lot of concentration of

aluminum sulphate plus other such substance, like the minerals.

In the kind of climate of a disaster, the last few years when we had a major one national wise and local wise and kind of anticipated possible natural or manmade disaster, what is going to happen when high concentration of those substances get -- either because pipeline gets broken, either because trucking gets in a car accident on a local road or in highway or because of something like a bomb onto this other facility, that is going to be a disaster.

MR. CAMPBELL: I'll start the answer to that question. I may not be able to complete it. I'm looking at you. Think about that for a moment.

The whole issue of the toxicity of the coagulants. And rather than look at existing studies or do the studies ourselves to understand both the acute toxicity and it's chronic toxicity, those are two different things and what would the effect be of a disaster or a truck spill or a pipeline spill or something like that, and if there was a pathway to exposure, people who have contact with or ingest it, what would that mean for people. We are trying to understand

that. We don't know the results at this point of the TCLP analysis and heavy metals analysis.

Do you have anything to add to that answer, Ed, I'll look to you. Or Phil.

MR. HECHT: My name is Phil Hecht and I have been involved in drinking water for over 20 years. And you raised a good concern.

The City of Newport News, I'll tell you, has been using aluminum sulphate for many years. They currently land apply their aluminum sulphate in a (inaudible). They did extensive surveys over the years to determine the impacts, not only of the sulphate but also of any other by-products -- and there are some in very minute traces, aluminum sulphate, not only in (inaudible), but also the ground water in the surrounding environment.

And through these careful studies, they found that there was really no impact at that particular site, negatively, long-term to any of those species that they took at look at, not either from an acute or a chronic perspective.

There are other places, Portsmouth, Virginia, which has lagooned their residuals for many

years and also gone studies.

I was somewhat peripherally involved for the City of Chesapeake, Virginia, who also took a look at sulphate leaching into the ground water. The Department of Environmental Quality asked Chesapeake to take a look at that. They did. They found the levels were a little bit high, not excessively so, so the City of Chesapeake went forth as a good stewart and lined their lagoon and came up with another plan.

But the second part of your question I think is what happens if there is a spill. Every water treatment plant has to come up with what they call a Hazardous Response Plan. And a part of that plan, we have to take a look very closely to what happens to chemicals in transit and the fate of those chemicals and how best to respond to those.

So, in this particular case, the Dalecarlia water treatment facility already has a similar plan in place. And that would be the major problem. The problem would not be so much the transporting of the solid materials.

8-42-NC, KA, KC

[redacted]: I think you also need the communication, if you can put that on the website for us,

8-42-NC, NB

what he is talking about.

MR. CAMPBELL: Yes, we can do that.

[redacted]: My name is [redacted] and I'm a resident of the Overlook community.

And, first, I would like to say that I did not get anything in January. And I believe that the persistence of our homeowners' association, which is a registered public entity, also did not get any notice. And I would like to have been informed earlier because I think I would have liked to have listened to and heard the other alternatives, the 26 alternatives. I feel very cut out and very limited by this process.

I also am not an engineer. So I can't read these documents and come up with alternatives. I would have to hire an engineer. And I know I can't afford to hire CH2M Hill. You know, it costs hundreds of thousands of dollars to hire these kind of engineering consultant services.

So I feel like it is a little bit disingenuous when you say to us, oh, you know, we're opening the process now for your solutions. This takes a while. You have had a long time to evaluate all of these problems. You have had years.

And I feel like we're being hamstrung. We are given this narrow little window in which we're supposed to come up with the solution. That doesn't seem fair to me.

MR. CAMPBELL: I appreciate your comment. At the scoping meeting that people are so very concerned about, we did not have 26 alternatives and we didn't discuss any alternatives. But all of the other aspects of your question, or your comment, are valid and I'm not going to try to clarify those at all.

8-43-NB

[redacted]: Okay. But, even so, to come to one meeting and -- did anybody come prepared with an engineer to say what it is you should do with your residuals? I mean most citizens would come and say, I don't know, not in my back yard, pretty much. I mean, I can't imagine you got serious technical input.

MS. HAMBEY: Actually, we did.

MR. JACOBUS: Well, we were -- it is our responsibility as the engineers, as the water treatment operator, to derive from our process to keep the safe and reliable and cost-effective production of water going, and it is really our responsibility to come up with alternatives. I mean that is our part of the process.

We wanted to alert the public at large that we're initiating the process and then we wanted to inform you through this environmental impact statement process of what we are considering and how they may affect you. I do not --

I apologize if you have taken from us that, well, we just want to step back from this and say we're looking to you for alternatives. No. We're looking -- we're trying to develop the very best alternatives we can, but we do respect the fact that certain citizen input is valuable to us, have you looked at the idea of doing such and such. And then we can come back and discuss that with the development team.

I also realize that you don't have the time to -- and we wouldn't expect necessarily for you to read through hundreds and hundreds of pages. But we certainly will take the time here this evening to go over all of the 26 in detail. We'll be happy to do that.

But what I'm offering is if someone does have something that wasn't among the scheme that we looked at and, in fact, we overlooked something -- We have tried to do the most responsible job based on many, many years of doing this.

Also, there are about 20,000 water treatment plants in the United States. We're coming to this very late in the process, this being not putting solids back in the river. And so through the industry association, the American Waterworks Association, the American Waterworks Research Foundation, there is all sorts of historical and industry-type information on the treatment of residuals.

And so it is a neighborhood issue because these are your back yards. And so we're trying to be as gentle as possible in our back yards, realizing that we are going to be required to add to our existing treatment process and we want to do it in a way that is gentle to the neighbors, is gentle to the environment, yet still meets our process. And so if there is something you think we've overlooked -- I don't expect you to hire a consultant.

We have hired the engineers. Our engineers are at everyone's disposal to evaluate alternatives that might be out there that we've missed in someone else's experience. We think we've done a very thorough job in looking at the various alternatives of taking it away as a liquid, taking it away as a solid,

taking it away as transformed solid of some kind. And we are very limited. This is a waste product problem. This is a solid waste problem. We know what the material is. In changing its form, it is either going to be a liquid or a solid. So there is a pretty thick range of options. The question is how to do it gently in the neighborhoods. And so that is kind of where we are.

MR. CAMPBELL: And two alternatives that we looked at did come from the scoping process. And one was the barge alternative that a man mentioned earlier today. And then there was another alternative we looked at, which essentially a plasma technology to turn the residuals into a useful product. And we examined that as well.

8-44-CA, EA, GA

[redacted]: I also want to understand something a little bit better about -- you had a slide up earlier this evening about the impact of the weapons removal that goes on in Spring Valley and that might postpone the monofill alternative.

The slide had some very interesting wording and I wanted to get some clarification. It said that -- that you would be unable to go forward with the monofill by itself in the schedule that doesn't allow any

kind of investigation of whether there is weapons there in 2008.

Does that mean that you would be considering a combination of trucking and sludge dump? That you would, you know, truck for a few years and after they finish excavating or investigating whether or not weapons removal is necessary before imposing a sludge dump?

MR. CAMPBELL: Do you want to answer that?

MR. JACOBUS: I think in the NEPA process that we're going through the final administrative milestone is a record of decision. And that record of decision we believe should be a decision and not a tier, a little of this and a little of that, or a combination.

So given the fact that we think we should, in this process, end up with one alternative, what that slide says, that the monofill by itself could not be an alternative because of the timing; therefore, it would have to be done in conjunction with trucking.

In our document called the description of proposed action and alternatives, we intentionally put a statement in there that would give us the opportunity to bring back to the public a combination of alternatives.

It is not our intention at this time, as we stand here tonight, it is not our intention to do that. It is our intention to continue to evaluate the monofill on all of these other environmental merits just so we completely understand that. But we think the monofill is blocked from going ahead at this time. Why? The weapons issue.

And that is why -- I think I said earlier, as we stand here tonight, I believe it is -- I can say what we know right now is that it would not be the preferred alternative.

So the slide was not meant to be tricky, but it was meant to kind of -- you saw, in a sense, that we move through the process we're going to have to be looking at it. If for some reason some other part of the federal government decided to accelerate the Spring Valley process over the next six months to a year or two years, it might be possible that that would become more viable. We don't see that happening.

We are not requesting as the water agency to make that happen.

[redacted]: If I may, one last question. Before when you were explaining the chemical composition

8-45-KC

of the dewatered sludge, you were saying that that is something that you would study and make public before moving forward. Does that mean you have not ever studied it yet? Do you know yet what the chemical composition is?

MR. CAMPBELL: We have not performed recently this TCLP procedure with respect to this process. I believe it has been done in recent history.

MR. JACOBUS: In '94.

MR. CAMPBELL: Ok, in '94. It hasn't been done recently for this project.

MR. JACOBUS: We know --

8-46-KC

[redacted]: You are aware that the Wilderness Institute said that the sludge contained mercury, arsenic, and lead. And that is a matter of public record. And I was just wondering if you ever had to do a study yourself to rebut that.

MR. JACOBUS: Absolutely, because remember, please everyone, that the -- currently this material is discharged back to the Potomac River. And we have one of these National Pollutant Discharge limitations and NPDES permit to do that. And, in that permit, we do analytical analysis and report to the EPA

what is present. I am very much aware of what is being reported in the press about minute trace materials that are in the Potomac River that, of course, would come back and go back to the river as part of this. This is not -- the contaminates and that are not part of our treatment process. It is just stuff that was in the river.

But EPA, in their permit process, is completely aware of that. But, since this is a new project, it is both prudent and required that we provide a new analysis. The subject has been looked at at least twice before, both in 1996 and -- excuse me, 1976 and 1994 we got to a design of what we call 35 percent design or partial design of the process and then it was stopped because EPA decided to issue -- or not require a permit that would prohibit us from returning the materials to the river.

So, yes, we will -- we will publish all of that as part of the analysis. But, based on the history and there is nothing that has changed in the river substantially or our process at all, I would not expect any toxicity issues to be associated with what is in that jar.

[redacted]: So those studies are

available to the public?

MR. JACOBUS: Sure. Sure.

8-47-NC, KA, KB, KC

[redacted]: And are they going to be put on the website? Because I think that is a lot of people's concern here.

MR. CAMPBELL: We really have to respectful of somebody else here.

MR. JACOBUS: We can take care of that.

[redacted]: Certainly. Thank you for answering my questions.

[redacted]: My name is [redacted] and I would like to return to the question of the public involvement. Because, as I understand, and I appreciate that your permit does not allow you to discharge into the river.

8-48-FB, MA

But as I understand the timing of how you comply with that is, in fact, something that you negotiated with EPA and is, in effect, a negotiated time frame, which is that could be renegotiated because it is not in the statute itself.

And I think that we hopefully have demonstrated to you tonight -- and in the prior meeting there were 208 members of the public turning up for the

prior meeting -- that with adequate and effective notice the public does come to your meetings. We have now had over 500 people comes to these meetings.

8-49-NB

That was not the case in January because I don't believe that you had either -- you were complying with the spirit or the letter of the law in developing that initial meeting. And wouldn't it be appropriate to believe that this would be the beginning of the scoping process, because we would like to comment on the screening criteria being used, because we don't feel the screening criteria used was appropriate. The stakeholders were not considered as a part of the screening criteria. And I believe that one of the objectives of this project which you published in the Federal Register said the stakeholders -- the impact on the stakeholders is something to be considered. That was not considered in the project screening process. So wouldn't it be appropriate for us to comment on the screening process, to listen to the alternatives that are coming forward here.

We want you rescreen these alternatives and come up with actual alternatives that would make sense. You have already said tonight the three that you

are trying to force us to consider are already now being narrowed to one. This is not suppose to be a narrowing process. I thought the public involvement is suppose to bring ideas to you, which you then consider. And then you explain to us how you considered our ideas and how they were taken into consideration.

So I would insist that we backtrack to the January meeting, the public is now beginning to be involved and we should rescreen all of the alternatives.

MR. CAMPBELL: There two comments or questions that you had. One was the ability to renegotiate the permit, the deadline from EPA, and the other one was can you screen -- or reopen the screening process.

I think that we have.

[redacted]: Or start the screening process.

MR. CAMPBELL: Or to start the screening process. I apologize for putting different words in your mouth.

I think we have addressed both of those questions tonight. Do want to make a summary statement to either of those effects, Tom, or not?

MR. JACOBUS: Well --

MR. CAMPBELL: A summary.

MR. JACOBUS: Thank you. We have consulted with the EPA. We believe -- I believe as the permittee and as the responsible party under the Compliance Agreement that those are firm dates. And we are moving to comply with certain dates as a matter of enforceable action.

I have heard others and yourself tonight very articulately saying that you believe that the scoping and screening process could have been done differently.

We have gone from a completely open mind to a series of 26 alternatives to these 3, meeting screening criteria that was designed by us to meet our operational needs to preserve the reliability and redundancy of the project. We believe it is our responsibility as the operator to shape the alternatives to be considered in terms of what works for the plant. And that is what we tried to do to get to this point tonight and for the last several weeks, we have brought now to the public what works for the plant, but now we're trying to figure out what works for the public and we

need the public's involvement in that.

So that is why I believe that we have met the letter and spirit and I'm sorry that we don't agree on that point, but I tried to explain that a couple of times this evening.

[redacted]: If I could just say, you have had nine years to study this and now you are asking us to give our alternatives by the 15th of November as I understand. I also do not believe that the screening criteria is as narrowly construed as you are saying it is, Tom. I don't dispute how your plant operates, but I think it is how you operate as a public citizen.

8-50-CA, DA, GA

[redacted]: I came late. My name is [redacted] and I live across Westmoreland Circle. I don't know the name of the community I live in because it has always been there.

You're down to trucking, pipe, and monofill?

MR. CAMPBELL: That's correct.

[redacted]: And you explained and I think tried to show the photographs and stuff on the visual affect of the monofill and so forth, minimum, and I appreciate that.

8-51-CA

Have you talked about the environmental effect of the monofill? Anything? Thirty acres of woodland?

MR. CAMPBELL: That is all part of what we're looking at in the draft EIS. And so we have had people, for example, completely -- not completely, but look through that site the best the we are able to do given current safety concerns about the biology and the ecology of the area and the trees. And so all of that is taken a lot at in tremendous detail.

8-52-GA

[redacted]: And so you don't think that adding 780,000 car miles a year to this area affects the air quality?

MR. CAMPBELL: Air quality is something that we're looking at, very much so.

[redacted]: And the flooding? My church has a little 50-car gravel parking lot. We're not allowed to pave it because of the effects of flooding on the stream, watershed. And you are going to pave 30 acres?

MR. CAMPBELL: Surface water resources, geology and hydrology is all a part of this evaluation. So any process like this, we look at what are the impacts

that could come from the action and could those impacts be reduced or mitigated in any way. And all of that is put forth for everybody to read as a draft statement.

8-53-FB

[redacted]: When is that going to happen?

MR. CAMPBELL: Toward the end of the year, around the end of the year.

[redacted]: Yeah, but you're making a decision on November 15th.

MR. JACOBUS: No, no. No.

MR. CAMPBELL: No, no. November 15th was the date set by which we could receive extra alternatives to evaluate. And, frankly, that date was put on because we have to move forward to develop the project because of the scheduling that we talked about at length.

So that is a different date than the draft EIS, which I will emphasize is a draft document now. It then goes into a public comment period to see what people think about it. And all of this stuff, the air quality -- the air quality measurements, the noise measurements, biological resources, all of that, is looked at very carefully.

MR. JACOBUS: Can I just say, one of the

things that we committed to do as a result of the last meeting and maybe you didn't receive the letter, is we want to hold a series of these meetings. We're not prepared to announce tonight because we haven't heard all of the comments, we don't know how much it is going to take to -- to kind of reconvene with more information. But you will not have to read for the first time when that draft environmental impact statement is published to know what is in there. We will hold successive meetings to -- to give you snapshots of where we are in this process. The work is not all done. It is ongoing. All of these resources are being looked at and we will continue to bring to the community what we're finding and then it will all be put together in a final report, but because you are all stakeholders, neighbors, or whatever your interest may be, we want to allow you to watch the process unfold in the most orderly way we can find to make use of your time and bring you information that we think is of interest to you based on what you have told us.

[redacted]: Thank you.

MR. CAMPBELL: Sir.

[redacted]: My name is [redacted]

8-54-NB, NC

president of the Spring Valley West Homeowners' Association, approximately 60 homes, directly across the street from the Dalecarlia. None of our people got notified of this and I would like to ask, how many of the neighbors, home associations, did you all contact or send to the residents?

MR. CAMPBELL: At which point in the contact process, because we have described the letters that have gone out?

[redacted]: And second is the delta that you're talking about would be temporary. For us it would be permanent, so I think you just have to think about this. Thank you.

8-55-NC

[redacted]: My name is [redacted]. I have a question about, first, the website. We attempted to use it and got a response that your voucher has expired. I don't know if anybody else has encountered that.

MR. CAMPBELL: Was this very recently? We apologize if that is the case.

[redacted]: My wife tried to do it. It's hearsay, but she told me your voucher has expired.

MR. CAMPBELL: Excuse me. I want to make sure we heard it. It's the voucher. What was the

specific response to that.

[redacted]: It said the voucher was expired, your voucher was expired.

MR. CAMPBELL: We'll fix that.

8-56-CA

[redacted]: And leads me into the next question, which is the question of odor at a monofill. When this material becomes wet, as might happen, does it emit an odor?

MR. CAMPBELL: Glenn, do you want to talk about that?

MR. PALEN: Can you put up the UOSA slide?

We're going to pull up some slides here in just a second that are relevant, I think, in that they relate to a local Northern Virginia similar facility, not exactly the same, but similar.

In general, I would say the odor that is going to come off of this is going to be more of what I call an earthy odor, than a hydrogen sulphate type odor. It would be more of a biological sanitary sewer type odor. And it is also going to be less intense than what I would think of an odor anticipated with, say, a wastewater treatment plant or something like that. A typical odorous facility most people think of when they

think of the treatment plant type odors.

Again, I said earlier I could not guarantee that this monofill would not produce any odor. I don't think anybody could.

Would it be an odor that is objectionable? No. In general it is not because of the nature of the material. It does not include a large amount of organics and it is not a highly biologically active waste. It is dirt.

Now, dirt, by the way, has an odor. When it gets wet, it does smell. That would be a component of the odor coming off the monofill as would whatever biological activity is occurring as the natural organic material present in the river water is broken down by the bacteria present in the soil.

So that is the type of odor that it would have.

What I want to do now is just make a few comments about a neighboring facility that is similar because I know this has been a question that has come up and it is sort of related to this odor comment.

The question posed here is are residuals disposed in facility elsewhere. The answer is yes. I

wouldn't say that it is thousands and thousands of these, but it is done.

There is a facility in Centreville, Virginia. On this slide is the Upper Occoquan Sewage Authority, a wastewater treatment plant that treats wastewater to near drinking water standards. They have a monofill. That monofill contains lime solids from the tertiary treatment process for wastewater. So it's not alum, but it is not that different from alum either because it's treating tertiary wastewater where mostly the biological activity has already occurred in that treatment process.

8-57-BA

[redacted]: How many acres is that?

MR. PALEN: That is about a 40-acre facility in total footprint.

And you can see there it has got a green component that is sort of the mounded up waste and then next to that is a lower area where there has been some rainwater that is pooled. That rainwater in this case is then collected and pumped at a constant rate back to the wastewater treatment process. So that is why there is a pool of water there.

But that whole area is the monofill.

You can also see in the upper right corner of the picture that there is a residential subdivision right there and it is literally across the road, a two-lane with at most a third turning lane in the middle, and these homes are very close to the monofill.

We did recently talk to the wastewater plant and we said what is your operating history with the monofill, what have been your complaints, what have been the observations of the public.

The answer that came back, and you are welcome to talk to these folks -- We asked whether we could use their name in a public forum and they said, yes, we're more than willing to do receive public questions about our facility.

The answer that came back was we received three complaints in the last ten years. One was for dust. One was for odor. And one for noise. And these neighbors are extremely close. There is also not an extensive tree blocker between the monofill and then the road and then these homes. So it is boom, boom, boom, right one after the other.

The noise complaint, I really can't comment on. I don't know the details of it. I assume it

had to do with machinery that was used to distribute the waste around the monofill.

