ARCADIS

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ENVIRONMENTAL

Mr. Steven Scharf, P.E.
New York State Department of Environmental Conservation (NYSDEC)
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7015

Subject:
Third and Fourth Quarter 2003 Groundwater Monitoring Data,
Northrop Grumman Corporation, Bethpage, New York.

Date:
27 February 2004

Contact:
David Stern

Phone:
(631) 391-5284

Email:
dstern@arcadis-us.com

Our ref:
NY001348.0013.00004

Dear Mr. Scharf:

On behalf of Northrop Grumman Corporation (NGC), ARCADIS G&M is providing the NYSDEC with data for the past two quarters (i.e., Third and Fourth Quarters of 2003) of groundwater monitoring near Bethpage Water District Plants 4, 5, and 6. Table 1 provides volatile organic compound (VOC) concentrations detected in groundwater samples during this period. Figures 1 through 3 depict the historical concentrations of total VOCs in groundwater.

Also provided are the results of the past two quarters (i.e., Third and Fourth Quarters of 2003) of monitoring for total cadmium and chromium (Cd/Cr) near former NGC Plant 2. Table 2 summarizes Cd/Cr concentrations detected in groundwater samples during this period.

Please contact us if you have any questions or comments.

Sincerely,

ARCADIS G&M, Inc.

Carlo San Giovanni
Project Manager

Michael F. Wolfert
Project Director

Copies:
J. Cofman - Northrop Grumman
J. Molloy - H2M
R. Krumholz - Bethpage Water District

Part of a bigger picture

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Table 1. Concentrations of VOCs Detected in Outpost Monitoring Wells, Third and Fourth Quarters of 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL:	GM-35D2	GM-35D2	GM-35D2	GM-35D2	GM-36D	GM-36D	GM-36D	GM-36D
	SAMPLE ID:	GM 35D2	GM 35D2	GM-35D2	GM 35D2	GM 36D	GM 36 D	GM 36D	GM 36D
	DATE:	10/13/03	10/13/03	01/20/04	01/20/04	10/07/03	10/07/03	01/19/04	01/19/04
	LAB/SAMPLER:	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M
Chloromethane		<20 J	<1	<20	<0.5	<6 J	<0.5	<5	<0.5
Bromomethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Vinyl Chloride		<8	<1	<8	<0.5	<2	<0.5	<2	<0.5
Chloroethane		<20 J	<1	<20	<0.5	<6	<0.5	<5	<0.5
Methylene chloride		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Acetone		<40	--	<40	--	<12 J	--	<10	--
Carbon disulfide		<20	--	<20	--	<6	--	<5	--
1,1-Dichloroethene		<20	**1.0**	<20	**2.0**	<6	<0.5	<5	<0.5
1,1-Dichloroethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
cis-1,2-Dichloroethene		**7 J**	**2.5**	<20	<0.5	<6	<0.5	<5	<0.5
trans-1,2-Dichloroethene		<20	<1	**4 J**	<0.5	<6	<0.5	<5	<0.5
Chloroform		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
1,2-Dichloroethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
2-Butanone		<40 J	--	<40	--	<12	--	<10	--
1,1,1-Trichloroethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Carbon tetrachloride		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Bromodichloromethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
1,2-Dichloropropane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
cis-1,3-Dichloropropene		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Trichloroethene		**340**	**321**	**350**	**379**	**17**	**13.7**	**14**	**13.4**
Dibromochloromethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
1,1,2-Trichloroethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Benzene		<3	<1	<3	<0.5	<0.9	<0.5	<0.7	<0.5
trans-1,3-Dichloropropene		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Bromoform		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
4-Methyl-2-pentanone		<40	--	<40	--	<12	--	<10	--
2-Hexanone		<40 J	--	<40	--	<12	--	<10	--
Tetrachloroethene		**8 J**	**5.0**	**8 J**	**5.2**	**1 J**	**0.5**	<5	<0.5
1,1,2,2-Tetrachloroethane		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Toluene		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Chlorobenzene		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Ethylbenzene		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Styrene		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Xylene (total)		<20	<1	<20	<0.5	<6	<0.5	<5	<0.5
Vinyl Acetate		<20	--	<20	--	<6	--	<5	--
Freon-113		**10 J**	--	**10 J**	--	<6	--	<5	--
Total VOCs		**365**	**329.5**	**372**	**386.2**	**18**	**14.2**	**14**	**13.4**

VOCs	Volatile organic compounds.
H2M	Holzmacher, McClendon & Murrell, P.C., Melville, NY.
G&M	ARCADIS G&M, Inc.
STL	Severn Trent Laboratories, Inc., Shelton, Connecticut.
REP	Replicate sample.
ug/L	Micrograms per liter.
D	Detected at secondary dilution.
J	Estimated value.
--	Not analyzed.
Bold	Constituent detected above Method Detection Limit.