The dust complaint, they said was solved when they paved the access road into the monofill, which tells me that the dust was really being created more by the trucks moving in and out of the monofill than it was by moving the monofill material within the parameter of the facility.

And the fact that there was only one odor complaint to me indicates that odor is not a big concern to the neighbors.

So, hopefully, that helps in giving some perspective on this.

Question?

8-58-BA

UNIDENTIFIED SPEAKER: Is that covered by grass or a tarp or just what?

MR. PALEN: What we are seeing in there is basically natural vegetation growing on the residuals. The top of that is relatively flat. I will tell you --

UNIDENTIFIED SPEAKER: What was it before? Trees?

MR. PALEN: It was an area that included some trees and some open area. It was a combination of

things. There was for -- there was a significant expansion of this facility. It is now being wrapped up, but it started about 10 or 15 years ago and it involved the purchase of additional land that kind of went through this area and was kind of like this.

8-59-BB

UNIDENTIFIED SPEAKER: What is the value of the homes in area?

MR. PALEN: I honestly couldn't answer that question, but given the --

UNIDENTIFIED SPEAKER: When we they built in relation to the monofill?

MR. PALEN: Pardon?

UNIDENTIFIED SPEAKER: Which came first, the monofill or the homes?

MR. PALEN: I believe there were homes there before. There were certainly more homes built after. I do not think -- I'll have to check on this, but I do not think it would be fair to say all of the homes came after the monofill. I am quite sure there were some that was before.

UNIDENTIFIED SPEAKER: So it was sort of a rural area, they put a monofill in, and --

MR. CAMPBELL: Can we go back to the

people who are waiting in line to ask questions.

UNIDENTIFIED SPEAKER: But come on, come on and ask. Don't be afraid. Come on and ask.

UNIDENTIFIED SPEAKER: Get on the record.

UNIDENTIFIED SPEAKER: Get on the record. It is important.

MR. CAMPBELL: The woman who has been waiting over here. I'm going to stick to the process. Thanks for the suggestion.

[redacted]: Okay. My name is [redacted] I live in the Brookmont neighborhood at [redacted] Broad Street, not far from here. And I want to just raise some bigger picture considerations that came to mind as i listened to the whole debate and a lot of the ire I'm hearing among the community.

One thing that really came to mind, and maybe after the hurricane it came to mind, seeing Haiti and other countries. We are very fortunate to live in a country with clean water when two billion people in the world don't have that. So I've been thinking about that. Let's keep that in mind. Maybe not a very popular perception, but it has come to my mind.

We are also very lucky we live in a

democracy where we have environmental laws and a public review process. Maybe it wasn't perfect the way it has been implemented here, but at least we're having the opportunity to comment, whereas in some countries there no opportunity and all like that.

We also live in a great part of a cool city that has imperfect infrastructure. And that is part of the compromise and that is the thing that with modern population numbers we have to factor in.

Thinking back to the big picture, I think we also need to look more broadly than the scale of just this bite and look at the whole Potomac watershed and why is it there is so much sediment in the water and consider some of the development practices across the Potomac watershed that are flooding the Potomac with these extra sediments which we now have to deal with in order to have a clean and safe water supply here.

UNIDENTIFIED SPEAKER: Very good.

[redacted]: So something to think about is development practices across the watershed, riparian restoration and rebuffer the water up the river, and to protect the water quality before the permit side, as opposed to just focusing on this very contentious side of

curing the problem. So that is what I wanted to say.

MR. CAMPBELL: Yes, sir.

8-60-NB, NC

[redacted]: My name is [redacted]. I'm afraid my question is not as global as that. We talked a lot tonight about the screening process and the screening criteria, but you haven't said anything about the screening people. And what I am trying to understand is somewhere in your organization are people who applied these -- decided, first of all, that there were 20 some alternatives. And secondly they decided that 24 of them didn't meet the criterion and 3 of them did.

And my question is who are those people. Are you talking about 2 people or 15 people? Are you talking about yourself? Are you in the room tonight? Did you outsource this? Tell us who the people are and -- I've searched your website for a list of names of your committee and haven't found it. How can we contact you if we want to say why you should rule out alternative 16? How do we get in touch in these people so that we can determine who they are and where that decision making came from.

MR. CAMPBELL: Several of the people are in the room this evening. Glenn Palen is the project

manager and led that effort. The Washington Aqueduct staff was always intrinsically involved in that. Ed Fleischer. We had several other engineers who were engaged in that and planners who are not present here today.

And it would be perfectly appropriate for us to put all of those names up on the website. In fact, in the draft EIS a list of all of the people involved in the project is always listed on there and what their education and qualifications are.

[redacted]: But that's not available now; is that right?

MR. CAMPBELL: We will put it up now and that's a good idea.

[redacted]: Because the -- I mean it's obvious these decision impact, apparently, a lot of lives. The question to me is who makes the final decision that A, B, and C were the only three -- I guess there was a fourth one which is do nothing -- that meet your criteria and that the other 24 don't meet your criteria. And I know there is a matrix of Xes and boxes, but somebody had to put the Xes in those boxes. And did you vote on it? Did one person put an X in a box? How

did that process occur?

MR. CAMPBELL: Was there a process and was it arbitrary. Well, hopefully, very carefully we can argue about the screening criteria and whether you like them or not, but the criterion themselves were objectively applied against the alternatives. So it was a team analysis approach that led to the conclusion that some alternatives did not meet one or perhaps several. And I believe the ones that were screened out were screened out for not meeting several criteria. And then hopefully we were very careful in the feasibility studies to illustrate why that was and which criteria in particular caused an alternative to be screened out.

And, if you would like all of those details, we have all of that information in presentation form to walk people through to see what that is all about and how thorough that was.

So was it done in a dark room or one person or throwing darts or any of those questions, it was a team approach and some of those people are here right now.

8-61-NC

[redacted]: You will put that up?

MR. CAMPBELL: Yes. The feasibility study

is available on the website now. It is the website that is having problems. That is all made available. We'll put the names of the folks on there.

[redacted]: My name is [redacted] I grew up in Spring Valley. And I am one of the few people who attended the scoping session in January. And it occur to me that there were 24 alternatives not shown there. But thank you for bringing it up tonight.

8-62-IA

I would like to ask if you could post those -- the 26 alternatives to the website. That would be helpful for the residents to come up with other alternatives that may have missed. And that is just following up on the previous person's question.

My concern is that I think that the biggest failure that could come out of this process is we end up with the no action alternative. For Mr. Jacobus to say that there is no measurable impact on the river, I suggest someone start doing detailed health surveys of people down river, starting with the people at Fletcher's Boat House and all of the fishermen who have been fishing there over the years. And I suggest you take sediment samples from the Potomac River, especially around Fletcher's Boat House and you will probably see some of

8-63-JA

the same contaminants in the sediments that are coming out of the Washington Aqueduct discharge.

I think it is great to see so many people here tonight. And I would like to encourage you all to stay involved. I think one way to keep the citizens involved is if you would post the discharge -- the discharge time and the dates on the website so that we could go and stand on Chain Bridge and see the river turn brown, turn black, and we can see the fish that die. The National Wilderness Institute has done studies. In some cases, the fish have lived for less than a minute from this discharge.

Representative Radanovich has all of this information no his website and it's called toxic sludge central.

And for you to say there is no notice -- no noticeable impact on the river, it is just -- I don't know how you can say that.

Would you commit to posting your discharge dates and times on your website so that the public can be notified, so that we know not to go fishing at Fletcher's?

MR. JACOBUS: Thank you, Ken. Our current

-- I guess it's the permit. The permit requires -- the element in the permit of the Federal Facility -- the permit requires that we do make notification to resource agencies in advance of discharge.

Right now discharges are made under two conditions. One is they cannot be made after the 15th of February -- in that period of time between the 15th of February and the 30th of June. That is to protect any affect the discharges might have on the agamous or the native fish species who would be spawning. And the various species spawn over a period of lots of different times in that window.

So one of the permit conditions is no discharge during that period of time.

The other discharge condition has to do with river elevation. I am not going to commit this evening to posting those, not because I want to hide it from the public, but because I don't want you to rush out and see something that is not there because given operational concerns it is not a clockwork. You know, we get a window of opportunity, then we will make a discharge. And we might have to change the time based on what is happening within the treatment plant, did

something happen operationally.

So for us to commit to putting an exact time and location, it is not because we don't want you not to see that. It is because we don't discharge to a schedule. We discharge within a certain window of time that meets those other permit conditions.

We do have a permit condition that requires us to notify, at least 24 hours ahead of when we make a discharge, the various resource agencies.

MR. CAMPBELL: All of the alternatives are available on the website right now in the feasibility study. Perhaps we need to make a more simplified document so that it is easier to understand those because, admittedly, that is a pretty thick document to go through, but they are on their right now. And that is a document that you click on and look for.

MR. PALEN: Jed, I have one comment.

Just to make this a little simpler, and I think we will post, as Jed has just suggested, the details of that stuff.

If you want to go to the website and you want to look at the specific place in the feasibility study to see a concise description of the alternatives, I

would suggest looking at pages 2-2 through 2-5. It is a pretty simple list of each one of the 26 alternatives on those three pages.

MR. CAMPBELL: But I think it is in everyone's interest to post a summary that makes this information a little more accessible.

[redacted]: I'm [redacted] from Brooks and Locust Lane Community Association. We're just above Brookmont and below Fort Sumner, your neighbors, as well as that wonderful mapping agency.

I want to just be clear on a couple of things that came out today that having been at not the scoping meeting, but the last meeting, which was that shout feast that wasn't very clear.

8-64-FB, EA

There is a fourth option which is do nothing. And that is still a part of the process at this stage; right?

And, not being an environmental scientist, we're not talking about eliminating a problem of disposing of residue. We're talking about trying to find land-based solutions as opposed to a river-based solution, which is the present method we're using to dispose of residue; correct?

MR. CAMPBELL: Correct.

[redacted]: Now, you also said tonight, if I heard this correctly, that the EPA regulation is that you have to -- if you technologically can remove this residue, you have to do it regardless of whether there is an environmental problem and it's is not -- so therefore -- because that is what doesn't make any sense here. I would, as a citizen, be very happy to watch a process go through where we look at the scientific merits and demerits of the land versus water-based methods of disposing of this residue and decide in terms of all of the criteria we've talked about what makes more sense for the community, for the wider Washington community, the Potomac River basin, all of these things.

8-65-MA

But am I wrong, that the EPA could still -- you're saying the EPA says you can take it out, so you have to take it out even if that may not be the best thing to do because the other problems you're creating has the resulting of taking it out and having to deal with it outside are worse than the problems that might exist if yo throw it back in the river?

MR. CAMPBELL: This relates to EPA's enforcement of the Federal Clean Water Act. And we have

described that there are two criteria. One is the water quality criteria and the other one is the goal of stopping discharge to water bodies. And it is that second criteria that is being applied here. And the question of land disposal versus water disposal was addressed in the EPAs process. We're not going to address that in this process. So that would be understood by reading the fact sheet that accompanies that permit, that we have some copies of today. So that is really an EPA issue in terms of how they interpreted it and water versus land and the respective switching of impacts from one area to another area. And so that decision has been made by EPA based on the Clean Water Act.

MR. JACOBUS: That's a very good question. Our discharge permit expired in April of 1994. And between April of 1994 until June of 2003, we were operating under administrative extensions of the permit while EPA, the states, the community, us as the Aqueduct, the National Wilderness Institute, all of these players, were engaged in a process of determining should the river be the disposal mechanism or should it be a land-based disposal.

It was out of that nine years of efforts by EPA that they did issue the permit requiring that the river not be the disposal option. And it does seem paradoxical that while you're dealing with the Clean Water Act issue you are also initiating an environmental impact statement form under NEPA for the -- for the solids that are going to have an effect on human and other biological and all of those other environments.

So, yes, it is a -- in 1994 when we started to do this before, we got literally through design and stopped because there was no way to move forward without a new permit. EPA would not -- it decided not to issue a permit until they got additional information and it took nine years to issue the permit. And so we are where we are as a result of a very long and involved public participation process and intervention by the State of Maryland and for the District of Columbia in doing what they have to do to certify the elements of the permit.

So I am not blaming anything on EPA. I am not using them as a shield. I am just saying that that process occurred very deliberately over a long period of time. Out of that process came to us as the operator a

requirement to recover the solids because it was technologically feasible to do that. It was not the Clean Water Act's water quality prong that didn't all this discharge. It was the best available technology.

So that is where we are and why we're proceeding here.

8-66-FB

[redacted]: Well, let me make one very quick remark. Treating it sequentially makes no sense to me. You should be treating them at the same time and comparing whether -- I am not taking a position here. I don't want dirty water and I don't want dirty air and I don't want dirty ground. I mean I -- but I don't like is that we decide one option is closed and then we start looking at the others and we're not comparing the relevant environmental harm and the relative environmental damages of the two options together, which for us who live around this -- this facility, it would seem to be the more rationale way to do it. Thank you.

[redacted]: I'm [redacted] from the Brookmont Civil League. I had an earlier bit at the apple here and I beg your indulgence. And I'm driving a car pool and we have to leave shortly.

I just wanted to get in the record two

8-67-BA

1 points. One, that the general agreement, there was no
2 public discussion, either in formal hearings or
3 information sessions, by the Corps that this building
4 would be built and the -- in particular, the height of
5 that. We're talking about the residuals dewatering
6 building in terms of its height, it's site, it's
7 architectural features. That is point one.
8 And I take to heart, Tom, about what you
9 said a moment ago that the issue isn't set. This fellow
10 over here seemed to say that it was set. In reality, it
11 isn't set. I am delighted to hear that.
12 Your engineering feasibility report in
13 section 4-3 basically suggests it is set somewhat. The
14 height is set for a variety of reasons, of getting trucks
15 under the building. The design is set for a variety of
16 other reasons. The location is set for a variety of
17 other reasons
18 I am really delighted to hear that this is
19 not set and we basically want to get to further
20 discussion on this issue in a time fashion, before the
21 decision is made, anything is locked in. That would
22 certainly comport with everything we have heard tonight
23 in terms of the timing for treatment of residuals, before

you treat the residuals, you have to create them in this building. And I think that should be the primary issue of high priority on the decision.

MR. JACOBUS: Thank you. No design has been offered. These are just all the ideas and speculation at this point.

[redacted]: Okay, thanks. Appreciate that.

[redacted]: My name is [redacted] and I have been a resident of Spring Valley for 22 years. And I just have a comment, not a question, a comment on the monofill alternative.

I just want to speak for all of those who cannot speak, and that would include the 30 acres of animals and trees, and I just think it would be just outrageous to just mow over and kill all of those trees and animals. Thank you.

8-68-AC

[redacted]: I'm [redacted] I live in Westmoreland Hills. I was curious about the economic analysis. You may have this done as part of your monofill option. The 30 acres that you are proposing your waste dump, it probably is the most expensive property in the District of Columbia. And, absent the

chemical munitions that may be in that site, that site is probably worth more than a lot of the costs that you currently are comparing in terms of the various options.

And I wondered if you had considered the opportunity costs of alternative use of that property. Perhaps developing that property and creating a tax base for the District of Columbia that they heretofore otherwise don't have. And, if you put your monofill in there, will never have.

And I wondered if you had done that -- that kind of economic analysis as far as your options.

MR. CAMPBELL: Alternative uses for that site has not been included. It has been limited strictly to residuals management. The market value of the parcel has also not been included because the land is the Aqueduct's own. Now, related to future development or a pension of the Aqueduct with respect to that land, really only Tom can address that.

MR. JACOBUS: I would say that we have no plan to sell or develop any land that is currently under our control. But we will take that comment and give you a response to that in some thoughtful way as part of the record of all of this. What that means is I don't see

us ever -- I think water treatment facility is well-served by having that buffer. If we did the monofill, it would still be in a format there that would have a controlled environment. That would be helpful to us to protect our reservoir property, even thought the reservoir over here has a dike around it and no water goes directly into it. We think that buffer is important to us.

Whether putting a monofill on that property would be inconsistent with that buffer, it is something that we will be evaluating in the process. But we never ever considered selling that land or to develop it.

[redacted]: No, i'm not talking about selling the property. I am saying that a proper economic analysis has to include the opportunity cost of alternative use of that property.

In your other two options, that property remains solid and it has to include an opportunity cost of selling that property or the expense of not doing that.

MR. JACOBUS: Thank you, Bob, and we will fit it in somehow. Thank you.

[redacted]: Good evening. My name is [redacted]. I live in Westmoreland Hills. And earlier on you guys talked about the members of the team and someone had a question about who makes the decisions and whatnot. And I was wondering if you could tell us a little bit about the background of all of the members of the team. It seems from what I have been listening to, and I may be completely wrong and I hope you can shed some light on this, that most of the members of this team are either engineers or chemists or people who are more focused on the actual water issue, which I guess for you guys it is the main thing.

8-69-NC

Was there a town planner or an urban planner or anyone -- and I can only speak for myself because I have -- and I can only speak for myself, but I would say from the majority of those people, the urban planning issues, the impact that it is going to go have on our community, is the main issue. I mean, if you had someone like that, an urban planner or a town planner in your team helping you go through all of those 26 options because, I mean, obviously having a landfill and so forth is not done planning-wise. It is not the most focused option, as you mentioned earlier, you're looking

8-70-CA

for a very gentle thing to do in the neighborhood, and I don't know if I'm quoting you correctly, but I was wondering if you could shed light on that.

MR. CAMPBELL: Yes, I would like to. I talked earlier about the land use associated with the monofill being inconsistent with both existing land use and adjacent land use.

To launch off on that point, on the team are not only environment and civil engineers, but also environmental planners, biologists, resource economists, meteorologists, and economists.

And so they will be looking at that variety of issues, land use and the monofill.

8-70-NC

[redacted]: To be specific, I know CH2M Hill is a large firm. From your -- I know they are architects and I know there are all of these engineers. Do you have any town planners working on this in particular or just in your group?

MR. CAMPBELL: We have environmental planners, not town planners as you're calling them. They have degrees in environmental planning and the answer is yes.

[redacted]: Thank you.

[redacted]: My name is [redacted] and I did have an opportunity to ask a question. I have one more question. I live in Westmoreland Hills.

I would appreciate in addition to your answer right now, if you can, if you would research this and put a more complete answer on your website.

8-71-AB, NB

My understanding is that one of your screening criteria is a least cost, or low cost, option and it may have had a dollar amount to exclude other -- certain options. And my question is: Were any options that were not in the 26 excluded in part because it did not meet that cost criteria and, if so, what were those options and what was your estimate of the cost?

The second part is, when you narrowed the 26 options down to the three options, were any of those 23 excluded in part because of the cost and, if so what were those options and how much was the cost. And I would really appreciate -- I wouldn't expect you to have all of that information handy, but I really would appreciate it if you would provide that question and that answer, complete answer, on your website.

MR. JACOBUS: We would be happy to do that. Let me clarify. There were never more than 26

options.

[redacted]: But were any failed to be included?

MR. JACOBUS: No. Everything could be included. All we could think of from ourselves and others was 26. And then we started whittling it down. And cost did play a factor and we will be happy to provide that information.

8-72-AB

[redacted]: Do any of you know off the top of your head now?

MR. JACOBUS: I will probably misspeak.

MR. CAMPBELL: It probably is better if we are going to go through the detailed alternative presentation, I think it will be easier to summarize it from the presentation.

[redacted]: Well, just off the top of your head for people who can't stay.

MR. CAMPBELL: Quite a number.

MR. JACOBUS: There several. And the cost factor I think was if something got beyond -- excuse me. If something got beyond, was it 30 percent?

MR. PALEN: Yes.

MR. JACOBUS: About 30 percent, but that

was a screening area that we wanted to look at because everything we do here has to be paid by our rate payers. So cost is a factor. It was about a 30 percent -- anything beyond the 30 percent range of others was looked at and evaluated in terms of cost.

We will get you specifically here -- I think there are a couple more questions. We'll come back to this.

[redacted]: What was the baseline?

MR. JACOBUS: Whatever it was, we estimate right now that form just the general planning that this project is about $60 million. So a cost that looked at about more than $90 million -- Is that the figure, 30 percent of 60 -- you know, 75 or so would start to be something that we would -- we would want to look at alternatives that could be physically done that were not more expensive than that $75 million.

[redacted]: But might there be one that is out there that was over 70 million that might be on the list of three and it might be four or five not, but for that cost?

MR. PALEN: We can get you that.

MR. CAMPBELL: There are a couple of

questions. The reason we held off on this detailed screening criteria is it is kind of long and involved and it seems like us talking too much. And the momentum of the meeting clearly was for people having a lot of questions.

8-73-NB

[redacted]: I selected that one because many people feel that was an arbitrary screening criteria. And, if it is arbitrary and if it did screen out some viable options, that is something I think the citizens would like to know.

MR. CAMPBELL: We would like to talk about that. That is also in the feasibility study that we have to make more clear.

Why don't we listen to these two extra questions or comments and then for those who are interested, perhaps we could walk through some of our material about the screening studies for those alternatives.

[redacted]: I am going to take a real quick second bite at the apple here. I want to say I think these people have done a good job tonight. They have been up here at least taking the heat.

People in this room, thanks for sticking

around.

I want you to know that the Army Corps project manager for the remediation was here most of the entire evening. He had been in meetings all day. He has got to come back down from Baltimore tomorrow.

Is the gentleman from EPA still here?

To the Army Corps and to Mr. Jacobus in particular, I think the EPA has been hanging you out to dry here and I think it is really unfair and they are going to hear about it tomorrow, whether it is Tim Wolford or Mr. Dunn or whatever because it is not fair to you that the EPA put you in this position and doesn't have the guts or the responsibility, in my opinion, to send a person here for much more than the beginning of this meeting.

So any activists in the room, any people interested in taking this further, let's talk to EPA at some point before we even go -- At least our Congressional representatives are here.

8-73-MA, FE, NC

UNIDENTIFIED SPEAKER: Was EPA invited?

MR. JACOBUS: Yes.

UNIDENTIFIED SPEAKER: They were invited and they declined?

MR. JACOBUS: They were invited. I did not know who the gentleman was who was here. He is not someone I have met.

[redacted]: My point is, as hard as you are working, it's not fair to you what they have done.

[redacted]: Hi. I'm [redacted] I live on West Nathan. I have some similar questions. It is probably best for me to list them all very briefly and then you can decide exactly how to answer those.

8-74-MA, NA

I would like to know, did the EPA have to go through the NEPA process similar to this when they issued their permit, as far as did they have to consider the land-based alternatives and their impacts in the process of issuing their permit?

And when what I would like to know is, was the Corps of Engineers agreement to the permit, did that not count as an agency action at that time? If it did, it might have required the NEPA process as far as when the Corps agreed to return to that permit that effectively precluded some alternatives down the road. Maybe that was the time to had to have gone through some part of the NEPA process.

And, also, in the current process that we

are now undertaking, as the EPA been asked to be a corroborating agency and, if not, do you still intend to invite them to be a corroborating agency?

And a clarification, I apologize, I was late at the beginning. Did you announce at the beginning that the original 30 September deadline for alternatives was extended to 15 November?

MR. CAMPBELL: Yes. Yes.

8-75-NA, NB

[redacted]: And when you get to the part on the discussion of the 26, would you please explain how those 26 was developed in the first place.

MR. CAMPBELL: Why don't we try to -- we have answered some of those already and I'll maybe look at them inverse order. And help me make sure I remember them.

A fundamental issue is did EPA have to go though NEPA and at what point did NEPA get triggered, was it earlier in the process? EPA has -- I'm not an attorney, so I'm not sure I know the answer. EPA did have a process and during this permit that Tom has described is outlined in their fact sheet and they had a number of public involvement points in that project. It was essentially sort of a nine-year process to go through

that.

MR. JACOBUS: The EPA did not need NEPA, per se, for its permit, no. That fell to us and our NEPA responsibilities started essentially the day the permit was issued as we tried to figure out how to move forward.

[redacted]: So the permit itself, though, was not an agency action requiring NEPA?

MR. CAMPBELL: We don't believe so.

Did you have other questions? I'm sorry, I can't keep them all in my mind.

8-76-MA

[redacted]: Basically, that one as far as from the Corps of Engineers' perspective, is that the Corps of Engineers agency action required NEPA when you agreed to the terms of the permit?

MR. JACOBUS: I'm not any attorney. I can get you answer to that. But we are -- yes, I am the Corps of Engineers, but I'm treated like a water utility. A water utility, after it accepts the permit -- once we accepted the permit, then we had to begin an action on our own. And, since we are a federal agency, our action to come into compliance, if it is going to involve a construction alternative, it would certainly require NEPA.

So we initiated the NEPA process as the permittee. I don't exactly know the answer to your question of when we received the permit.

[redacted]: I guess my question was more the agreement.

MR. JACOBUS: Well, it wasn't an agreement. It was the issuance of a permit under the Clean Water Act. It wasn't an agreement. They issued us a permit. They said these are your standards. Since we could not meet those standards, they issued us a Federal Facilities Compliance Agreement which is an enforceable consent order that tell us how we're going to get from where we are to where we're going. But it still falls in our court for NEPA.

Now, as far as whether the EPA -- the EPA is not now a consulting -- what do you call it --

MR. CAMPBELL: Cooperating.

MR. JACOBUS: Cooperating agency. I suspect they will become one as we get the draft EIS published.

MR. CAMPBELL: They are involved very closely in the project. This team has been up to Philadelphia, Region III, and we briefed them on the

8-77-MA

1 project so the are aware of the progress that we're
2 making.
3 MR. CAMPBELL: One more question.
4 [redacted]: [redacted]. Did the Clean
5 Water Act require that the Aqueduct be run by a non-
6 federal agency sooner or later? And would that have
7 deemed (inaudible).
8 MR. JACOBUS: No. The Clean Water Act,
9 through the National Pollutant Discharge Regulation, the
10 NPDES, it regulates whoever the operator is. We are
11 registered as a public water supply. We happen to be
12 part of the Army Corps of Engineers, but in our
13 relationship with EPA, they look at us as a regulated
14 public utility.
15 You may be thinking about historically
16 that it is in the -- in the revisions to the Safe
17 Drinking Water Act of 1995 or '96, there was provisions
18 in that that the Army was to decide whether or not to
19 retain ownership and operation within the Corps of
20 Engineers or whether we should go to become some non-
21 federal entity.
22 As a result of that process, the Army and
23 its wholesale customs, the District of Columbia Water and

Sewer Authority, Arlington County, and the City of Falls Church, Virginia, agreed, and the Army agreed, to continue the function as the operator. So there is no pending action to change the ownership or operation responsibility from the Corps of Engineers in The Washington Aqueduct. And our presence here as a federal agency has nothing to do with how we will comply with the permit, other than just as a normal water utility.

8-78-JA

UNIDENTIFIED SPEAKER: Hi. Just a quick question. What is the environmental harm the EPA is concerned about with affect to the discharge or where would we find some description of what that is?

MR. JACOBUS: We can give these fact sheets out. This is all very well described in what they call a fact sheet, which is a summary of analysis that goes along with the permit.

The material that we have discharged into the river will continue to be discharged until we correct this, is this material right here. It is the river sediment plus coagulant.

By the time it settles down and goes back into the river, it is a fairly thick solution and it goes into the river at three different locations, one above

Chain Bridge and two below Fletcher's Boat House, essentially in pipes. And, at the end of the pipe there is a very concentrated discharge. As Mr. Slowenski said, if you stand on Chain Bridge when we're discharging, you see a point until it mixes with the river, it's dark brown to black, depending on how long the material has been in the sedimentation basin.

The potential harm, we look at the toxic and the other effects, whether it is toxic effects. We do the current toxicity on young life species of fish that is exposed to the different dilutions of the material. And then they look at the effects as it sat on the river bottom and affect aquatic vegetation. My comment that it has no effect on the river; of course, it has an effect on the river in that you are adding something to the river that wasn't there. Of course, it's there. But what I am saying is that it probably be consistent with a discharge that would be allowable, except for the fact that technology exists and is in place to recover the discharges and so EPA declined to issue a permit unless we put that available technology into recovering the solids.

MR. CAMPBELL: We have a number of people

who have really stuck with us through the length of this meeting under the promise that we would talk about the screening of the alternatives and I think it is time for us to do that. And, Glenn, I am going to turn that to you. We've had questions about the alternatives throughout the course of the evening.

Very early on we were asked about the barge alternative. I'm am sure that there was some thorough analysis done on that. There were a variety of different screening related subjects that came up. And so we would to take the opportunity to walk through what that process was like. There is a lot that goes into their. And Glenn will go through that process now.

Glenn, I think that we have those in perhaps some modules so that -- or how long do you do you talk? How long do you want to talk on this?

MR. PALEN: Okay, the question is how long would I like to talk, how long is my material. I have two options. If you would like additional information as I go through this, I'll be happy to enhance what I have, so let me get into the beginning.

I will show you information on the first three alternatives. I will describe all of the

information that I prepared in my notes here and proposed to tell, including what is the alternative, describe it, was it selected for further evaluation or was it eliminated from consideration, why was it eliminated, what are the screening criteria we used to eliminate it, and then some detail about that, the particulars in that alternative.

We have developed that complete level of detail for all 26 alternatives, I've done it before, it will take me about 40 minutes if I talk really fast. So I don't know if you really want to stay for 40 minutes. I am going to try a quicker version I think would be half of that time. And, like I say, if you want more detail, we have more detail and I can give it to you. So I am not trying to hit you with just the 40-minute version.

Okay. Let's start. Alternative number 1 is what we call and what NEPA calls the no action alternative. It is continue to discharge the residuals to the Potomac River. In this case, it was selected for further evaluation by regulation requirements.

And one other feature I will show here is, if we have something, just as a visual aide, if the something we eliminate, we are going to it red. So, when

we get to the end of a grouping of alternatives, you will be able to look at all of them and say ahh, two out of that eight were eliminated or retained or whatever.

8-79-FE

[redacted]: I apologize. In light of the hour and the few people here, would you schedule another evening for this presentation so more people can be here?

MR. CAMPBELL: We certainly envisioned more presentations on this project. And one reason we held off on this is because it is long and detailed and we put a lot of momentum towards the questions and you yourself were part of that.

At a subsequent meeting, we can certainly go through this at that time. I think we should still go through at least Glenn's 20-minute version of it right now.

MR. PALEN: Okay. Let's move on to the next group of alternatives. These are discussed in groups. And the same grouping -- the same alternative numbers are used in the feasibility study, in other words cross-referencing is made.

This grouping includes some alternatives that did not require continuous trucking from the

Dalecarlia water treatment plant. And there is a variety of them. I'll go done one by one.

Number 2 on that list includes processing water treatment residuals and dispose of them in the Dalecarlia monofill periodically hauling Forebay residuals off-site as they are now.

This alternative was selected for further evaluation. It is what we commonly call the monofill alternative in our meeting here tonight.

Alternative 3 is similar to, but not exactly the same. It involves processing, or more specifically co-processing, water treatment and Forebay residuals together. So in that water treatment you would process all of those things together so there is a common product and then it is silted back into a Dalecarlia monofill.

This alternative was eliminated from consideration for the reliability and redundancy.

Let me go through in this case a little more detail as to why that elimination took place. I will then be able to offer this additional detail for the other alternatives. Probably a later meeting will be best, but let me explain how it got eliminate in more

detail here.

So, in this case we are talking about a co-processing alternative. Inherent in the mixing of these two residuals and then co-processing them are some characteristics of the product. One that we discovered as we studied it was we will be able to get the Forebay a little dryer if we process them separately. Since the majority of them are residuals that are being transported either to the monofill or light truck or through a pipeline, our water -- we are talking about producing, is 30 percent dry solids with 70 percent of that basin being water.

The fact that we can get a dryer material when we process them separately means that in the co-process, as in this alternative, we would generate a larger volume of the dewatered solids to then transport to the monofill or through some other method.

That was considered a disadvantage to us, making more material move.

The second issue we had with this alternative is by combining these two substances, the Forebay residuals with the water treatment residuals, we recognized that the Forebay, a large percent of that

material is gradient. It is very abrasive. So if we put that material into our dewatering equipment or other pumps, we're going to wear it out. It is going to be very abrasive. We're going to reduce the life of that equipment and we're going to affect the reliability of the system as a whole. Another disadvantage of combining alternatives given that they also contribution to a larger volume.

So that is the kind of back up logic, if you will, that is being that one phrase reliability and redundancy for this alternative.

So now we're going to proceed through in a little more abbreviated fashion, just going over the basic criteria that we used for eliminating or, in some cases, maintaining an alternative.

So alternative 4, here we're pumping via the Potomac Interceptor. This is the unthickened water treatment residual products that we're putting directly in the Potomac Interceptor sewer.

It was eliminated from consideration for reliability and redundancy reasons, economic reasons, as well as zoning, land use, federal and local regulation reasons.

So the fifth alternative in the total list was thickening at Dalecarlia and pumping via a new parallel pipeline installed adjacent to the Potomac Interceptor. This alternative was elected for further evaluation and it is what we call the pipeline alternative or the Blue Plains alternative.

Alternative 5 is thicken at the Dalecarlia plant and then barge the residuals to the Blue Plains facility or dewatering. This was studied in quite a high level of detail in the feasibility study. We looked at the various impacts of different size barges, the issues associated with seasonal issues, with ice formation, et cetera.

And, in the end, we were not able to carry this alternative forward for the following reasons: Reliability and redundancy. There was also zoning issues because the pipeline down to the barge would have to go through the C and O Canal park to get there, one of the issues. As well as a proven method criteria which really relates to the fact that there isn't a lot of barge with this kind of material at this stretch of the river. It is not a common use.

Alternative number 7 involves thickening

the residuals at the Dalecarlia plant, pumping them via pipeline to a neighboring water utility. In this case we looked at two nearby water utilities, Fairfax County Water Authority, the Corbalis plant in Herndon, Virginia, and then we also looked at the Potomac Water Treatment Plant, which is owned and operated by the Washington Sewage and Sanitary Commission, or WSSC. And that plant is just up the Potomac River on this side, on the Maryland side.

In both cases, we were looking at installing a pipeline that would transport this thickened material to those facilities.

Some of the reasons that these alternatives did not carry -- were not carried forward is this is one of those where the economic criteria was relevant. The cost of putting in the pipeline and, unfortunately, because neither of these existing water utilities had excess dewatering capacity, we still had to provide all of the other features or a facility such as thickening facilities, pumping, and the dewatering facilities. Then, on top of that, we had to cost for the transfer, for the pipeline, to get it from point A to point B. When you looked at that cost, it was higher

than our criteria would allow.

There were also institutional complaints. Neither the Fairfax County Water Authority or WSSC is by definition a regional processor of residuals and they really didn't express much interest in becoming one as a result of this project. They have their own residuals. They handle them themselves. And, therefore, the Washington Aqueduct would have no real control over them, there was that institutional barrier as well.

Alternative 8 involves thickening at Dalecarlia and pumping via pipeline to what is called a dewatering location. What is meant here is a nearby location, probably something close to the beltway so we could move the material quickly to a large volume road, but not necessarily the water treatment plant that already exists.

This alternative was screened out for somewhat similar reasons to the last one. There was a pipeline involved, so the same kinds of economic factors associated with the pipeline costs come in the play here. There was an added pipeline cost, if you will. There was also FFCA issues here because we were looking at installing a pipeline through a relatively large number

of plots of land owned by various commercial and private folks.

The general assumption here was that we would have to go around and study, to look at various alternate routes. We would then have to go through the processing of getting right-of-way, et cetera. And that added time to the process when compared to an alternative that did not require a pipeline to go through those kinds of parcels. So that was a problem from a schedule prospective which represents FFCA.

This is kind of a summary of how those seven alternatives turned out. There two green. So tow of them were retained and the remainder were not retained for further study.

Then we moved on to another grouping of alternatives. These are alternatives which discharge to the Potomac River in some form.

We'll start with the first one, number 9. It involves processing most residuals at the Dalecarlia Water Treatment Plant and hauling those off-site, but taking a portion of the residuals and instead of concentrating them, dilute them and send them back to the river so that they would be within the standards or

concentrations allowed within the permit.

And Tom talked before about how those concentrations are really very low, like 30 milligrams per liter is one of the numbers for TSS and then there is a separate standard for aluminum.

So I don't think we really necessarily thought this was going to be feasible up front, but we thought we had to rigorously look at it. Forebay residuals was also going remain at the level they are now. They are going to have to be hauled off-site.

The alternative did not follow through or was not carried through for two reasons, reliability and redundancy and NPDES. The NPDES issue was related to the fact that inherent in this alternative is a dilution assumption. We're going to take some water from somewhere, we are going to add a portion of the residuals, dilute the concentration and get it down within the limits acceptable to the permit.

The obvious choice -- the reasonable choice for dilution water was the cleanest water we had that wasn't finished water where we hadn't put all of these chemicals into it and made it into potable water, which we would then use to dilute residuals before we

dump them in the river. So the cleanest water we had that wasn't finished water was the water that exits the Dalecarlia Reservoir where some of the sedimentation had already occurred and the water cleaned up again by ground desettling.

However, when we looked at the concentrations of that water, it was too high to serve as a dilution water source and then meet our permit for the discharge. So we didn't have a feasible dilution method that made any sense to us. So that is really why this alternative failed our -- our criterion.

Number 10, renegotiate the NPDES permit to allow us to return all residuals to the Potomac River. This is legally an optimistic way to think of no action alternative. Not only are we going to not go out in the river, but we're going to actually renegotiate with EPA and everybody is going to agree to leave it in the river.

This is pretty much a direct conflict with our discharge permit. So it screams out sort of philosophically on that basis. Either you are going to say we're going to have meet the permit or you're not. If you are, then this alternative is really -- flies in the face of that.

And, since we already have the no action alternative, it's a little redundant too.

Alternative 11, process most of the residuals at Dalecarlia, haul them off-site. This also involves a dilution step here to allow some of the residuals to be sent back to the river. In this case we're not talking about taking a stream of the residuals before they're processed and diluting them. Here we are talking about the side streams that are generated as a result of treating the residuals, take the side stream flows and dilute them with water to allow some of those to be discharged.

It may be not be fully obvious, but in these dilution alternatives we are talking about theoretically sending a tiny fraction of these residuals back to the river and still having to dewater and either monofill or pipe or truck the vast majority of them away to another place because the discharge standard that we have to meet to accomplish this dilution is so low. But nonetheless we wanted to rigorously show through our calculations that it was theoretically possible.

So what we did was say, okay, let's find a dilution water source again. We ran into the same

problem. Our best water source that we could use for dilution was the reservoir affluent. Once again, it had too much natural turbidity in it to serve as a water source when combined with the flow thing we were trying to dilute. So we didn't have a feasible way of doing the dilution.

So, in summary, here is how those three alternatives turned out. All three were not carried forward for further consideration.

Four alternatives were also looked at that involved building something in the Dalecarlia Reservoir itself. The first thing, number 12, which is storing the residuals at the reservoir, processing at Dalecarlia, with final disposal in the Dalecarlia and, in this case, the McMillan monofill.

Someone asked earlier, and I should have answered before, where did these alternatives comes from. This is an example of one, but the vast majority of these, I think like 24 out of 26, came from various Corps documents prepared by a whole host of other firms and work that was done by the Washington Aqueduct. We went through those various documents, found the alternatives, put them in his list. This is one of those that had come

from that historical list of documents.

This alternative did not survive the screening process based upon the reliability and redundancy criteria.

Excuse me for a second.

And actually I think we're going to show here all of alternative 12 through 15 were eliminated based upon that same criteria, reliability and redundancy. So you can just flip through those.

The basic reason for that is the reservoir, being the initial -- you call it a treatment step, but it is really a gravity settling step and in the water treatment process. It provides a very valuable function for the treatment plant.

As I said before about half of the river silt that enters the plant or the Dalecarlia Reservoir from the rive settles out by gravity in the Dalecarlia Reservoir. That is a tremendous benefit because it helps reduce the amount chemicals that has to be added to the remaining 50 percent of the residuals.

The concern we had with these alternatives -- the principle concern was we're building something in the reservoir, so we're making it smaller and at some

8-80-NB

point we're starting to impact it's effectiveness to service as that initial gravity settlement or a treatment step. So we had a concern about that.

UNIDENTIFIED SPEAKER: What is the next set?