Table 1. Concentrations of VOCs Detected in Outpost Monitoring Wells, Third and Fourth Quarters of 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL:	GM-36D2	GM-36D2	GM-36D2	GM-36D2	GM-37D	GM-37D	GM-37D	GM-37D
	SAMPLE ID:	GM 36D2	GM 36D2	GM 36D2	GM 36D2	GM 37D	GM-37D	GM37D	REP11404
	DATE:	10/07/03	10/07/03	01/26/04	01/26/04	10/08/03	10/08/03	01/14/04	01/14/04
	LAB/SAMPLER:	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M	STL/G&M
Chloromethane		<6 J	<0.5	<5	<0.5	<5 J	<0.5	<5	<5
Bromomethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Vinyl Chloride		<2	<0.5	<2	<0.5	<2	<0.5	<2	<2
Chloroethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Methylene chloride		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Acetone		<12 J	--	<10	--	<10	--	<10	<10
Carbon disulfide		<6	--	<5	--	<5	--	<5	<5
1,1-Dichloroethene		<6	<0.5	<5	<0.5	**2 J**	**0.5**	<5	<5
1,1-Dichloroethane		<6	<0.5	<5	<0.5	**4 J**	**2.4**	**2 J**	<5
cis-1,2-Dichloroethene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
trans-1,2-Dichloroethene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Chloroform		<6	<0.5	<5	<0.5	**0.9 J**	<0.5	<5	<5
1,2-Dichloroethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
2-Butanone		<12	--	<10	--	<10	--	<10	<10
1,1,1-Trichloroethane		<6	<0.5	<5	<0.5	**2 J**	**1.6**	<5	<5
Carbon tetrachloride		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Bromodichloromethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
1,2-Dichloropropane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
cis-1,3-Dichloropropene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Trichloroethene		<6	<0.5	<5	<0.5	**0.7 J**	<0.5	<5	<5
Dibromochloromethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
1,1,2-Trichloroethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Benzene		<0.9	<0.5	<0.7	<0.5	<0.7	<0.5	<0.7	<0.7
trans-1,3-Dichloropropene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Bromoform		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
4-Methyl-2-pentanone		<12	--	<10	--	<10 J	--	<10	<10
2-Hexanone		<12	--	<10	--	<10 J	--	<10	<10
Tetrachloroethene		<6	<0.5	<5	<0.5	**1 J**	<0.5	<5	<5
1,1,2,2-Tetrachloroethane		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Toluene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Chlorobenzene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Ethylbenzene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Styrene		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Xylene (total)		<6	<0.5	<5	<0.5	<5	<0.5	<5	<5
Vinyl Acetate		<6	--	<5	--	<5	--	<5	<5
Freon-113		<6	--	<5	--	<5	--	<5	<5
Total VOCs		0	0	0	0	**10.6**	**4.5**	**2**	0

VOCs	Volatile organic compounds.
H2M	Holzmacher, McClendon & Murrell, P.C., Melville, NY.
G&M	ARCADIS G&M, Inc.
STL	Severn Trent Laboratories, Inc., Shelton, Connecticut.
REP	Replicate sample.
ug/L	Micrograms per liter.
D	Detected at secondary dilution.
J	Estimated value.
--	Not analyzed.
Bold	Constituent detected above Method Detection Limit.

Table 1. Concentrations of VOCs Detected in Outpost Monitoring Wells, Third and Fourth Quarters of 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL:	GM-37D	GM-37D2	GM-37D2	GM-37D2	GM-37D2	GM-38D	GM-38D	GM-38D
	SAMPLE ID:	GM 37D	GM 37D-2	GM-37D2	GM37D2	GM 37D2	GM 38D	GM-38D	GM-38D
	DATE:	01/14/04	10/08/03	10/08/03	01/14/04	01/14/04	10/09/03	10/09/03	01/13/04
	LAB/SAMPLER:	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M	STL/G&M
Chloromethane		<0.5	<5 J	<0.5	<5	<0.5	<50 J	<2.5	<25
Bromomethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Vinyl Chloride		<0.5	<2 J	<0.5	<2	<0.5	<20 J	<2.5	<10
Chloroethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Methylene chloride		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Acetone		--	<10 J	--	<10	--	<100 J	--	**25 J**
Carbon disulfide		--	<5	--	<5	--	<50	--	<25
1,1-Dichloroethene		<0.5	**2 J**	<0.5	<5	<0.5	**7 J**	<2.5	**8 J**
1,1-Dichloroethane		**1.4**	**6**	**4.0**	**4 J**	**4.5**	<50	<2.5	**4 J**
cis-1,2-Dichloroethene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
trans-1,2-Dichloroethene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	**3 J**
Chloroform		<0.5	**0.8 J**	<0.5	**0.5 J**	<0.5	<50	<2.5	<25
1,2-Dichloroethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
2-Butanone		--	<10	--	<10	--	<100	--	<50
1,1,1-Trichloroethane		**1.3**	**2 J**	**1.3**	<5	**1.3**	<50	**2.6**	**4 J**
Carbon tetrachloride		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Bromodichloromethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
1,2-Dichloropropane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
cis-1,3-Dichloropropene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Trichloroethene		<0.5	**3 J**	**1.6**	**2 J**	**1.5**	**830**	**858**	**790**
Dibromochloromethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
1,1,2-Trichloroethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Benzene		<0.5	<0.7	<0.5	<0.7	<0.5	<7	<2.5	<4
trans-1,3-Dichloropropene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Bromoform		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
4-Methyl-2-pentanone		--	<10 J	--	<10	--	<100 J	--	<50
2-Hexanone		--	<10	--	<10	--	<100	--	<50
Tetrachloroethene		<0.5	<5	<0.5	**1 J**	<0.5	<50	<2.5	<25
1,1,2,2-Tetrachloroethane		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Toluene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Chlorobenzene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Ethylbenzene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Styrene		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Xylene (total)		<0.5	<5	<0.5	<5	<0.5	<50	<2.5	<25
Vinyl Acetate		--	<5 J	--	<5	--	<50 J	--	<25
Freon-113		--	<5	--	<5	--	<50	--	<25
Total VOCs		**2.7**	**13.8**	**6.9**	**7.5**	**7.3**	**837**	**860.6**	**834**

VOCs	Volatile organic compounds.
H2M	Holzmacher, McClendon & Murrell, P.C., Melville, NY.
G&M	ARCADIS G&M, Inc.
STL	Severn Trent Laboratories, Inc., Shelton, Connecticut.
REP	Replicate sample.
ug/L	Micrograms per liter.
D	Detected at secondary dilution.
J	Estimated value.
--	Not analyzed.
Bold	Constituent detected above Method Detection Limit.