MR. PALEN: The next set involves -- six or seven alternatives involves -- eight alternatives that involve some type of constructed facility at the other water treatment plant owned and operated by Washington Aqueduct at the McMillan Water Treatment Plant, which is located in Northeast, D.C. And these are -- I apologize for the numbering in these. We had a previous scheme for how to do deal with these slides, so forget the wacky n numbers. But the numbers are correct. They're just not in order.

Again, as stated in the previous set of alternatives, there is some commonality here in the criteria used to eliminate all eight alternatives. And I am going to go through each one and describe what it is. But the commonality revolves around the fact the residuals are really being produced on this side of D.C., either at the Dalecarlia Water Treatment Plant or at the Georgetown Reservoir two miles down the road.

But the alternative here assumes we're going to build some sort of facility at McMillan, which is six miles away across D.C.

The feasible way to get from point A to point B with pipeline residuals is to go in what is called the City Tunnel, which is an existing water conduit that is about 100, 150 feet below the ground surface. It was constructed, I believe, between the late eighteen hundreds and the early nineteen hundreds. It is like a nine-foot diameter tunnel, board and rock.

The concern we had with this grouping of alternatives, given that it had to involve construction in that tunnel, was that construction would probably take between one and two years to complete. During that time, the tunnel would have to remain dry and the McMillan Water Treatment Plant would essentially be out of service because there is no other way to get water from this side of the river over to the McMillan Water Treatment Plant.

We're kind of over here at Dalecarlia, right on the border of D.C. and Maryland. The McMillan Water Treatment Plant and reservoir is over here. And this is the connecting tunnel.

This tunnel goes from the Dalecarlia Water

Treatment Plant down to the Georgetown Reservoir where treatment is occurring, sedimentation is occurring. Then that settled water going to McMillan goes through this conduit, or called the City Tunnel, over into a reservoir and then ultimately into the McMillan Water Treatment Plant for final treatment of that portion of the water that goes to the eastern side of D.C.

So, as I mentioned, this alternative, or this set of alternatives, we would have to work in the City tunnel, dewater it, which is a bit of uncertain thing to think about. The tunnel was built a long time ago. The precise condition of this tunnel is not known. It hasn't been dewatered for a number of decades. So here was some uncertainty as to the length of time it might take to dewater due to its conditions, do other fundamental fixes that might need to be made to the tunnel as you're building a parallel pipeline through it. That related into a certain general uncertainty as to whether the alternative was feasible.

And then there was this issue of it will probably take two years to do it. It is difficult construction in a tight location, the conduit, and it involves just building difficult things in those confined

spaces.

The general feeling about losing McMillan's production for perhaps two years was too much of a negative impact on the overall reliability of the water production system in general, especially bearing in mind that during that same time frame we would also have to be doing improvements to the Dalecarlia water plant to change the way its residuals were removed, so from say the sed basin.

So, if we only had to do this tunnel and only had to take Dalecarlia water -- the McMillan water plant out of service, it would be marginal, but given that we were also in the parallel having to do Dalecarlia water plant improvements, it just was too much risk to the overall production capability of the water system in general.

There were also other criteria like cost that came into play here, but the first one I just described is really the main one.

So, in summary, all of those eight alternatives were ultimately not carried forward for further consideration.

Go to the next one. Catch up with the

slides here.

And then there is only one more grouping, if I've done my math right. We'll get to those.

These final three alternatives involving building facilities at the Dalecarlia Water Treatment Plant. Number 24 involves co-processing residuals from the Forebay in Dalecarlia -- at the Dalecarlia plant and hauling these residuals off-site.

As I mentioned earlier the co-processing is thought to have inherent disadvantages over individual processing, so this alternative was eliminated for basically the same reasons, the reliability and redundancy reason.

The next alternative, 25, involved processing the residuals at Dalecarlia and hauling those off-site, processing Forebay residuals by current methods and hauling them off-site. It is essentially the same as the last alternative without the coprocessing. So by eliminating the coprocessing alternative and keeping this one, which was our outcome, for further study, we'll really trying to retain the better of the two and get rid of the disadvantages of the weaker.

MR. CAMPBELL: Was there a truck issue

related to the former one, the coprocessing, was there more trucks associated with it?

MR. PALEN: Well, as I stated before, the coprocessing results in a net increase in the amount of residuals that we need to -- that will be produced because we can't get it as dry when it is processed together. So that would, in this case, translate to a slight increase in the number of trucks that would have to move through the neighborhoods to dispose of this material off-site.

8-81-EB

UNIDENTIFIED SPEAKER: What is the current methods for processing the Forebay residuals?

MR. PALEN: The current method is to periodically dredge out the Forebay. I could probably be a little more accurate in the timing of that, but I know it occurs every year. I don't know the exact or the month of the year. It is then stored in an area adjacent to the Forebay where some settling can occur. Some of the clear liquids can come of and the solids can settle down a little bit, but it is still a fairly wet material. It is then removed periodically, I don't know about every year, I don't think it is, and placed on a pile up near -- sort of across from the back end of Sibley Hospital

where it is allowed to gravity drain and then periodically hauled off-site, I think, in general in the area of five to ten years, although it has been different intervals over time as I understand it.

So it is a pretty simple process, in considering that it is mostly silt and sand out of the Potomac River. There is no chemicals added to it. It is, I think, an appropriate process.

The final alternative, number 26, was one of those added as a result of our scoping meeting. It involved using new technology, plasma oven processing at Dalecarlia followed by hauling the material off-site.

Now, plasma oven technology would generate a very, very small volume compared with the dewatering technology that we were talking about, or most of the alternatives that might make it 30 percent solid material and 70 percent water.

However, this alternative was not retained once we examined it, we did some study of the technology itself, for a couple of reason. One was it, as in the of some other alternatives and technologies, added to the technology. We still had to thicken, pump, dewater the residuals with the types of technologies were talking

before, getting the material dry enough to then put it into the plasma oven to make that technology feasible to function.

So there was a cost added for using these technology in addition to everything else. It is also a rather innovative technology. It is a cutting-edge type of technology. It is not used for this type of residuals processing activity in the wastewater industry to our knowledge anywhere, certainly not in the United States. It is a pretty energy intense technology because we're talking about processing a waste that does not have much fuel value, if you will. It is earth, sand, and turbidity from the river and it is coagulant chemicals. None of those have much BTU fuel value.

This technology is a lot more feasible when you're talking about processing some waste that has some inherent fuel value to it, so you don't have to just add a lot of either natural gas or some other fuel supply to heat up the material to say 3,000 degrees C, which is the kind of number that this technology uses, so that you can reduce the volume of the material.

So for a variety of reasons, this technology was not viewed as practical at this time and

it was not carried forward for examination. But it was -- like I said, one of those where the citizens had suggested an alternative and we did an evaluation of it and that was included in the feasibility study.

So, in summary -- turn to the last slide -- for this group, we retained number 25, which is known as our trucking alternative in simple vernacular.

In summary of overall, we retained 4 alternatives, and they include the following, of the 26. One is to discharge to the Potomac River, the no action alternative. One is number 2, the monofill alternative in simple terms. Number 5, the new pipe to the Potomac Interceptor and dewater at Blue Plains. And number 25, which I just described, which is processing at Dalecarlia and hauling off-site by truck.

That pretty much covers what I would like to cover in these very short version of this. I did along the way here give you much of the detailed information that I had in my other notes. I don't know if I did 40 minutes, but I tried to make this as clear as I could.

Any questions? Yes.

UNIDENTIFIED SPEAKER: I have a question

8-82-EB, HA

1 and a comment sort of also. You indicated that almost
2 all of the alternatives you looked at were things that
3 had come out of studies that had been done before, other
4 reports. The only two really that are new and different
5 are the use of the barge and the plasma oven. And I
6 guess it just strikes me that it is sort of nice to come
7 up with some new -- something new and different. And
8 both of those, you said, were innovative and they weren't
9 proven, so let's eliminate them.
10 And I wonder if they should be looked at
11 more closely. The barge is -- you said a pipeline has to
12 go through the C and O Canal area. Well, maybe that
13 could be done easily. It's not that far.
14 The plasma oven, how many trucks would
15 that mean then going out and how much more does it cost?
16 MR. PALEN: Let me do the plasma oven
17 first.
18 UNIDENTIFIED SPEAKER: Okay.
19 MR. PALEN: The costs of the plasma oven
20 are a little more conceptual because of the innovative
21 nature of the technology, the fact that it hasn't been
22 applied.

8-83-EB

23 UNIDENTIFIED SPEAKER: Where has this been

used? You said in other parts of the world.

MR. PALEN: Where is this technology used? It is really used for treating other types of waste.

MR. FLEISCHER: It is used -- well, not a lot, but it generally discussed for use with hazardous waste and things like that, hazardous waster materials that you want to completely destroy.

MR. CAMPBELL: And also things the burn. They tend to be organic.

MR. PALEN: It is a very expensive process to operate as well as build. It's is very, very complex in terms of the machinery. It has air permit issues because you're burning stuff here. It's not an incinerator, but if I would characterize it as air issues. But they are not tremendously complex in permitting and incinerator-type facility because you're burning quite a bit of fossil fuel or something to get the temperature up high enough to essentially remove the majority of the mass of the solids and turn it into an elemental form, if you will.

So the cost we estimate associated with it would be probably an additional $20 million to add this facility on top of everything we are already going to do.

8-84-AB, EB

UNIDENTIFIED SPEAKER: Ninety-five million?

MR. PALEN: Well, not as high as that, but $60 million kind of number for what we were envisioning now, so it is probably 80 or more.

I think my major concern with it was that it's just -- I'm an engineer that does cutting edge things in general in water treatment. This is very cutting edge. It is not a little cutting edge. It is very cutting edge. So at some point you get into questions about just how far out on that do you want to be and how reliable will that system be. Not that they shouldn't consider new things, but there is a point where I think a little too much innovation. It might be just a little early for this technology, let's put it that way.

8-85-EB, GB

UNIDENTIFIED SPEAKER: Do you know how much it would reduce the -- you know, the amount of residuals that have to be trucked away?

MR. PALEN: I don't have that number in my head, but it essentially turns into a solid material with very, very little water because of the temperature being used. So it is almost like an ash material that results from that process. As opposed to it going from 30

percent solids to 50 percent solids, it goes to 90 -- I don't know the right number, but say 99 percent solids or something.

So you haul of a very, very small material, volume of material. But one of the interesting things you have to ponder is where you put this stuff when you concentrate things that much and you add that much heat to it, you do tend to change some of the forms of these materials, so I couldn't say for certain that we might not turn a waste that isn't hazardous into one that is by all of this concentration that is occurring because all of the mineral and materials are still there in some form. So that would be one of my other concerns with this before I would try to actually implement it.

UNIDENTIFIED SPEAKER: So there is a lot we don't know about it.

MR. PALEN: There is a great deal -- this one is a lot different than the other alternatives in terms of the level of uncertainty.

MR. FLEISCHER: May I talk about the barge a little bit. Glenn went over it fairly well, but -- yeah, I'll just talk about some of the issues that came up.

We have an arm or a subsidiary of CH2M Hill that does -- does ports, harbor type of work and we had some people from that group evaluate the barge option for us.

Some of the issues that came up -- one that Glenn mentioned was navigation constraints. There is eight bridges between Blue Plains and they Key Bridge. So that's one.

8-85-HA

UNIDENTIFIED SPEAKER: You can't go under a bridge?

MR. FLEISCHER: You can go under the bridges, but they are -- some of them are fairly low and we had trouble finding barges, commercial kind of barges that you would use for this that could go under the bridge, particularly the one by National Airport. So that is one issue.

And the issue of turning radius -- I'm not a barge person, but turning radiuses of, you know, barges that weigh tons and tons and tons to get through the small opening in the bridges is an issue. And we started out saying, well, if we could have, you know, one barge going each way per day and the barge got so big it really couldn't do that, so we ended up having multiple barges,

say three -- I can't remember the exact numbers, maybe three or four each directing each day. Then you get with issues like what -- are there places for them to pull over and dock so another barge can go by because the channels are very narrow. You know, those type of navigation constraints.

The Coast Guard really doesn't support any navigation above Key Bridge. You know, for example, the tourist boats out there, they go to Key Bridge, they turn around and they come back. So to go further up, if you decided to put the loading area further up, say all the way up here or by Georgetown Reservoir, that would have to be dredged -- that would have to be dredged and probably blasted because there is a lot of rock in there.

So there is other kinds of navigation issues that you would have to deal with. And then there is weather issue. You know, the river itself, you know, it's a fairly narrow watershed. There are certain times with hurricanes or whatever that you could not safely operate the barges. So you need places to dock. And then you get into the issues of storing residuals so you can not operate over weekends and over storm periods. So that, again, adds additional facilities and costs that

would have to be born up here.

So are some issues that we sorted out.

MR. PALEN: One other issue, obviously, is just the aesthetic impacts of a residuals filled barge going up and down the riverfront. This is -- a barge full of residuals, that's not very pretty. So it's another concern, kind of like a monofill. I'll admit to that.

8-86-NB, NC, MA

UNIDENTIFIED SPEAKER: I think after listening to everybody tonight a lot of people think or most people think they have been left out of the -- they have been left out of the process. You've gotten much further ahead of where the citizens are in this community. And I live in Spring Valley and I know you're with the Army Corps of Engineers. And they have lost a lot of credibility as a result of the weapons of mass destruction debauch in Spring Valley where they initially cleared the area and said this is great, there is no harm and then a couple of years later you found out that there was a major, major problem down there. And what the -- what the Army Corps did there, and I am sure they were under a lot of pressure to do this, is they formed -- they formed a citizens committee. And I know it's a

product of statute, I realize it.

But they formed a citizens committee that sat down and meets periodically and goes over various alternatives and plans, et cetera. And I think you ought to consider doing something like that. I mean you suggest that people can come up in November and submit proposals. I couldn't submit proposals to you if my life depended on it.

You need a blue ribbon committee of citizens that are generally affected in this area, that are going to be affected by this program. You can select them. You can have a selection committee to select the committee members like they did in Spring Valley, because I know, I was part of the selection committee. So you had scientists, you had biologists, you had engineers, et cetera, to -- to really do a bang up job and to sit down and discuss the issues.

What I am really telling you -- suggesting, not telling you, I am suggesting to you, you've got to go back to square one. You've got people who are -- your mandate is to act in the public interest and I am the public that you protect. I got to tell you, you are in an adversarial role now. I mean, if you

haven't noticed that as a result of tonight's discussion, then you're not hearing it -- then you're not hearing it. This is an adversarial proceeding now and I think you have got to do something to bring it back into a collaborative proceeding. And they attempted to do that in Spring Valley and they're meeting with some success on it. Boy, it's like pulling teeth.

And you say you're under deadlines. Well, you negotiated the deadlines, you renegotiate deadlines. I mean, it is done all the time. It is done -- renegotiation is done all the time when there is a -- when there is a sounds and rational basis for doing that.

And, you know, I guess my question to you is what is the downside of delaying this or deferring what you are trying to do under a negotiated deadline so that you can give the people in this neighborhood and the surrounding neighborhoods and opportunity to really feel that their voices are being heard. And I think you're missing the boat if yo don't do that.

You're going to run into a lot of -- a lot of the opposition that you want into this evening and it will get worse. It will get worse. Because right now you have given me a fait accompli, three alternatives,

one of which is a throw-away. It's an absolute throw-way. So I'm down to two alternatives.

And that is the first I've ever heard of it and now I'm faced with two alternatives, plus whatever I can come up with. I can't come up with anything.

And the committee that they formed in Spring Valley -- and, again, I realize that it was authorized by statute, but they were given funds to go out and hire experts to help them in their negotiations over removing these weapons of mass destruction.

I don't see what the rush is here.

MR. JACOBUS: Well, I appreciate very much the discussion. I don't want to give a long answer to that except I understand what you're saying. It is our desire to through the last couple of meetings discussions with community leadership of the civic associations, and our discussions with the EPA to see how to move from confrontation to collaboration. And I don't have the answer for you here tonight. I think we have -- we understand the emotion and the passion by the audience here this evening.

And we will continue with you in this process. I don't have a specific answer, but I certainly

understand and I want to find a way to move to cooperation.

UNIDENTIFIED SPEAKER: Well, what I am suggesting to you is one of the ways you move to collaboration is you form some committee of experts that are taken from this entire group, because you can negotiate with a committee. You can't negotiate with an audience of 200 people. You would be out of your mind to do that. I mean, it is chaos.

But if you -- if those 200 people feel they are being represented by 8 or 9 or 10 people who have their interest at heart. Because right now you're in an adversarial situation, the long and short.

MR. JACOBUS: I understand and I appreciate your comment. And I am looking to move to collaboration.

8-87-MA

[redacted]: A previous gentleman, I think, made an interesting point to a lot of pressure you're under as a result of the EPA. And I don't understand how the EPA works. But do you have any background on what officials at the EPA entered into this consent agreement with this Wilderness Institute? Was this low level staff people or was this at the highest

levels in the EPA?

And it's apparent that the Facilities Agreement between the Corps and EPA put you in this bind. And I'm just wondering if we were to try and talk to EPA, who would we talk to and what kind of background who kind pushed this? Was this the highest level doing to the White House? Or people at EPA, the Administrator? Or was this kind of lower level staff people? Do you know anything about the background so we can get a sense of how one could even approach the EPA?

MR. HEUER: Can I address that just -- And, please tell me, Mr. Jacobus, if I'm stepping out of line and if I'm misquoting here.

Unfortunately, the NWI put some pressure on the EPA, forced their hand with this permit because of something that was going on -- the activities along the river.

And this other gentleman here, I only caught the tail-end of what he was saying. The Restoration Advisory Board -- he was talking about Spring Valley and some of the interest in Spring Valley.

The activist, whatever, government investigators, were putting this pressure that ended up

coming to Mr. Jacobus' door step. And this kind of happened almost accidently through FOIA requests and in effect a position was forced.

Above and beyond that higher level, I don't know. I mean, obviously all of this is being looked at, the Army Corps of Engineers, the people in this room, and hopefully they go back to their bosses at a high level to say we've got a problem, what can we do about the problem.

But the Restoration Advisory Board is actually at times (inaudible) of this bona fide legitimate agency that has to deal with this situation because they're practice remediation.

MR. JACOBUS: I would simply answer your question, sir, in saying that as a regulated water authority, our regulator is EPA Region III. The Water Protection Division is responsible for issuing the permits. And the official who issues the permit is John Kapakaza, and he is the head of the Water Protection Division. And so he was operating under the EPA's responsibility under the Clean Water Act.

Now, in the process of issuing that permit, they certainly received input from all of the

normal sources, public officials, private individuals, resource agencies, and interest groups. The permit was appealed. There was an action in the Environmental Appeals Board for the District of Columbia that was filed by the National Wilderness Institute, NWI.

But the pressure didn't come from NWI, per se. It came from EPA having the responsibility to issue the Washington Aqueduct a discharge permit. They exercised their normal responsibilities.

But it would be inappropriate because I am not a part of that team. They are the regulator. I'm the regulated entity. If you wish to address those questions specifically in writing or on the phone, however you want to do that, it is really Mr. Kapakaza's decision in how to answer that.

But we would give you the benefit of the fact sheet that we have here. It's at least a piece of paper in writing that lays out the EPA logic for how they got to issuing the permit.

MR. CAMPBELL: It seems appropriate to close right now. Everybody is fatigues, including us up here.

So it's safe to say that we learned a lot

tonight. We have a lot of material and inputs to sift through and we have a lot of things to respond to in terms of getting information out on the website and make some of the information a little easier to understand.

I think it is going to take us some time to work through the transcript and understand what those issues are.

Also, it is safe to say that we'll be back in another forum at some time in the fairly near future. It won't be the next two weeks because we have got to sift through what has happened here tonight. And we also have additional things to talk about. Some of the studies that are ongoing that we described tonight might be a subject of further discussion. So at some point in the fairly near future. I would like to thank you for that.

And, Tom, do you have any closing remarks?

MR. JACOBUS: I would like to thank you for coming. I stepped out of the room while Glenn was going through and I was speaking to the Maryland delegation. We will look for ways through some collaborative process, investigation ways of working with the elected officials and the community associations to

bring this process along.

So we very much appreciate your coming out on such a dark and stormy might. I peaked out there. It's still dark. It's not quite so stormy. So I hope you have safe trip home. Thank you very much.

(The meeting ended at 10:15 p.m.)

CERTIFICATE OF REPORTER

I, Linda M. Kia, the Stenomask Reporter who was duly sworn to well and truly report the foregoing proceedings, do hereby certify that they are true and correct to the best of my knowledge and ability; and that I have no interest in said proceedings, financial or otherwise, nor through relationship with any of the parties in interest or their counsel.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____, 2004.

_____
Linda M. Kia
Certified Verbatim Reporter

Document #9

From:
Sent: Wednesday, September 29, 2004 4:30 PM
To: Jacobus, Thomas P
Subject: RE: Dalecarlia 9/28 Meeting

My number is

9-1-EB

In my previous life, I worked at the Montebello and Ashburton WTPs in Baltimore. Montebello treated ~200 MGD. By a quirk of history, they have a ~400 MG surplus reservoir, built for treated water, but used only for recreation (the road around it is popular for walking, jogging, skating, and biking). Back in the 1960s or early 1970s, we started sending the basin cleanout and filter backwash solids to this Lake to meet NPDES permit requirements (we had to meet a 20 mg/l SS limit). ~5 MGD of this wastewater went into the Lake for 30-40 years before someone decided to dredge out the Lake. They also found that most of the material had consolidated, and there was remarkably little material to dredge. The solids leaving the Lake typically were 1-2 mg/l.
The 180 MGD Ashburton WTP has a ~20 MG wastelake built for the purpose of allowing the ~5 MGD of basin and filter backwash solids to settle before the overflow is discharged to a stream. This wastelake needs to be dredged every 10-20 years because it begins to fill up and reduce its detention time and effectiveness.
I don't know what the capacity of the Dalecarlia Reservoir is, but, if a section could be separated off, only a relatively small volume should be needed to allow the already settled WTP solids to resettle.
Just a thought.

Document #10

-----Original Message-----
From:
Sent: Wednesday, September 29, 2004 10:27 PM
To: Peterson, Michael C WAD
Subject: Residuals project question

Michael,

I am trying to understand the three chosen alternatives a little better, hoping that by understanding these I could perhaps come up with some possible new ideas that are feasible, at least in principle. Could you please help by providing some insight into the following questions?

10-1-AB

- There are two places in the Engineering Feasibility Study (EFS) where you estimate the cost of a pipeline. One is, of course, in the cost estimate for the pipeline to Blue Plains. On page 5-4 of the EFS the cost of building this 13 mile, 12 inch pipeline is estimated at approximately 13.4 million dollars -- roughly 1 million dollars per mile of pipeline. The second place where you estimate the cost of a pipeline is where you estimate the cost of the pipeline for Alternative 8, on page 3-23 of the EFS. Here, a 10 mile, 12 inch pipeline is estimated at 30 million dollars -- 3.0 million dollars per mile. This is 300% of the cost of the Blue Plains Pipeline. Could you explain what drives this difference in cost?

10-2-DI

- You are using a diameter of 12 inches for the pipeline to Blue Plains. Based on your calculation on page 3-19 of the EFS I understand that a single 12 inch pipeline by itself is enough to convey the maximum estimated volume of 1.15 mgd of thickened residuals shown in table 3-3. Are you going to use 100% redundancy and build a dual 12" pipeline, or are you just building a single 12" pipeline? If you are doing the latter, why wasn't redundancy needed?

Thanks in advance for your help,

-----Original Message-----
From: Peterson, Michael C WAD [mailto:Michael.C.Peterson@wad01.usace.army.mil]
Sent: Monday, August 30, 2004 10:02 AM
To:
Subject: contact information

Please do not hesitate to contact me if you have any questions.

Very Respectfully,

MICHAEL C. PETERSON
Environmental Engineer
Washington Aqueduct
5900 MacArthur Boulevard, NW
Washington, DC 20016-2514
michael.c.peterson@usace.army.mil

Document #11

From:
Sent: Thursday, September 30, 2004 10:40 AM
To: Jacobus, Thomas P; Peterson, Michael C
Subject: Suggested Alternative

11-1-GD

Goodmorning Washington Aqueduct!

Sounds like there is still a hostile crowd out there.

I walked behind the aqueduct, down the CCT and discovered there are additional buildings on the back side of the aqueduct and an access road that runs under the CCT. Could you build a road from that part of the facility that would exit onto Clara Barton Parkway? It would allow you to truck out the back rather than through the community. Even if this alternative works you would still be faced with the need for a centrifuge and I understand Brookmont is not happy about the proposed location or the size of the building.

Just a thought.

Document #12

Statement by Brookmont Civic League
on
Proposed Water Treatment, Residual Management Process

For the record, my name is Jim O'Meara, a resident of the 6000 block of Board Street. Like many residents in Brookmont, I am the water plant's next door neighbor. I am speaking this evening on behalf of the Brookmont Civic League.

I wish I had a more positive statement to make. But, in all candor, we strongly support the Westmoreland Hills and D.C. neighborhood civic associations in opposition to the landfill and trucking proposals in the Engineering Feasibility Study.

Whether it is the clear cutting of a large swath of trees, the installation of an industrial landfill, or sending alum sludge-loaded dump trucks through quiet residential neighborhoods, your consultant's suggestions, I regret to say, are seriously misguided and inappropriate.

The Army Corps cannot resolve one debatable environmental issue—the discharge of alum into the Potomac River—by adopting approaches which are environmentally far more odious and onerous to the neighborhoods around the plant, including Brookmont. 12-1-IA

So, we in Brookmont stand with the other neighborhoods in full partnership to oppose this plan, and more particularly, the process by which it was developed.

Additional Issue:

I would like to focus on an issue that is the central to all three residual disposal options: the proposed construction of the de-watering and thickening facility that would create the alum sludge in the first place.

-The water plant managers have shaped this discussion almost exclusively on residuals disposal. Largely overlooked in this discussion, is the construction in Brookmont's back yard of the gigantic facility that would create the alum sludge in the first place.

-Reserving the right to object to the construction of that plant, and I will so object, strenuously, if this process is not reversed, I would just comment on some particular points which led us to this position:

General
As proposed, this building offers no buffers, no setbacks, no visual relief on the side that confronts Brookmont.

By its function and design that facility would maximize its visual intrusiveness. It also has great potential to create thunderous industrial noise, widespread unpleasant odor, glaring light, and other forms of pollution in Brookmont.

-In short, your proposed building would be noisy, smelly, towering eyesore, and a massive intrusion imposed by the Corps on its Brookmont neighbors.

In terms of offensiveness, this facility is surely in a league with the proposed landfill operation.

Specific Issues:

Site Selection

The Engineering Feasibility Study asserts that the site for the de-watering and thickening facility was identified in earlier work. This work was not shared with the neighbors, who were most effected by this siting. Why were we not consulted? Other tracts of water plant land are available, and less intrusive. 12-2-BB

The consultant's current proposal would place the new de-watering facility immediately against the rear fence which serves as the plant's back property line (see Figure 4-8 in the Engineering Feasibility Study). Thus the proposed plant, at 750 feet from the intersection of Board and 61st Streets) could not possibly be any closer to Brookmont. And yet, again, the citizens of Brookmont were not consulted on the matter of siting the plant.

Further, the consultant's site plan makes no accommodations for setbacks or buffers on the Brookmont side, a common feature in most construction.

The plan *discusses* buffers, but offers none where they are most needed, to mask the plant from the people most effected by its construction--- the Brookmont neighborhood.

Loss of trees

Instead of creating a buffer, the plan actually eliminates one. The plan would require clear cutting a block long stand of 40-50 foot white pine trees at the back perimeter of the water plant. 12-3-BB

These trees would be replaced by a narrow strip of asphalt pavement…a narrow truck roadway between the fence and the back wall of the proposed towering building.

Unavoidably, these truck and plant operations would be seen and heard, in our neighborhood.

Cutting down the pine trees would be sadly ironic, really.

Those trees had been planted by Dalecarlia in the 1970s, at the request of the Brookmont Civic League, following construction in that area of some single story buildings and sheds. The Corps in an neighborly gesture, attempted to mask these buildings and nearby light poles. Notwithstanding that effort, which was and is appreciated by Brookmont, the low lying buildings and the light poles are still somewhat visible, and the sounds of the occasional trucks operating in that area are quite audible, serving as a possible harbinger of worse things to come.

Height of the Building

The proposed calls for a building that soars an estimated 120 feet above Brookmont. The proposed structure itself is at least 80 feet tall; it would sit on a lot that is an estimated 40 feet above the intersection of 61st and Board. However, the building might be even higher. Section 4.3 of the consultants' report emphasizes that "the thickness be raised out of the ground to the maximum extent possible to minimize excavation depth and eliminate the need for a deep thickened residual pump station." 12-4-BA

With massive 10 feet by 20 feet lighted windows, the building would stand like a skyscraper intruding on a quiet suburban neighborhood.

Surely the building would be in the same leagues as the landfill proposal, and both should be scrapped.

Sound and Odor

Your consultants are proposing to expand massively an industrial activity in a residential neighborhood.

Since these plants are normally sited far from population centers, here are some of things we are concerned about: massive metal plant doors clanging open and shut, dump trucks straining under full loads, backing up with their beepers sounding, roaring and spewing diesel fumes near our homes. 12-5-BA 12-6-BG

Worse, the constant industrial sounds of sludge being sucked up, piped, or otherwise transported to a thickening facility would be a constant annoyance.

By proposing such a building, the large glass windows and back doors of which open onto our you would insure our neighborhood of the full the grind of mechanical noise. Continual truck traffic along that fence line will provide additional noise.

Conclusion

The overwhelming negative aspects of this proposal, lead us to reject it completely. Building a de-watering and thickening facility here amounts to an effort to shoehorn an new industrial plant into a long established, quiet residential neighborhood, and it is simply wrong to try attempt it. The Corps should rethink the entire issue, and handle the de-watering and thickening at a more appropriate site.

With the plant, there is no need to consider residual disposal options.

Document #13

From: Peterson, Michael C WAD [Michael.C.Peterson@wad01.usace.army.mil]
Sent: Tue 10/12/2004 1:42 PM
To: Gamby, Patricia A WAD; Jacobus, Thomas P WAD; Palen, Glenn/WDC
Cc:
Subject: cold call from lehigh cement

I received a call from Lehigh cement representative who indicated that they were interested in seeing if our WTR would use usable in their cement-making processes. Apparently their plant manager, who is from Germany, is aware of the use of WTR for cement making in Europe. I told him that we were interested in identifying all of the potential uses for the material. He indicated an interest in getting a sample and doing the oxide analysis to determine if it would be suitable. I told him we might not be able to give him a sample, but we might prefer to run the analysis ourselves.

Apparently the plant at Union Bridge, MD is the biggest cement making plant in North America.

He proposed meeting here on Tuesday to get a better understanding of our situation and residuals. Let me know if you think that we should:

1- meet with him at this point
2- give him a sample or run a sample ourselves

13-1-EA

Thanks,

Mike

Document #14

From:
Sent: Friday, November 05, 2004 2:15 PM
To: Peterson, Michael C WAD
Cc
Subject: Washington Aqueduct Residuals Treatment Alternative

Mike,

I'd like to propose a residuals treatment alternative that addresses neighbors' concerns regarding building the centrifuge and trucking sediments through residential neighborhoods.

Instead of removing sediments at the Water Filtration Plant on MacArthur Blvd., consider a new sediment treatment facility and centrifuge near the Beltway and Clara Barton Parkway, perhaps on the Carterock Naval Surface Warfare Center or David Taylor Model Basin property.

If homeland security issues are a concern, a new water treatment facility might be built using Homeland Security funding on the Great Falls C&O Canal National Park property further upriver, away from dense residential development.

Locating the sediment treatment facility by the Beltway would provide better access for trucking. This would also provide an opportunity to build a modern water treatment facility. Final chemical treatment might still occur at the Water Filtration Plant, or it might only be used for storage.

Let me know if you have any questions.

14-1-BB

PS: What is the chemical analysis of the residuals? Can the residuals be processed to make a usable product such as what the Maryland Department of Environmental Services does with composted sludge? Topsoil? Soil amendments? I understand alum binds with phosphate and reduces phosphate runoff from farmland. Can the alum be reused at the Blueplains Sewage Treatment Plant? What do other water treatment facilities do with residuals? Let's think outside the box.

14-2-EA

Document #15

Peterson, Michael C WAD

From: WWW [www@wfpub.usace.army.mil]
Sent: Tuesday, November 09, 2004 11:37 AM
To: Peterson, Michael C WAD
Cc: Schultz, Paula NAB02
Subject: Comments on Proposed Water Treatment Residuals Management Process

Specific Comments	Under what law or regulation is it forbidden to return the silt removed from Potomac River water to the river from which it came? This would seem a natural and environmentally neutral procedure as well as more economical and less disruptive. Could not the provisions preventing this approach be challenged or changed?
Name	
Agency	Spring Valley-Wesley Heights Citizens Association
E-Mail Address	
Telephone Number	
Please Contact	

15-1-JA

Peterson, Michael C WAD

From: WWW [www@wfpub.usace.army.mil]
Sent: Tuesday, July 13, 2004 8:23 PM
To: Peterson, Michael C
Cc: Schultz, Paula
Subject: Comments on Proposed Water Treatment Residuals Management Process

16-1-NC

Specific Comments

I am a resident of the Westmoreland Hills subdivision which is immediately adjacent to the facility where the Corp of Engineers proposes to dump sludge of enormous proportions. Although this project appears to have been in the planning and development stage for many, many months, I only today received a notice from our community association disclosing the existence of this project. It is apparent that there has been a calculated effort to keep the information about this project from the neighborhoods which are being impacted by this project. Why has there not been any direct disclosure and announcement to the citizens of this community about this project in order to obtain our input after full disclosure? Would any individuals from the Corps of Engineers want their neighborhood to be treated in this manner? How can the Corps of Engineers honestly represent to the public that they are dealing in a fair and forthright manner with the local citizenry when they surprise the community at this late stage of the project? Good faith and fair dealing requires that you hold public hearings and forums, including reasonable notice to community and civic leaders, in the community affected by your project before proceeding any further. Anything less than that smacks of heavy handed government which any citizen, including employees of the Corps of Engineers, would reject out of fundamental fairness.

Name	
Agency	
E-Mail Address	
Telephone Number	
Please Contact	ContactRequested

Document #17

From:
Sent: Wednesday, November 10, 2004 12:21 AM
To: 'Peterson, Michael C WAD'
Subject: RE: Comments on Proposed Water Treatment Residuals Management Process

Thank you for your e-mail. Yes, the rest of my comment was cut off, which seems odd and a little troubling. I am also troubled by the fact that these figures are not publicly available on your webstite; I believe that this omission prejudices the public's ability to review and comment on your plans. I certainly have not had enough time to read through all of the materials since I only learned of your plans two weeks ago and only received a letter from you yesterday.

17-1-DA

I wanted to comment that in your analysis of Alternative Four, I think that you are too deferential to WASA's institutional concerns and that these could be dealt with by paying for better faciltities at Blue Plains. I also do not understand why waiting till 2008 for new digesters is problematic since my understanding is that the dewatering and thickening plant would not be functioning till then anyway.

17-2-GI

Also I am troubled that you did not adequately assess the costs of various options that you selected. How did you calculate the costs of trucking residuals given rising oil prices? I also did not see discussion of the costs of the pollution to the air from trucking, not to mention the costs (including increased noise, lights, and pollution) if the plant is located near a residential community. Thank you for your consideration.

Document #18

18-1-BB, BC, BG, GA

Specific Comments	Hello Delcarlia Officials: As 25-year neighbor of the Delcarlia Water Treatment plant I am totally against your plan to build a sludge factory here! You will ruin our living environment with the industrial noise, smell, and huge trucks constantly (24/7!) rumbling through our peaceful neighborhood. Do NOT build the sludge treatment facility here. Please figure out a better, less destructive solution! Regards,
Name	
Agency	
E-Mail Address	
Telephone Number	--- --- ----
Please Contact	ContactRequested

Document #19

From:
Sent: Thursday, November 11, 2004 12:05 PM
To: Peterson, Michael C WAD
Cc:
Subject: sludge treatment plant

Dear Mr Peterson—

19-1-GG

While I confess that I am only minimally informed about the various options on the table to deal with the sludge issue, and certainly have no alternative to propose, I am writing to express my concern that a plant has been proposed to process this material in a residential neighborhood. I cannot imagine that sludge deemed too harmful to enter the river is sufficiently benign to be processed and trucked through a wooded area of homes filled with children.

19-2-BB

I also am sympathetic to the concerns of residents who fear a 24-hour factory operation of any kind so close to their homes.

I would appreciate your adding me to any email alert list on this issue, and keeping me informed as you consider alternatives to deal with the sludge.

Thank you for your consideration of my views.

Sincerely,

The closer you are to death
The harder you cling to life.
TOUCHING THE VOID
Premiering on PBS, November 21, 2004 at 9 PM ET/PT.

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Document #20

From:
Sent: Thursday, November 11, 2004 1:08 PM
To: Peterson, Michael C WAD
Cc:
Subject: Dalecarlia Sludge Alternative proposals

Please evaluate the following options:

20-1-DA	1. Pipeline to Blue Plains without Dalecarlia dewatering facility
20-2-BB	2. Options with underground dewatering facility
20-3-BB	3. Options with dewatering facility built over the existing settling pools in D.C
20-4-BB	4. Options with dewatering facility built in Dalecarlia service area (DC or VA)
20-5-BA	5. Options with zero emissions- odor/gas/sounde etc. and no new visual and sound impacts on existing homes in the neighborhood.

Please acknowledge receipt of this message.

Thanks!

Document #21

21-1-IA

Specific Comments	Residuals should be removed by best possible/practical means rather than clearing a forest in the midst of a residential area and creating a huge waste site. Nine to ten trucks per day or even double that amount on public thoroughfares to existing sites which want or at least accept this waste is preferable to trucking and creating a new local dump on the site of a beautiful green space which could only serve as a temporary monofill solution anyway. The latter is offensive to the environment and good judgement.
Name	
Agency	
E-Mail Address	
Telephone Number	
Please Contact	ContactRequested

.

Documents #22

November 12, 2004

Washington Aqueduct
5900 MacArthur Boulevard, NW
Washington, DC 20016
Attention: Michael Peterson

Subject: Proposed Water Treatment Residuals Management Process, Request for Comments

Dear Mr. Peterson:

SCS Engineers is a civil and environmental engineering firm that has been retained by the Concerned Citizens, a coalition of neighborhoods surrounding the Dalecarlia Reservoir, to review background information on the Proposed Water Treatment Residuals Management Process and to offer comments on behalf of the Association. We understand that the Washington Aqueduct Division of the Baltimore District, U.S. Army Corps of Engineers will accept comments on alternatives not already considered in the Engineering Feasibility Study and Project Introduction and Description of Proposed Action and Alternatives prepared by CH2MHill for the Corps in May of this year.

The following alternatives for management of residuals do not appear to have been considered in CH2MHill's work to date:

1. Use new or existing outfall piping to transport residuals to Potomac River without dewatering, and transport via barge to bioreactor landfill.

   Bioreactor landfills are emerging as a technology of choice for disposal of municipal solid waste. Bioreactor landfills are able to accept wastes with liquids (such as water treatment residuals), because bioreactors use the extra moisture to enhance biodegradation and production of landfill gas. EPA recently published its final rules to promote bioreactor landfills (69 Fed. Reg. 13242, March 22, 2004).

   There are several regional landfills in Virginia that can receive wastes conveyed by barges, and that apparently could qualify under the new EPA rules as soon as next summer (when Virginia regulations will adopt the new Federal program). Management of water treatment residuals in such a bioreactor landfill would be superior to other dewatering techniques, if for no other reason than the liquids would be used beneficially in treating municipal solid wastes.

   The Feasibility Study considered a barge alternative, and screened it from further consideration based on reliability, land use (zoning) and proven methods criteria. We

22-1-HA

are surprised that of all Federal agencies, the U.S. Army Corps of Engineers would consider active maritime uses of navigable waters to be inconsistent with appropriate uses of the Potomac River shoreline. Regarding the "proven methods" criterion, it is remarkable that the Corps would consider barging—the very reason there is a C&O canal in the first place—to be unproven technology.