Table 1. Concentrations of VOCs Detected in Outpost Monitoring Wells, Third and Fourth Quarters of 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	WELL: / SAMPLE ID: / DATE: / LAB/SAMPLER:	GM-38D GM 38D 01/13/04 H2M/H2M	GM-38D2 GM 38D2 10/09/03 STL/G&M	GM-38D2 GM 38D2 10/09/03 H2M/H2M	GM-38D2 GM 38D2 01/13/04 STL/G&M	GM-38D2 GM 38D2 01/13/04 H2M/H2M	GM-70D2 GM 70D2 10/10/03 STL/G&M	GM-70D2 GM 70D2 10/10/03 H2M/H2M	GM-70D2 GM 70D2 01/16/04 STL/G&M
Chloromethane		<0.5	<50 J	<2.5	<50	<0.5	<5 J	<0.5	<5
Bromomethane		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Vinyl Chloride		<0.5	<20 J	<2.5	<20	<0.5	<2 J	<0.5	<2
Chloroethane		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Methylene chloride		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Acetone		--	<100 J	--	<100	--	<10 J	--	<10
Carbon disulfide		--	<50	--	<50	--	<5	--	<5
1,1-Dichloroethene		4.4	<50	<2.5	<50	**1.1**	0.5 J	<0.5	<5
1,1-Dichloroethane		**2.3**	<50	<2.5	<50	<0.5	<5	<0.5	<5
cis-1,2-Dichloroethene		<0.5	**5 J**	**2.5**	<50	<0.5	**1 J**	**0.5**	<5
trans-1,2-Dichloroethene		**1.5**	<50	<2.5	**5 J**	**5.0**	<5	<0.5	<5
Chloroform		**0.8**	<50	<2.5	<50	**1.2**	<5	<0.5	<5
1,2-Dichloroethane		**0.7**	<50	<2.5	<50	<0.5	<5	<0.5	<5
2-Butanone		--	<100	--	<100	--	<10	--	<10
1,1,1-Trichloroethane		**3.5**	<50	<2.5	<50	**1.1**	<5	<0.5	<5
Carbon tetrachloride		**0.6**	<50	<2.5	<50	<0.5	<5	<0.5	<5
Bromodichloromethane		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
1,2-Dichloropropane		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
cis-1,3-Dichloropropene		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Trichloroethene		**866 D**	**960**	**973**	**980**	**1180 D**	**89**	**64.0**	**21**
Dibromochloromethane		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
1,1,2-Trichloroethane		<0.5	<50	<2.5	<50	**0.9**	<5	<0.5	<5
Benzene		<0.5	<7	<2.5	<7	<0.5	<0.7	<0.5	<0.7
trans-1,3-Dichloropropene		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Bromoform		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
4-Methyl-2-pentanone		--	<100 J	--	<100	--	<10 J	--	<10
2-Hexanone		--	<100	--	<100	--	<10	--	<10
Tetrachloroethene		**0.9**	<50	<2.5	<50	<0.5	**5 J**	**2.3**	**1 J**
1,1,2,2-Tetrachloroethane		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Toluene		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Chlorobenzene		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Ethylbenzene		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Styrene		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Xylene (total)		<0.5	<50	<2.5	<50	<0.5	<5	<0.5	<5
Vinyl Acetate		--	<50 J	--	<50	--	<5 J	--	<5
Freon-113		--	<50	--	<50	--	**1 J**	--	<5
Total VOCs		**880.7**	**965**	**975.5**	**985**	**1189.3**	**96.5**	**66.8**	**22**

VOCs	Volatile organic compounds.
H2M	Holzmacher, McClendon & Murrell, P.C., Melville, NY.
G&M	ARCADIS G&M, Inc.
STL	Severn Trent Laboratories, Inc., Shelton, Connecticut.
REP	Replicate sample.
ug/L	Micrograms per liter.
D	Detected at secondary dilution.
J	Estimated value.
--	Not analyzed.
Bold	Constituent detected above Method Detection Limit.

Table 1. Concentrations of VOCs Detected in Outpost Monitoring Wells, Third and Fourth Quarters of 2003, Northrop Grumman Corporation, Bethpage, New York.

	WELL:	GM-70D2	GM-71D2	GM-71D2	GM-71D2	GM-71D2	GM-71D2
	SAMPLE ID:	GW 70 D2	GM 71D2	REP101003	GM 71D2	GM 71D2	GM 71D 2
CONSTITUENT	DATE:	01/16/04	10/10/03	10/10/03	10/10/03	01/19/04	01/19/04
(Units in ug/L)	LAB/SAMPLER:	H2M/H2M	STL/G&M	STL/G&M	H2M/H2M	STL/G&M	H2M/H2M
Chloromethane		<0.5	<5 J	<5 J	<0.5	<5	<0.5
Bromomethane		<0.5	<5	<5	<0.5	<5	<0.5
Vinyl Chloride		<0.5	<2 J	<2 J	<0.5	<2	<0.5
Chloroethane		<0.5	<5	<5	<0.5	<5	<0.5
Methylene chloride		<0.5	<5	<5	<0.5	<5	<0.5
Acetone		--	<10 J	<10 J	--	<10	--
Carbon disulfide		--	<5	<5	--	<5	--
1,1-Dichloroethene		<0.5	**1 J**	**0.7 J**	<0.5	<5	<0.5
1,1-Dichloroethane		<0.5	**4 J**	**3 J**	**1.9**	**2 J**	**1.3**
cis-1,2-Dichloroethene		<0.5	<5	<5	<0.5	<5	<0.5
trans-1,2-Dichloroethene		<0.5	<5	<5	<0.5	<5	<0.5
Chloroform		<0.5	**1 J**	**1 J**	**0.6**	**0.8 J**	<0.5
1,2-Dichloroethane		<0.5	<5	<5	<0.5	<5	<0.5
2-Butanone		--	<10	<10	--	<10	--
1,1,1-Trichloroethane		<0.5	**1 J**	**0.9 J**	<0.5	<5	<0.5
Carbon tetrachloride		<0.5	<5	<5	<0.5	<5	<0.5
Bromodichloromethane		<0.5	<5	<5	<0.5	<5	<0.5
1,2-Dichloropropane		<0.5	<5	<5	<0.5	<5	<0.5
cis-1,3-Dichloropropene		<0.5	<5	<5	<0.5	<5	<0.5
Trichloroethene		**20.8**	**4 J**	**4 J**	**1.9**	**2 J**	**0.8**
Dibromochloromethane		<0.5	<5	<5	<0.5	<5	<0.5
1,1,2-Trichloroethane		<0.5	<5	<5	<0.5	<5	<0.5
Benzene		<0.5	<0.7	<0.7	<0.5	<0.7	<0.5
trans-1,3-Dichloropropene		<0.5	<5	<5	<0.5	<5	<0.5
Bromoform		<0.5	<5	<5	<0.5	<5	<0.5
4-Methyl-2-pentanone		--	<10 J	<10 J	--	<10	--
2-Hexanone		--	<10	<10	--	<10	--
Tetrachloroethene		**0.5**	<5	<5	<0.5	<5	<0.5
1,1,2,2-Tetrachloroethane		<0.5	<5	<5	<0.5	<5	<0.5
Toluene		<0.5	<5	<5	<0.5	**0.6 J**	<0.5
Chlorobenzene		<0.5	<5	<5	<0.5	<5	<0.5
Ethylbenzene		<0.5	<5	<5	<0.5	<5	<0.5
Styrene		<0.5	<5	<5	<0.5	<5	<0.5
Xylene (total)		<0.5	<5	<5	<0.5	<5	<0.5
Vinyl Acetate		--	<5 J	<5 J	--	<5	--
Freon-113		--	<5	<5	--	<5	--
Total VOCs		**21.3**	**11**	**9.6**	**4.4**	**5.4**	**2.1**

VOCs	Volatile organic compounds.
H2M	Holzmacher, McClendon & Murrell, P.C., Melville, NY.
G&M	ARCADIS G&M, Inc.
STL	Severn Trent Laboratories, Inc., Shelton, Connecticut.
REP	Replicate sample.
ug/L	Micrograms per liter.
D	Detected at secondary dilution.
J	Estimated value.
--	Not analyzed.
Bold	Constituent detected above Method Detection Limit.

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Table 2. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, Third and Fourth Quarters 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC SCGs [1]	WELL: / SAMPLE ID: / DATE:	10631 N-10631 10/07/2003	GM-16SR GM-16SR 10/08/2003	GM-16SR GM-16SR 01/09/2004	GM-17SR GM-17SR 10/07/2003	GM-17SR GM-17SR 01/08/2004	GM-18S GM-18S 10/07/2003	GM-18S GM 18S 01/30/2004	GM-18S REP013004 01/30/2004	GM-32S GM-32S 10/08/2003	GM-32S MW-32S 01/12/2004
Cadmium, Total	5		**2 B**	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94
Cadmium, Dissolved	5		**1.8 B**	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	--	<0.94	<0.94
Chromium, Total	50		**5.6 B**	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	**3.8 B**	**37**	**43.4**
Chromium, Dissolved	50		**2.1 B**	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	--	**32**	**43.1**

(1) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.
ug/L Micrograms per liter
B Detected between the IDL and CRDL
IDL Instrument detection limit
CRDL Contract-required detection limit
NYSDEC New York State Department of Environmental Conservation
EQ Equipment
[ ] Value exceeds associated SCG value.
Bold Constituent detected above IDL.
-- Not analyzed.