We agree that any barging alternative should include flexibility (e.g., storage capacity) to accommodate periods where unusual conditions such as floods, icing, etc. preclude barging. Suitable tanks (e.g., adequate to store the volume of residuals produced in a month) located near the banks of the Potomac River would be one approach to providing operational flexibility. If the Corps desires to limit barge traffic to a point closer to Blue Plains, then storage tanks provided as part of this alternative could be located at a point downstream, with a new pipeline constructed in the riverbed to connect the current outfall and the new tanks.

22-2-DA, DG

2. Use existing outfall piping to transport residuals to Potomac River without dewatering, and transport via new riverbed pipeline to Blue Plains for treatment.

The Feasibility Study does not provide much detail on the current methods used to transport residuals to the Potomac River. Apparently, there is a pipeline that has been used reliably for many years to convey residuals to the River. Use of the pipeline has the advantage of managing residuals without disturbing Dalecarlia neighbors.

An alternative that would use existing pipeline(s) to convey residuals to the River, and then transfer residuals to a new pipeline constructed along the bed of the Potomac River, should be considered. If necessary, a pump station (including one or more tanks) could be constructed near the River to facilitate this alternative.

22-3-DB, DE

3. Construct new pipelines within existing pipelines.

For the pipeline alternatives, it does not appear that the Corps has considered installing new pipelines for residuals within existing pipelines. Obviously, to the extent that existing pipelines can be used, expenses associated with procurement of right-of-way would be eliminated.

Using the existing outfall piping to the Potomac River has been mentioned above. Where the existing outfall crosses the existing Potomac Interceptor sewer, residuals could be transferred to a new pipeline constructed within the Potomac Interceptor, for example, and conveyed either to the vicinity of the David W. Taylor Naval facility at Carderock, or to Blue Plains, for further treatment and transport. If use of the Potomac Interceptor is not viable for any reason, then the new pipeline could be constructed within the existing raw water transmission line to Carderock.

Since Alternative 8 (construction of a new dewatering facility) was screened from further consideration based largely on economic factors, this alternative should be

retained, assuming the economic factors are mitigated by constructing new pipelines within existing pipelines. The same assumptions used regarding land acquisition costs for Alternative 5 would appear to apply with equal force to this variation of Alternative 8. The other screening factor mentioned for Alternative 8 (schedule requirements) also should be mitigated by eliminating the need to acquire land for pipeline right-ofway, and limiting consideration of sites for any new facility to a location (such as the David W. Taylor site in Carderock) near an existing pipeline.

22-4-DG

Another possible pipeline route to the north is the old outfall from the planned (but not constructed) Rock Run Advanced Treatment Plant in Potomac. We understand that the outfall for this plant was to be a pipeline from near the Avenal Country Club to a point below Chain Bridge. If this pipeline right-of-way could be used, then the cost of constructing a pipeline to the vicinity of Interstate 495 would be much lower than that shown in the Feasibility Study.

22-5-DE

The Feasibility Study mentions "ongoing projects" at the David W. Taylor Carderock facility that might prevent adequate acreage being available at this site, however, a more specific evaluation should be performed. Perhaps the mission of the David W. Taylor facility would be well-served by a facility to treat residuals (the Carderock facility has a wastewater discharge permit that limits solids, among other parameters).

This alternative would eliminate the need for residuals truck traffic on the neighborhood streets surrounding Dalecarlia, and would shift the necessary truck traffic to a nearby major highway better suited to it.

22-6-KA

4. Reduce volume of residuals requiring management by relocating or redesigning the intake structure(s).

When the Fairfax County Water Authority (FCWA) recently replaced its former raw water intake near the Virginia shoreline with a new structure near the middle of the Potomac River, one of the stated goals was to substantially reduce (e.g., by 50 percent) the volume of sediment that would be withdrawn from the River. Reductions in sediment withdrawn from the River would be directly related to volumes of residuals requiring management, no matter what approach is taken to managing residuals.

An alternative to relocate or redesign the intake structure to reduce residual volume should be considered, and such consideration formally documented.

22-7-KA

5. Reduce volume of residuals requiring management through active management of raw water intake.

In connection with the new FCWA raw water intake permit proceedings before the Maryland Department of the Environment, there was some discussion of trying to reduce withdrawal of sediment from the River by avoiding raw water withdrawals during periods of high river sediment. Apparently, such an approach was not practical

for FCWA, because it does not have sufficient water impoundment storage capacity at its Corbalis Treatment Plant. However, at Dalecarlia, it appears that the Corps has substantially more impoundment storage capacity than FCWA has at Corbalis.

An alternative to actively manage water withdrawals (e.g., avoid withdrawals during high sediment water flows) should be considered to reduce residual volumes, and such consideration formally documented.

22-8-OA

6. Use alternative processes for coagulation of sediments to reduce the volume of residuals requiring management.

Aluminum sulfate (alum) comprises a significant volume of the residuals produced at the Dalecarlia plant. The Corps should consider alternative proven technologies, such as the use of liquid cationic coagulants, to dramatically reduce the volume of residuals produced at the plant, and thus the volumes of residuals requiring management under any of the alternatives under consideration.

In addition to suggesting the above alternatives for your consideration, we offer several comments on the alternatives analysis included in the Feasibility Study.

Construction of Monofill in District of Columbia Will Require Protracted Permit Process

22-9-CA

At page 3-3, the Feasibility Study briefly refers to regulations that were reviewed to determine whether a monofill could be built within the District. The regulations cited in the text (§8-1052) pertain to "open" solid waste facilities, and specifically were prepared to address open-air solid waste transfer stations and recycling facilities (not solid waste *disposal* facilities).

In addition to the transfer station regulations cited by CH2MHill, there are prohibitions on dumping that would preclude operation of a monofill on the property of the Aqueduct in the District. Specifically, Title 8 (Environmental and Animal Control and Protection), Subtitle B (Waste Disposal and Management), Chapter 9 (Illegal Dumping Enforcement), of the District of Columbia Code (§8-902) provides:

> (a) It shall be unlawful for any person to dispose or cause or permit the disposal of solid waste, hazardous waste, or medical waste in or upon any street, lot, park, public place, or any other public or private area, whether or not for a commercial purpose, unless the site is authorized for the disposal of solid waste, hazardous waste or medical waste by the Mayor.

Definitions are provided at §8-901 for several key terms, including:

> "Person" means any individual, partnership, corporation (including a government corporation), trust, association, firm, joint stock company,

> organization, commission, the District or federal government, or any other entity.
>
> "Solid waste" means combustible or incombustible refuse. Solid waste includes dirt, sand, sawdust, gravel, clay, loam, stone, rocks, rubble, building rubbish, shavings, trade or household waste, refuse, ashes, manure, vegetable matter, paper, dead animals, garbage or debris of any kind, any other organic or inorganic material or thing, or any other offensive matter.

These terms would clearly appear to apply to the Corps (federal government) and operation of a monofill for disposal of residuals (dirt, sand, gravel, clay, loam, or any other organic or inorganic material). However, there is no current provision in the D.C. Code to obtain a permit or otherwise obtain the Mayor's authorization to construct or operate a monofill. The District does not have regulations for permitting solid waste disposal facilities such as landfills or monofills, and we are not aware of any plans by the District to develop such regulations.

It is unlikely that regulations governing a monofill could be developed by the District in time for the Corps to obtain a permit and construct a monofill in a five-year planning window.

The monofill alternative should not be considered further because necessary regulations and permitting infrastructure are not available to allow it.

Volumes of Residuals Noted in Feasibility Study Require Clarification

22-10-EC

At page 2-1 of the Feasibility Study, water treatment residuals are estimated to be generated at an average rate of 120 cubic yards per day. Converting to gallons per day, this would be about 24,200 gallons per day. The generation rate of 24,200 gallons per day is much lower than numbers used elsewhere in the report. For example, at page 3-6, it is estimated that the average of unthickened residuals to be shipped to Blue Plains is between about 1.6 million gallons and 8.1 million gallons per day.

On answer to this discrepancy might be that the lower number is a volume of dewatered sludge, while the higher numbers reflect residual volumes with no treatment at all. At page 3-10, it is estimated that an average of between about 390,000 and 2,000,000 gallons of thickened residuals (2 percent solids) per day would be taken to Blue Plains.

Introducing the 120 cubic yard per day average production rate (i.e., for dewatered residuals containing more than 30 percent solids) at the outset of the Feasibility Study presumes that dewatering will occur at Dalecarlia—putting the cart before the horse, and indicating a bias to the report almost as soon as it begins.

The Corps should provide a simple table showing the design criteria for residuals to be managed, including average production volumes, solids content, and chemical content. These should be provided for current technology used at Dalecarlia, and should be compared with

other water treatment systems that currently use Potomac River water (e.g., FCWA) on some consistent basis (e.g., per million gallons of water delivered).

22-11-EC

Next, the Corps should provide simple tables to illustrate how the volumes, solids content, and chemical content of residuals are expected to vary over the design life of the project for each of the alternatives considered. As noted above, we believe the alternatives should consider approaches to reduce the volumes of residuals requiring management.

Operating Costs for Monofill Alternative Appear Low

The Feasibility Study puts the annual cost of operating a monofill at $138,000. If true, assuming a 120 cubic yard per day generation rate (seven days per week, water treatment residuals only), the cost per cubic yard would be $3.15. It is hard to believe that the dewatered residuals could be transported to the monofill for $3.15 per cubic yard, let alone placed, covered, and monitored for the operating life of the monofill and a 30-year post-closure period.

22-12-AB

Monofill-specific operating costs are probably understated in the Feasibility Study by a factor of five or ten. The annual O&M cost for Alternative 2 (Dalecarlia Monofill) probably will be in the range of $1.4 to $2.1 million, including both the monofill-specific operating costs and the other operating costs of this alternative.

The Feasibility Study Ignores the District's Urban Trees Law and Little NEPA

22-13-CD

The Urban Forest Preservation Act of 2002 was passed by the Council in an effort to minimize loss of environmentally important tree cover throughout the District of Columbia. It requires permits for removal of certain trees, and payments into the Tree Fund of at least $35 for each inch of circumference for certain trees.

Clear cutting any area of the forested Dalecarlia property (e.g. to facilitate construction of a monofill), will necessarily require compliance with the Urban Forest Preservation Act.

In addition, DC Public Law 8-36, the Environmental Policy Act of 1989, requires that all District of Columbia agencies consider the environmental impact of all proposed major actions prior to issuing any approvals for such actions. It does not appear that the Feasibility Study expressly considers DC Public Law 8-36. It is not clear that the screening criteria used by the Corps to reduce the number of alternatives under consideration are consistent with DC Public Law 8-36, or with NEPA, for that matter.

Summary

22-14-NB

The limited number of alternatives remaining under consideration (three), and the elimination of several alternatives that appear to have relatively little environmental impact (e.g., pipelines to convey residuals to major transportation routes), suggest that the screening process should be revisited to better achieve the goals of NEPA and DC Public Law 8-36.

Thank you for considering our comments. If you have any questions, or wish to discuss any of the points raised by this letter, please feel free to contact the undersigned directly.

Very truly yours,

Michael W. McLaughlin, P.E.
Senior Vice President
SCS ENGINEERS

MWM:bpc

Document #23

23-1-KA

Specific Comments	Have you considered conversion of the water intake from a surface intake to a well based intake system. The current surface intake is the source of the turbidity that needs to be removed. If you switched to a series of properly constructed wells under the river for the intake the turbidity of the water would approach zero and thus you could reduce the costs for sedimentation and eliminate the need for a costly sludge thickening and trucking process. I realize that the well based intake would be costly to construct and operate but it would be environmetally better in at least two ways: 1) vastly reduced turbidity and thus much less need to chemical floculants to remove sediment; and 2) you could decommission little falls dam and improve fish migration on the river by restoring its natural flow which would work much better then the fish ladder. Please consider this alternative by instructing the engineers to at least cost out what a well based input would be. Regards,
Name	
Agency	Citizen
E-Mail Address	
Telephone Number	
Please Contact	ContactRequested

Document #24

Specific Comments

Dear Mr. Jacobus:

Thank you for the opportunity to offer suggestions on additional alternatives for the Residuals Project. I would like to offer some prospective additional alternatives as well as comments on the screening criteria.

24-1-IA

There should be a criterion as to the number of years for which alternatives will be projected to provide adequate service. Alternatives should provide service for at least 30--and quite possibly 40 or 50--years in order to be considered feasible and prudent. The only alternatives with a shorter service life that should be further considered would be interim solutions--to be operated pending completion of a permanent alternative--that would have impacts and costs appropriate to a temporary solution.

24-2-FC

Similarly, alternatives should not necessarily be limited to those which can be implemented by 2009. Feasible alternatives--which meet the other criteria--should be reconsidered for further study if their only deficiency is their inability to be on line by 2009.

24-3-FD

If the DEIS finds that otherwise promising alternatives are available, then potential actions options would include implementation of a temporary interim alternative and/or renegotiation with the EPA to extend the deadline until such alternative could be implemented. The trucking of residuals could be considered a potential interim solution. While this would have definite impacts on neighborhoods served by the roads along the trucking routes, it would have less impact if limited to the time until an additional permanent alternative--such as a pipeline--could be implemented later (but committed to in the Record of Decision). In addition to the proposed pipeline to Blue Plains, pipeline routes that are shorter or with more accessible rights of way should be considered. Two examples could incorporate the former rail line that runs through the Aqueduct, which is now the Crescent Trail. It should be possible to construct a pipeline along this right of way with little or no permanent impact to the Trail as a recreation facility. The pipeline could turn out River Road (similar to the previously considered alternative) or continue east to the current CSX system, where the residuals could be transferred to rail cars for further transport. A pipeline terminating at River Road could deliver residuals to a drying facility located on suitable industrial land near I-495 or to tank trucks for transport to a more remote procesing facility. Similarly, a pipeline following the trail downtown might alleviate some of the impacts discussed at the last meeting to properties along MacArthur Blvd, and facilitate! connection to the pipelines previously discussed to Blue Plains or transfer to tank trucks to Blue Plains (as an interim solution if the entire pipeline cannot be completed by 2009). I understand that these may require implementation of an interim alternative if completion by 2009 or renegotiation with EPA are not

feasible. Interim alernatives could include trucking and/or a landfill that avoids permanent impacts to viewsheds, even though both of these alternatives are likely to have impacts that would be undesirable for the short-term and probably unacceptable for the long-term.

24-4-CA

If any landfill is further considered for the short or long-term, I would recommend moving the residuals under MacArthur Blvd through a short underground tunnel (e.g., small rail or conveyor system), similar to but much smaller than the existing rail tunnel through the Aqueduct, or a pipeline in order to obviate the need for trucks to carry the residuals across the street.

24-5-FD

The costs associated with the drying process proposed for a permanent trucking alternative may require modifications for using trucking as an interim measure. Possible modifications could include partial drying with presumably less expensive equipment, or no drying. Both of these methods would likely require additional trucks (and/or substitution of tank trucks), but this may be worthwhile if it affords implementation of a better long-term solution.

24-6-EB

Long-term trucking might be a potential acceptable long-term measure if the number of required trucks could be substantially reduced. As discussed at the last meeting, it may not be clear whether application of certain oven technology would be feasible. I have not been been able to review the proposed drying process, though I did examine samples of the dried residuals at the poster session. Centrifuges might increase or speed the water drawn from the residuals if only gravity or air-drying is currently planned. Also, grinding the residuals into a fine powder could increase the density of the residuals, permitting a greater weight to be carried in a smaller volume--and perhaps in a smaller number of trucks or in trucks of smaller size.

24-7-BB

Another option that would lessen the impacts of trucking would be the relocation of part of all of the Aqueduct facility (or construction of the dring facility) to federal lands closer to I-495, such as on part of the Navy's property in Carderock--which must be close to the Aqueduct's current pipeline between Great Falls and Dalecarlia.

24-8-EA

Understanding that the current dumping of residuals does not appear to be a feasible long-term option (though it may be warranted as an interim solution), perhaps there may be dumping options that avoid harmful environmental impacts--such as diluting the residuals through the constant dumping of diluted residual at many sites located to avoid or minimize damage to the environment.

24-9-EA

Finally, perhaps creation or extension of an island or islands in the Potomac could be accomplished with these residuals in a manner that that does not result in the environmental impacts caused by the current dumping. It may be possible to create islands that would be relatively consistent with viewsheds and habitats. This has been successfully done on land with far less environmentally-friendly materials (e.g., Mount Trashmore in Norfolk, Virginia).

Again, I appreciate the opportunity to offer additional suggestions and comments. I encourage the Corps to continue to work with the community to identify and implement a solution (or solutions) that minimizes long-term impacts to our neighborhoods. Sincerely,

Name	
Agency	N/A (individual)
E-Mail Address	
Telephone Number	
Please Contact	

Document #25

Public Submission of Residuals Alternatives

From:
Sent: Monday, November 15, 2004 5:01 PM
To: Peterson, Michael C WAD
Subject: Public Submission of Residuals Alternatives

Dear Michael,

Per our conversation of just a few moments ago, I am submitting for your consideration the attached set of alternatives regarding the Residuals Project at Dalecarlia. It is in Adobe Acrobat format, but should you have any difficulties in receiving or reading the document, please contact me and I will deliver a hard copy.

25-1-QA

Regards,

SludgeStoppers

Document #26

Specific Comments	Attn: Michael Peterson Dear Mr. Peterson:
26-1-IA	This comment is being submitted on behalf of the Palisades Citizens Association, which opposes the proposal to truck through the Palisades and other District neighborhoods the residual treatment solids that result from the water treatment process from the Washington Aqueduct.
26-2-DA	We believe you should revisit the only true permanent and environmentally sound solution to this process, namely construction, through horizontal boring, of a pipeline to the Blue Plains Water Treatment facility. Such a pipeline would avoid construction of a centrifuge, make dumping unnecessary, and preserve the character of the affected land in all of the communities that will be impacted.
26-3-IA	We urge rejection of Alternative 2 that envisions disposal of solids at a landfill to be constructed in the Greater Spring Valley area and support, as noted above, Alternative 5, the construction of a pipeline to Blue Plains. Respectfully submitted,
Name	
Agency	Palisades Citizens Association
E-Mail Address	
Telephone Number	
Please Contact	

Document #27

27-1-BA	1. If you plan to build the residuals treatment facility, the round settling tanks can be built into the ground with the top lip at gound level. There is precedence for this strategy on the facility. The ponds on the south side of the facilty are at ground level.
27-2-BA, BC	2. Built berms and other architectural landscape devices to hide the facility and control noise.
27-3-BA	3. The truck entrance and exit can be below grade to the west of the Crescent Trail.
27-4-BB	4. Where is the disposal site for the trucked sludge? Has the Aqueduct entered into negotiations with the property owners? What is the capacity of the site and for how long? What will be done when the site is filled? Will you be able to find a site in 20 years within a reasonable distince from Delcarlia?
27-5-BD	5. When will the digital model of the area be available for viewing. How far will the model extend beyond the boundaries of the existing site? I would suggest from Goldsboro road on the north, Masschuetts on the east, Nebraska/Arisona on the south and the crest of the river valley on the west. It might be interesting to include the George Washington Parkway from Rosslyn. I know that the technolgy and tools are available to make the digital process economincal. Also, there needs to be a summer and winter conditions for the flors.
27-6-AB	6. The spreadsheet for costs needs serious editing to develop the supporting data for the line item costs.
27-7-AA	7. The 20 year discount rate is a trivial line item.
	8. Many government agencies, including the military are evaluating projects from a
Name	
Agency	
E-Mail Address	
Telephone Number	
Please Contact	ContactRequested

Document #28

Specific Comments

Ladies and Gentlemen: I am writing to comment on the Water Treatment Residuals Management Project. I live in the vicinity of the Dalecarlia facility in the Brookmont neighborhood of Bethesda. I would ask you to consider the following alternatives in your Draft Environmental Impact Statement.