Table 2. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, Third and Fourth Quarters 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC SCGs [1]	WELL: / SAMPLE ID: / DATE:	GM-78S GM-78S 10/16/2003	GM-78S GM-78S 01/08/2004	GM-78I GM-78I 10/16/2003	GM-78I GM-78I 01/08/2004	MW-01GF MW-1GF 10/08/2003	MW-16F MW 1GF 01/26/2004	MW-02GF MW-2GF 10/08/2003	MW-02GF MW-2GF 01/12/2004	MW-03R MW-03R 10/07/2003	MW-03R MW-3R 01/09/2004
Cadmium, Total	5		<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	<0.94	**31.4**	**43.4**
Cadmium, Dissolved	5		--	--	--	--	<0.94	<0.94	<0.94	<0.94	**30.6**	**42.1**
Chromium, Total	50		<1.4	<1.4	<1.4	**3.1 B**	<1.4	<2.4	**25.8**	**31**	**58.3**	**67.2**
Chromium, Dissolved	50		--	--	--	--	<1.4	<1.4	**24.5**	**28.8**	**56.4**	**66.5**

(1) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.

ug/L Micrograms per liter

B Detected between the IDL and CRDL

IDL Instrument detection limit

CRDL Contract-required detection limit

NYSDEC New York State Department of Environmental Conservation

EQ Equipment

Value exceeds associated SCG value.

Bold Constituent detected above IDL.

-- Not analyzed.

Table 2. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, Third and Fourth Quarters 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC SCGs [1]	WELL: / SAMPLE ID: / DATE:	WATER EQ. BLANK FB100703 10/07/2003	WATER EQ. BLANK FB100803 10/08/2003	WATER EQ. BLANK FB101003 10/10/2003	WATER EQ. BLANK FB101603 10/16/2003	WATER EQ. BLANK FB100703 10/07/2003	WATER EQ. BLANK FB100703 10/07/2003
Cadmium, Total	5		<0.94	<0.94	--	<0.94	<0.94	<0.94
Cadmium, Dissolved	5		<0.94	--	--	--	<0.94	<0.94
Chromium, Total	50		<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Chromium, Dissolved	50		<1.4	--	--	--	<1.4	<1.4

(1) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.

ug/L Micrograms per liter

B Detected between the IDL and CRDL

IDL Instrument detection limit

CRDL Contract-required detection limit

NYSDEC New York State Department of Environmental Conservation

EQ Equipment

[ ] Value exceeds associated SCG value.

Bold Constituent detected above IDL.

-- Not analyzed.

Table 2. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, Third and Fourth Quarters 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC SCGs [1]	WELL: / SAMPLE ID: / DATE:	WATER EQ. BLANK FB100803 10/08/2003	WATER EQ. BLANK FB101003 10/10/2003	WATER EQ. BLANK FB101603 10/16/2003	WATER EQ. BLANK FB010604 01/06/2004	WATER EQ. BLANK FB010804 01/08/2004	WATER EQ. BLANK FB010904 01/09/2004
Cadmium, Total	5		<0.94	--	<0.94	--	<0.94	<0.94
Cadmium, Dissolved	5		--	--	--	--	--	--
Chromium, Total	50		<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Chromium, Dissolved	50		--	--	--	--	--	--

(1) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.

ug/L Micrograms per liter

B Detected between the IDL and CRDL

IDL Instrument detection limit

CRDL Contract-required detection limit

NYSDEC New York State Department of Environmental Conservation

EQ Equipment

[ ] Value exceeds associated SCG value.

Bold Constituent detected above IDL.

-- Not analyzed.

Table 2. Concentrations of Total and Dissolved Cadmium and Chromium Detected in Groundwater and Blank Samples, Third and Fourth Quarters 2003, Northrop Grumman Corporation, Bethpage, New York.

CONSTITUENT (Units in ug/L)	NYSDEC SCGs [1]	WELL: / SAMPLE ID: / DATE:	WATER EQ. BLANK FB011204 01/12/2004	WATER EQ. BLANK FB012604 01/26/2004	WATER EQ. BLANK FB13004 01/30/2004
Cadmium, Total	5		<0.94	<0.94	<0.94
Cadmium, Dissolved	5		--	--	--
Chromium, Total	50		<1.4	2.8 B	<1.4
Chromium, Dissolved	50		--	--	--

(1) Standards, Criteria, and Guidance values based on documents referenced in the Groundwater Feasibility Study Report (ARCADIS Geraghty & Miller 2000); most stringent value listed.

ug/L Micrograms per liter

B Detected between the IDL and CRDL

IDL Instrument detection limit

CRDL Contract-required detection limit

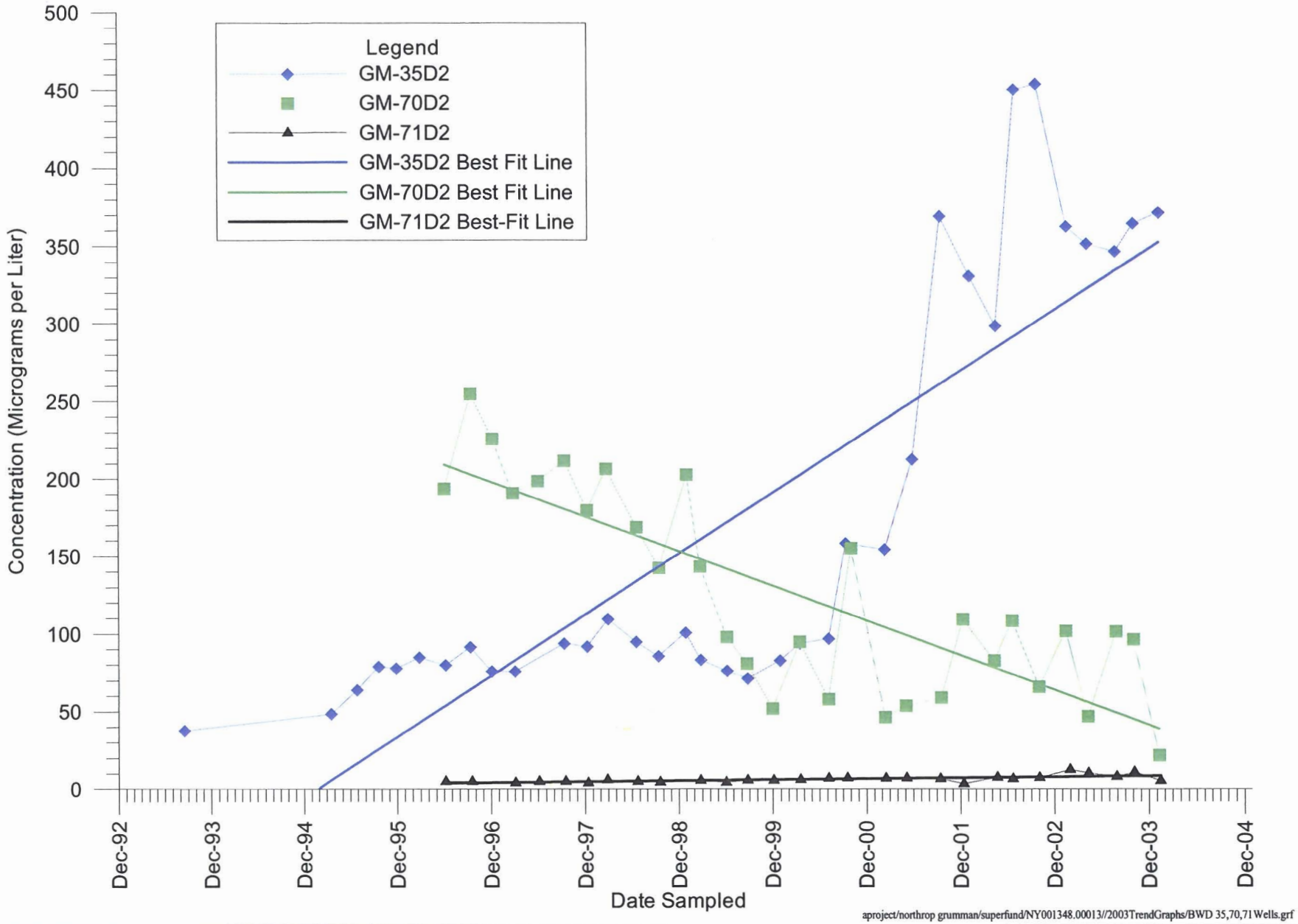
NYSDEC New York State Department of Environmental Conservation

EQ Equipment

☐ Value exceeds associated SCG value.