28-1-DC

1. Convey Dewatered Residuals to Blue Plains Via Potomac Interceptor
Alternative 4 of the Engineering Feasibility Study of May 2004 only mentions in passing that the residuals could be dewatered at the Dalecarlia facility and then conveyed to the Blue Plains facility via the Potomac Interceptor. The introduction to Alternative 5 then states that such an option would have the same negative consequences as Alternative 4. That is not true. Instead, such an alternative would eliminate all the negative effects on the Potomac Interceptor of Alternative 4. As mentioned in the Feasibility Study, an on-site thickening facility would not only allow control over the solids-collection process and provide a more consistent residuals product. If combined with additional storage facilities, it would also obviate the need to discharge residuals into the Potomac Interceptor during wet weather, which is the only time DC WASA has a problem with Combined Sewer Overflows. During dry-weather days, the Potomac Interceptor has more than ample capacity to accept ! the residuals, which, at a 2% concentration of solids, would still be easily conveyable. An active management of residuals discharge into the Potomac Interceptor would also reduce, if not eliminate, the need for additional treatment capacity at the Blue Plains facility. Such active management, if coordinated properly with the Blue Plains facility, would also allow Blue Plains to adjust their treatment processes accordingly. The technical issues therefore seem relatively easy to overcome. According to the Engineering Feasibility Study, however, no attempt was made to formally contact DC WASA about this option, even though DC WASA is a major offtaker of drinking water from the Dalecarlia facility. That is inconsistent with the Corps' obligations under the National Environmental Policy Act to thoroughly evaluate all reasonably available options.

28-2-DB

2. Convey Dewatered Residuals to Blue Plains Via Pipe in Potomac Interceptor
If it were not feasible or not economically practicable to treat the water treatment residuals jointly with the incoming sewage at the Blue Plains facility, then dewatered residuals could be conveyed to Blue Plains through a dedicated pipe within the Potomac Interceptor. Such a pipe could consist of either stainless steel or high density polyethylene and would be attached to the inside of the Interceptor using metal brackets. Installing such a pipe within the Interceptor would not appear to be a problem, as the Interceptor is large enough for people to work in on dry-weather days, when only the bottom of the sewer would be covered with sewage. Only where the Interceptor passes under the Anacostia River may it be necessary to lay a separate pipeline along the Interceptor. Given the relatively easy access to the Potomac Interceptor, and the low risk of any negative consequences should the pipe malfunction, it would not

	appear to be necessary to install redundant pipes in areas other than the Anacostia crossing. The effect on the capacity of the Potomac Interceptor would therefore be acceptable. Most importantly, it would not be expected to lead to a significant increase in the number of combined sewer overflows. At the same time, the negative consequences (if any) on the treatment processes at Blue Plains could be avoided.
28-3-DB	In conversations with neighborhood representatives, representatives of the Army Corps of Engineers have admitted that similar solutions have been successfully implemented in other cities. Not analyzing such an option thoroughly would therefore be inconsistent with the Corps' obligations under NEPA. Please don't hesitate to contact me with any questions you may have regarding these comments. Yours sincerely, [illegible]
Name	
Agency	
E-Mail Address	
Telephone Number	
Please Contact	

Document #29

November 15th, 2004

Mr. Thomas P. Jacobus
General Manager
Washington Aqueduct
U.S. Army Corps of Engineers, Baltimore District
5900 MacArthur Boulevard, NW
Washington, DC 20016-2514

Re: Brookmont Community comments on and alternatives to the proposed Washington Aqueduct Water Treatment Residuals Management Process Facility to be located at the existing Dalecarlia Facility

Mr. Jacobus,

This letter is submitted by the Brookmont Civic League on behalf of the residents of the Brookmont neighborhood (see attached Petition).

We are writing to object to the U. S. Army Corps of Engineers (USACE) failure to follow the spirit, intent or letter of the procedural requirements set forth in the National Environmental Policy Act (NEPA) with regard to the proposed expansion of your existing Dalecarlia Facility.

Secondly, we are submitting our questions, comments and criticism of the narrow range of alternatives proposed by the USACE in your Engineering Feasibility Study (EFS) dated May 2004.

Finally, we submit our proposals for viable alternatives that were not considered in the EFS. We believe these proposed alternatives demonstrate a range of appropriate options for a more sensitive and beneficial response to this matter, and point out that they have been generated within the limited time available to us due to the USACE's lack of sufficient and meaningful notification.

29-1-NC

A. Lack of sufficient and meaningful notification.

The citizens of Brookmont believe that the USACE failed to act in good faith and consistently with the NEPA throughout the process of moving forward with plans to expand the Dalecarlia Facility. A central component of NEPA is to provide citizens most directly impacted by a major federal action the opportunity to comment on the action and provide alternatives.

The USACE has failed to provide reasonable notice since this project was reintroduced to the public in January of 2004, despite your apparent intention and ongoing efforts to modify the plant for over the past nine (9) years. This lack of notification has resulted in our community having inadequate time to effectively prepare for public meetings and review alternatives.

Secondly, the USACE has failed to provide to the public the critical documentation necessary to appropriately review the project. The net effect has been to limit meaningful public participation.

B. Failure to assess of reasonable alternatives given the environmental impact.

The changes proposed by the USACE impose a heavy industrial solution in an existing densely populated residential community. Furthermore, we believe the proposed facility's siting, topography (both existing USACE undocumented landfill surcharge, circa 1960's, as well as underlying natural landforms) and

infrastructure (specifically the surrounding public road and intersection network) are not adequate to the initial construction of and ongoing safe daily operation of this facility.

Such an invasive proposal requires careful consideration of all possible solutions with a view toward finding a sound and minimally invasive result.

Much data is missing from the EFS. Many alternatives were not thoroughly researched, alternatives that may more appropriately meet the needs of the surrounding communities while still satisfying the requirements of the Scope of Statement.

There are several instances in the EFS where a fact is used to screen out one alternative, but not another.

Lastly, the cost analysis appears to be both faulty and misleading. In short, the report generates more questions than it answers.

C. Environmentally sensitive alternatives that the USACE must explore.

We submit our comments on the proposed alternatives and present new viable alternatives not considered by the USACE, consistent with the November 15, 2004 solicitation for comments (extended) deadline set by the USACE.

We are following the NEPA process as fully as possible, given inadequate notice and incomplete documentation. We have made our best effort to identify other alternatives that should be evaluated by the USACE, despite not having access to the original studies that provided the basis for the 26 alternatives considered in the EIS process.

The attached documents from the Brookmont Engineering Committee address:

- Questions, comments and criticism of the narrow range of alternatives proposed by the USACE in your Engineering Feasibility Study (EFS) dated May 2004;

- Six (6) viable proposed alternatives which were never considered by the USACE, which are outlined below:

1. Relocate proposed facility -"pipe within a pipe solution;
2. Relocate proposed facility - existing Crescent Trail/DC Metro rights of way solution;
3. Relocate proposed facility - existing abandoned sewer line(s);
4. Relocate proposed facility to Carderock (Naval Surface Warfare Center) adjacent to US 495;
5. Relocate proposed facility to Georgetown Reservoir site;
6. Re-site proposed facility within existing Dalecarlia campus.

Our priorities in developing these alternatives have been,

* Relocate the facility to an appropriate existing industrial site.

Or, failing that,

* Re-site the proposed facility within the existing Dalecarlia plant campus.

Conclusion

29-2-NB

The public has a right to participate fully in the development of alternatives to the current water treatment residuals management process. The record must remain open to other alternatives until such time as we have been provided with an opportunity to review and analyze the critical documents that we have requested. Therefore, the residents of Brookmont request that the USACE re-open the NEPA process to provide for meaningful participation and to evaluate the alternatives. We are joined in this demand by

neighboring communities and local leaders. Attached, please find a petition to this end, signed by Brookmont residents.

Sincerely,

Abby Ra for Madeleine Greenwald

Madeleine Greenwald,
President, Brookmont Civic League

Attachment B

COMMENTS ON PROPOSED WATER TREATMENT RESIDUALS MANAGEMENT PROCESS
PRELIMINARY RESPONSE, 11-13-2004

VIABLE ALTERNATIVES NOT CONSIDERED/EVALUATED BY THE CORPS

29-3-DB

1. Option A: Insert a dedicated pipeline within the Potomac (Dulles) Interceptor from the sediment ponds at Dalecarlia to Blue Plains or to another plant within the Potomac Interceptor sewer system. This option and the next two (B,C), assume use of the $50 million baseline budget to build a new facility or to expand capacity at Blue Plains or another treatment plant for thickening and dewatering the Dalecarlia residuals

The technology to accomplish this pipe-within-a-pipe approach currently exists, and it has been employed elsewhere. Municipal sewer systems in Albuquerque, Indianapolis, Omaha, Paris, Vienna, Tokyo and Berlin have had metal brackets robotically installed to hold conduit pipe. A dowel and screw process was involved with some of the larger dimension conduits. Although high-tech robotics were involved in these projects, in each instance, the cost was less and the construction process less disruptive than conventional trench systems. Water and gas mains and other pipelines have been inserted into municipal sewers. A German firm indicated that, given the size of the Potomac Interceptor Sewer, a manual application of brackets and sewer pipe would be more cost effective than the use of robotic technology. Thus, this approach meets the "proven methods" screening criteria.

This approach also has a built-in redundancy component: even in the unlikely event the residuals line within the sewer ruptured, it would not pollute the sewage in the Potomac Interceptor sewer. Repairs could be made in an expeditious manner that would not affect treatment of the waste water from in the Potomac Interceptor system. Thus, this alternative also preserves the "qualilty, reliability and redundancy of the existing water treatment and distribution system" screening criteria.

This approach would send the residuals to an advanced water treatment facility at an industrial site for a level of treatment that would meet the full requirements of the Clean Water Act. These standards are higher than those currently envisioned for residuals treatment at Dalecarlia in the Engineering Feasibility Study. As such, the pipe-within-a-pipe approach would exceed the requirements of the National Pollution Discharge Elimination System permit requirement to reduce or eliminate discharge to the Potomac River. Thus, this approach fully meets the "NPDES permit" screening criteria.

In the Engineering Feasibility Report, alternatives involving new piping adjacent to the existing Potomac Interceptor were eliminated due to zoning, security and land use regulations. The pipe-within-a-pipe alternative would not involve extensive excavation on National Park Service or other sensitive, federally administered, property. Access to Potomac Interceptor would be primarily (if not entirely) through existing manholes/vents. Thus, it complies with zoning and land use regulations, institutional constraints, and other Federal and local regulations, and thereby fully meets those screening criteria.

This approach would eliminate the pollution and other health and safety concerns involved in trucking contaminated sludge along residential streets, past an extended care facility, past a large hospital and through countless school crossings. These concerns were brought up previously. As well, the need for the thickening and dewatering plant would be made obsolete, eliminating the abrupt intrusiveness created by the sludge plant that is just a few yards from the most used recreational trail in the region, and among quiet residential neighborhoods.

This approach would ensure that the permitting timetable could be met. None of the pre-construction archeological surveys mandated by the Historic Preservation Act would have to be undertaken prior to installation of the pipeline. Installation could occur daily in off-peak sewer use hours. Thus, it complies with the requirement to meet "Federal Facilities Compliance Agreement, including scheduling" screening criteria.

The lower sections of the Potomac Interceptor that would be used in this approach range in size from 8 foot diameter concrete pipes to 13 X 7.75 foot rectangular reinforced tunnels in the lower section of the sewer system. The Potomac Interceptor uses a pumping station and a pressure main with a smaller diameter pipe to carry sewage across the Anacostia River. This constraint might be overcome by running the residuals pipe outside the Potomac Interceptor Sewer for that short section. The residuals pipe might be routed in the bridge undercarriage directly below the roadway, and then rejoin the Potomac Interceptor below the pressure line section.

The Potomac Interceptor Sewer on this route is operated and maintained by DCWASA, a major Army Corps of Engineers customer and institutional partner in providing drinking water and treating waste water in the District of Columbia.

In summary, the pipe-in-pipe approach is viable both technologically and logistically. It would comport with the overall purposes of the National Environment Protection Act. It would meet each of the stated objectives of the Notice of Intent in the January 12, 2004 Federal Register Notice. It would greatly exceed the pollution reduction intent of the "NPDES permit" screening criteria. Lastly, and most importantly, it would "minimize, if possible, impacts on various local and regional stakeholders and minimize impacts on the environment (traffic, noise, dudt, pollutants, etc)." This solution is the only option that is acceptable to the surrounding communities and must be pursued vigorously. A cost analysis should be completed for this option, one in which the environmental impacts are thoroughly evaluated and costed-out.

2. Option B: Route a residuals pipeline primarily along Metro rights of way.

29-4-DA

In this approach, a pipeline would be inserted, starting at the former D.C Transit trolley line immediately next to the Dalecarlia settlement ponds. Trenchless technology would be used to send a pipe along that right of way to Georgetown. Continuing on from Georgetown, the Key Bridge would be used to carry the line over the river to the edge of Rosslyn. The trenchless line would be continued a few hundred feet alongside of the George Washington Parkway to a point above the Metro Orange/Blue line. Then the line would be inserted into the utility tunnels, chases, ducts or storm mains of the Metro. The residual pipeline would continue through this system to a point near the Anacostia station, at which point it would be routed alongside the Anacostia Freeway to Blue Plains.

This option achieves many of the goals stated in Option A, but mechanically achieves piping the residuals along a different route. Metro is reportedly strapped for cash, and might consider this option. This option should be further studied. We note that there are several possible variations within the proposed routing that should be considered in parallel with the proposal.

3. Option C: Locate an abandoned sewer main and either reline it for use as a dedicated pipeline for part of the route to Blue Plains or to the WSSC plant along River Road, or use the abandoned main as a void into which a dedicated line could be inserted.

29-5-DA

One such abandoned line reportedly parallels the Potomac Interceptor from Potomac into the District. This line was identified in the late 1970s to members of the Montgomery County Executive's citizen advisory panel on the planned Rock Run Advanced Treatment Plant. That plant was to have been constructed in the Avenal Country Club area. In the course of studying options, consultants mentioned the older, abandoned sewer line, and it was briefly considered for use in carrying treated water from the proposed plant to a point below Chain Bridge to avoid the Army Corps intake in that section of the river. The Rock Run plan was dropped after about 2 years of planning. The abandoned line might be used to carry a residual pipeline to the WSSC plant along River Road, avoiding excavation in the NPS C&O Canal property.

4. Option D: Consider different sites for the thickening and/or thickening/dewatering facility on the existing grounds.

In the existing plans, dozens of residential homes are well within 1200' of the plant. Yet several different locations exist for the proposed facility which would mitigate the number of homes within close proximity the new facility. (See attached drawings). The following table shows the advantages of each drawing. These site alternatives must be evaluated in the case a new facility needs to be built. Additionally, as part of the existing plans, barriers and blockades must be included in all future plans as ways to lessen the pollutants (noise, smell, sight, dust, etc). These remedies are not ideal, but should have been included in the Engineering Feasibility Study and must be included in the Statement of Scope, the draft EIS and the final EIS.

29-6-BB

Drawing A – Carderock	Drawing B – Georgetown Reservoir	Drawing C1 – Dalecarlia	Drawing C2 – Dalecarlia
- Existing secure campus - Construction on undisturbed site - No elaborate or costly foundation system - Direct access to beltway - No proximity to residential areas	- Existing secure federal campus - Adjacent to controlled intersection - Possible direct access to parkway - No proximity to residential areas	- Existing secure usage campus - Repurpose unused west filter building - Dewatering building on undisturbed site - No elaborate or costly foundation system - Limited proximity to residential areas	- Existing secure usage campus - Dewatering and thickening tanks built above modified sedimentation basins - Limited proximity to residential areas

Comments on General Assumptions

29-7-DA

1. Please provide evidence that a more environmentally friendly flocculent does not exist, and that deflocculation is not feasible.

29-8-CA

2. Please indicate how the Corps plans to ensure that there are no munitions on the proposed monofill and thickening/dewatering plant sites, given the recent discovery of munitions in the Spring Valley and Westmoreland vicinity. The Summary of Statement specifically limits the Corps to relying "on findings of existing investigations". There are no current or planned investigations in these areas. We consider this to be a top-priority safety issue.

29-9-BB

3. Please provide complete information on how the selection was made of the site for the proposed thickening and dewatering facility, or provide a copy of the actual study (studies) that was used to make the decision. Pages 4-6 says that site was "identified in previous work".

29-10-FD

4. Please provide explanation for why a 20 year time frame was chosen as acceptable for the life of the landfill. This seems unreasonably short; for example, just the construction of the project represents 15% of the total length of the project. This is not an acceptable investment metric and biases the cost estimates.

29-11-BA

5. The size of the thickening and de-watering facility for alternatives requiring this process is discrepant. In the narrative part of the Engineering Feasibility Report it is described as 128'long, 76' wide and "three stories" high. The elevations and equipment specifications show that the building will be 235'long, 250' wide and 80' high. Please resolve this discrepancy so stakeholders will have accurate information.

Comments on Alternatives

29-12-GA

1. Many of the alternatives require some sort of trucking of thickened, dewatered sludge through residential neighborhoods, both DC and MD. Trucking raises many environmental concerns such as air quality, noise, traffic congestion and traffic safety and effect on ozone emissions. Each of these concerns should be addressed separately as part of evaluating any alternative requiring trucking. The planned studies regarding these concerns, if they exist at all, are wholly inadequate. Please provide a detailed plan of how these concerns will be studied.

29-13-GG

2. The manufacturing and trucking of dewatered, "aluminized" sludge may produce dust that could be harmful to children, the elderly and perhaps even healthy people. This is of particular concern because of the close proximity of these activities to residential neighborhoods —Brookmont, Dalecarlia and Sibley Hospital to name a few. Please provide evidence that this "aluminized" dust, which we know is harmful to fish, is not harmful to mankind. We note that in two Corps-favored alternatives, this material is to be trucked past a hospital, a long-term care facility, and through residential neighborhoods.

29-14-GA

3. In alternatives requiring trucking sludge, the estimates of the number of truck trips was downplayed by not taking into account days of increased turbidity, which can increase suspended particulate matter substantially. This will increase the number of truck trips/day. On the other hand, days-of-high-turbidity was used as an eliminating factor for Alternative 4 because Blue Plains could not handle the combined storm sewer overflow plus the residuals from Dalecarlia. Please explain this bias and re-present trucking

alternatives/cost calculations taking into account the higher number of truck-trips/day on days of high turbidity.

29-15-CA

4. Construction of both the landfill and new dewatering facility will be highly disruptive and have strong negative environmental consequences. Please provide an analysis of the impact that this construction will have on the surrounding environment, including air (dust, noise, ozone, particulates), water (runoff, contaminants), flora and fauna. Also establish

29-16-BC

scientifically whether or not there are endangered plants or animals that will be threatened (or any other pertinent impact).

29-17-DD

5. Alternative 7 – Piping thickened residuals to WSSC or Corbalis. Please provide complete justification as to why this alternative was rejected, as it is clearly similar to Alternative #5; distances are comparable and obtaining permits would more than likely be less challenging.

29-18-CA

6. Alternative 4 was discarded based on DC regulation that prohibits "sludges or other materials from sewage or industrial waste treatment plants or from water treatment plants" from being discharged to the District of Columbia sewer system. Yet, Alternative 2 was not discarded, despite existing DC regulations that prohibit the building and maintaining of a landfill on the District. This sheds some doubt on the integrity of the assessment and leads the reader to believe the whole report is biased. Please explain this bias.

Comments on Cost Analysis

29-19-AB

1. In Table 5-2, the trucking costs for Alternatives 5 and 25 are exactly the same, yet clearly alternative 25 is much more expensive in terms of trucking costs. Please explain this discrepancy.

29-20-AB

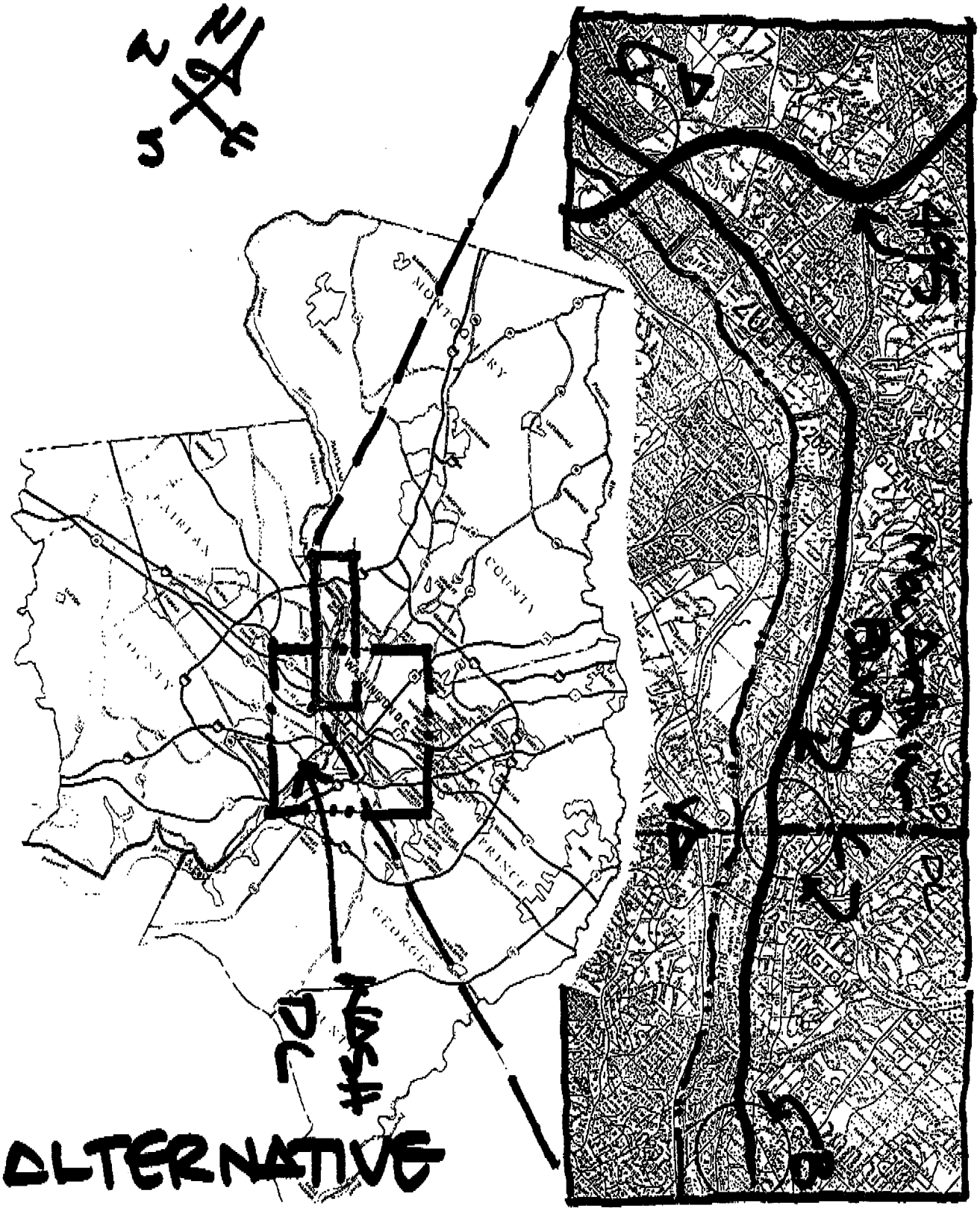
2. In Alternative 2, there are no costs associated with trucking the residuals to the monofill. This is not credible. Please explain.

29-21-IA

3. As trucking costs are operational and piping costs are mostly construction costs, any cost analysis will favor trucking options over piping options.

29-22-AB

4. No costs associated with road deterioration and environmental impacts were included with any alternative.



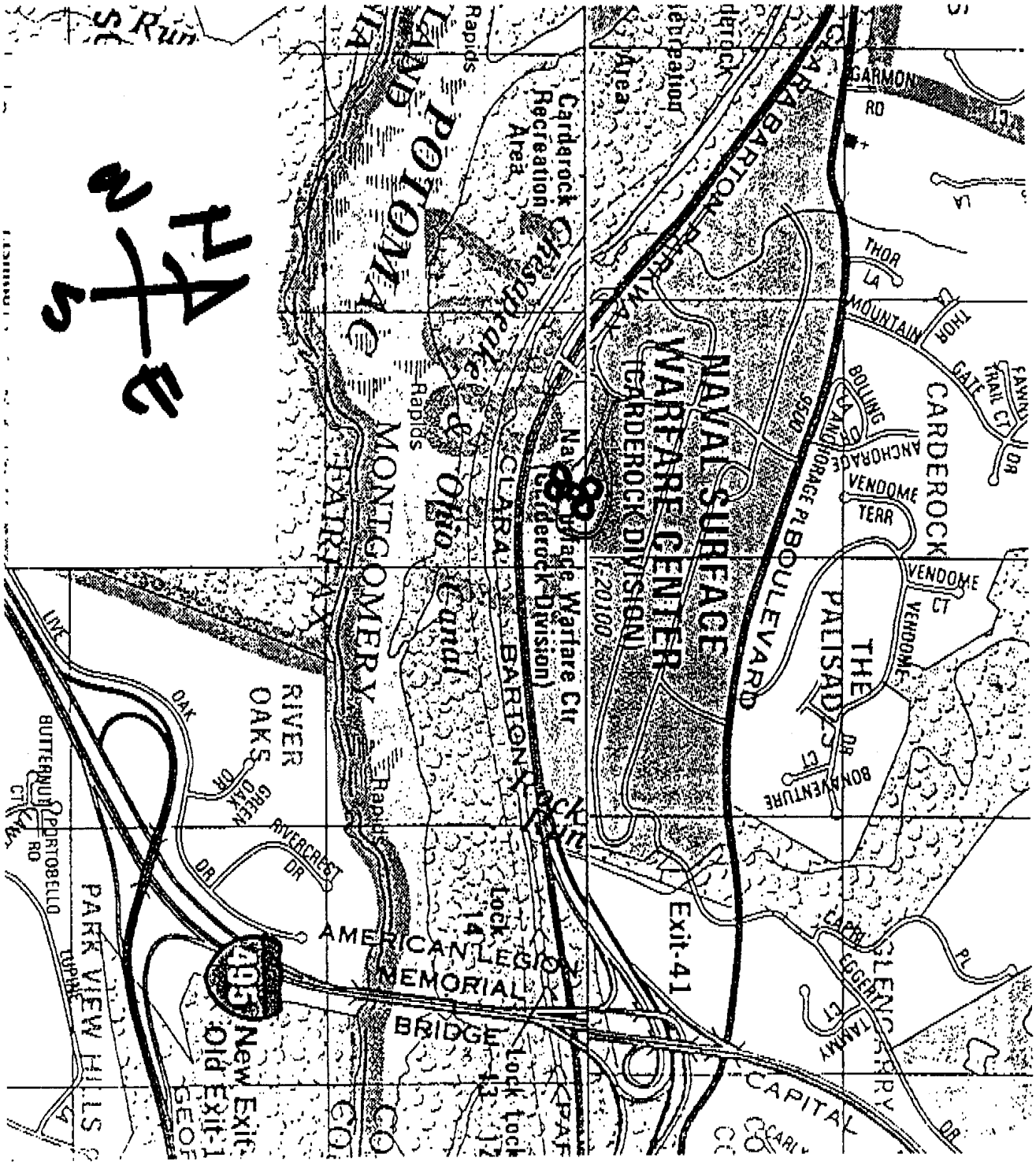
SITE LOCATIONS

WASHINGTON DC METRO AREA WITH DETAIL OF POTOMAC CORRIDOR FROM GEORGETOWN TO THE BELTWAY

WASHINGTON AQUEDUCT BALTIMORE DISTRICT USACE

BROOKMONT CIVIC LEAGUE - ALTERNATE SITE PROPOSAL

13 NOVEMBER 2004



CARDEROCK

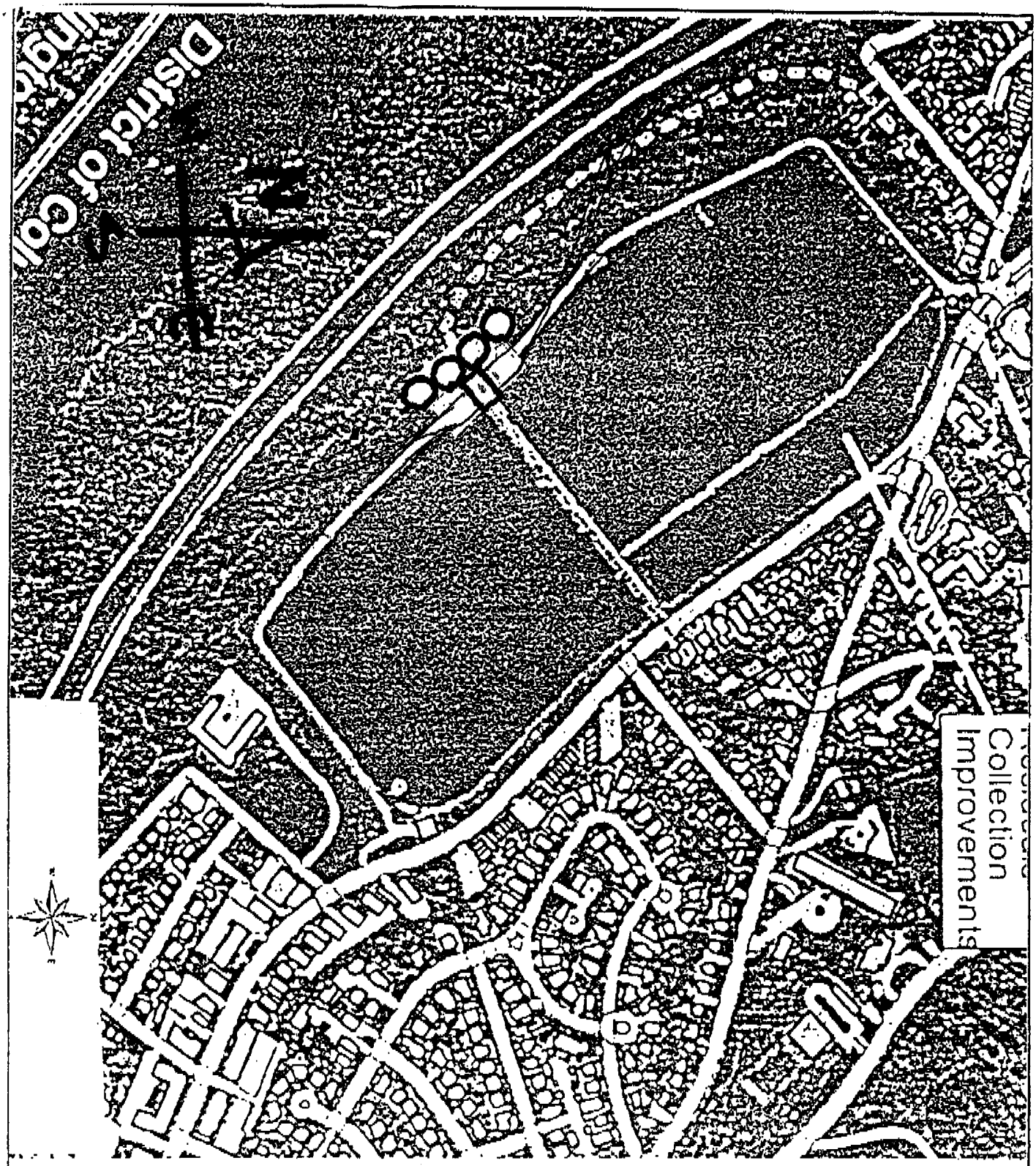
EXISTING SECURE FEDERAL CAMPUS
ADJACENT TO EXISTING CONTROLLED INTERSECTION
CONSTRUCTION ON UNDISTURBED SITE
NO ELABORATE/ COSTLY FOUNDATION SYSTEM
DIRECT ACCESS TO THE BELTWAY

A

WASHINGTON AQUEDUCT BALTIMORE DISTRICT USACE

BROOKMONT CIVIC LEAGUE - ALTERNATE SITE PROPOSAL

13 NOVEMBER 2004



GEORGETOWN RESERVIOR

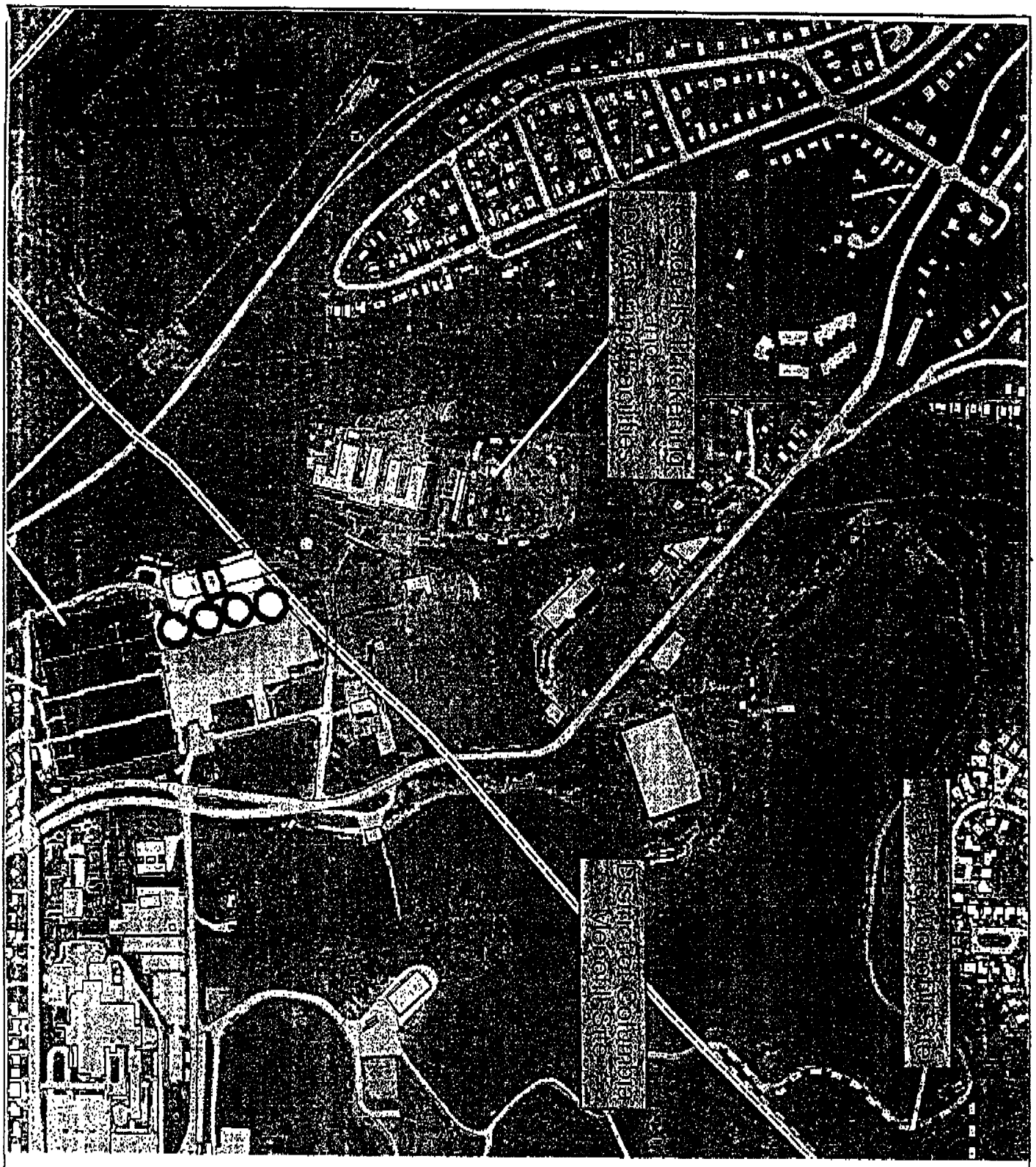
EXISTING SECURE FEDERAL CAMPUS
ADJACENT TO CONTROLLED INTERSECTION
POSSIBLE DIRECT ACCESS TO PARKWAY

B

WASHINGTON AQUEDUCT BALTIMORE DISTRICT USACE

BROOKMONT CIVIC LEAGLE - ALTERNATE SITE PROPOSAL

13 NOVEMBER 2004



DALECARLIA I

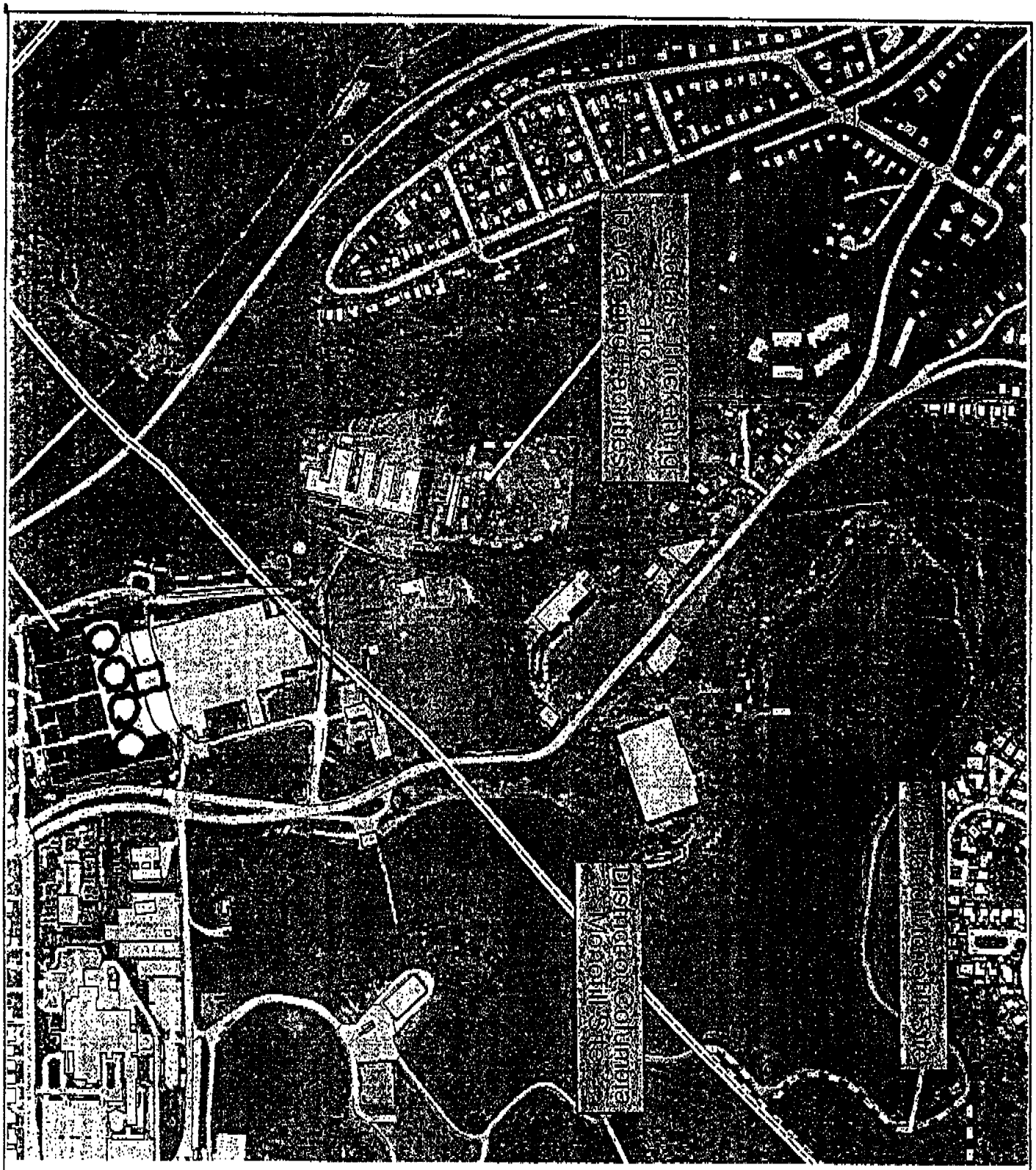
EXISTING SECURE USACE CAMPUS
REPURPOSE UNUSED WEST FILTER BUIDLING
DEWATERING BUILDING ON UNDESTURBED SITE
NO ELABORATE/ COSTLY FOUNDATION SYSTEM

C I

WASHINGTON AQUEDUCT BALTIMORE DISTRICT USACE

BROOKMONT CIVIC LEAGUE - ALTERNATE SITE PROPOSAL

13 NOVEMBER 2004



DALECARLIA 2

EXISTING SECURE USACE CAMPUS

DEWATERING BUILDING - THICKENING TANKS
ABOVE MODIFIED SEDIMENTATION BASINS

C2

WASHINGTON AQUEDUCT BALTIMORE DISTRICT USACE

BROOKMONT CIVIC LEAGUE - ALTERNATE SITE PROPOSAL

13 NOVEMBER 2004