Bold Constituent detected above IDL.

-- Not analyzed.



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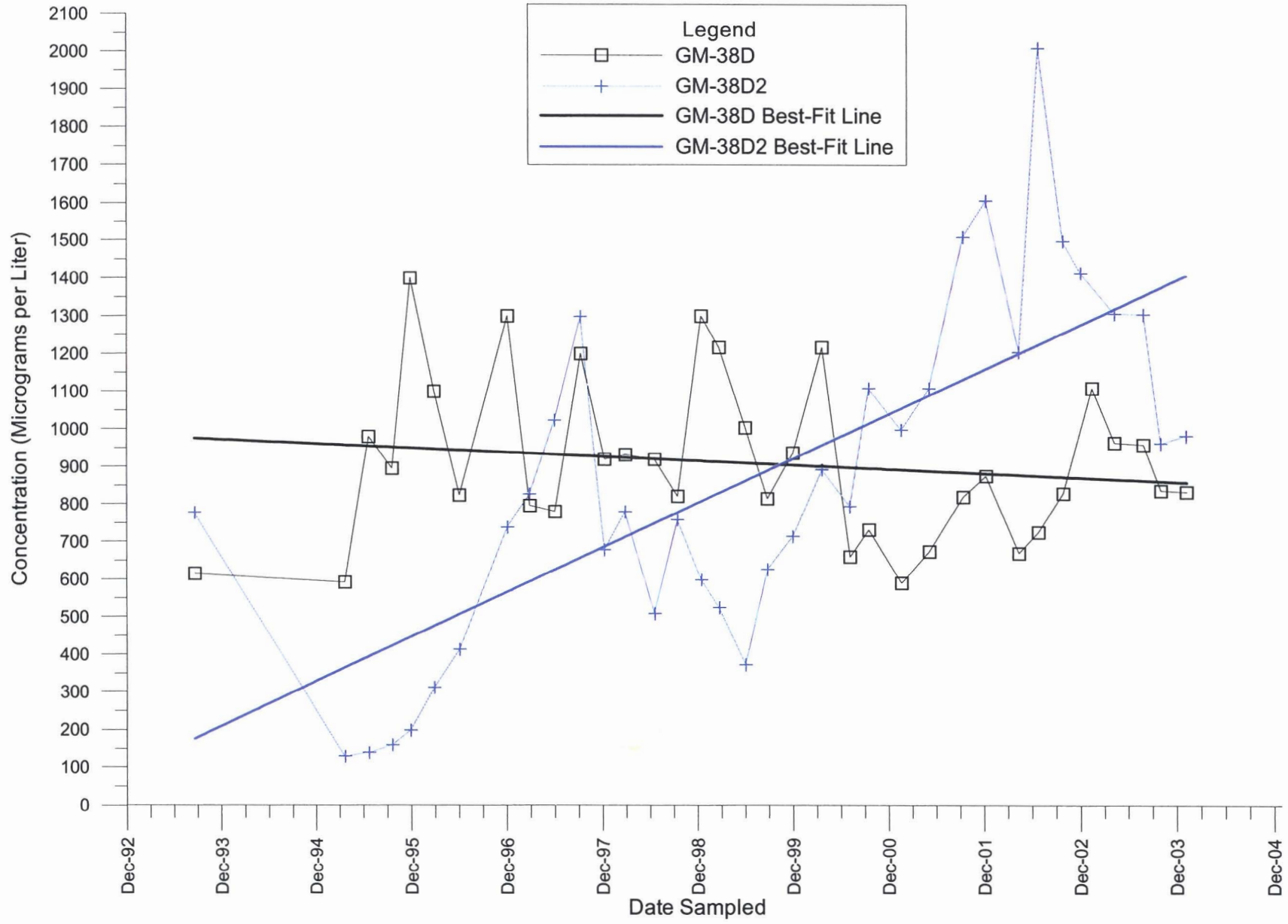
Total Volatile Organic Compound Concentrations in Selected Deep2 Monitoring Wells
Northrop Grumman Corporation, Bethpage, New York

FIGURE 1



aproject/northrop grumman/superfund/2003Trend Graphs/ NY001348.0013/38d,38d2.GRF

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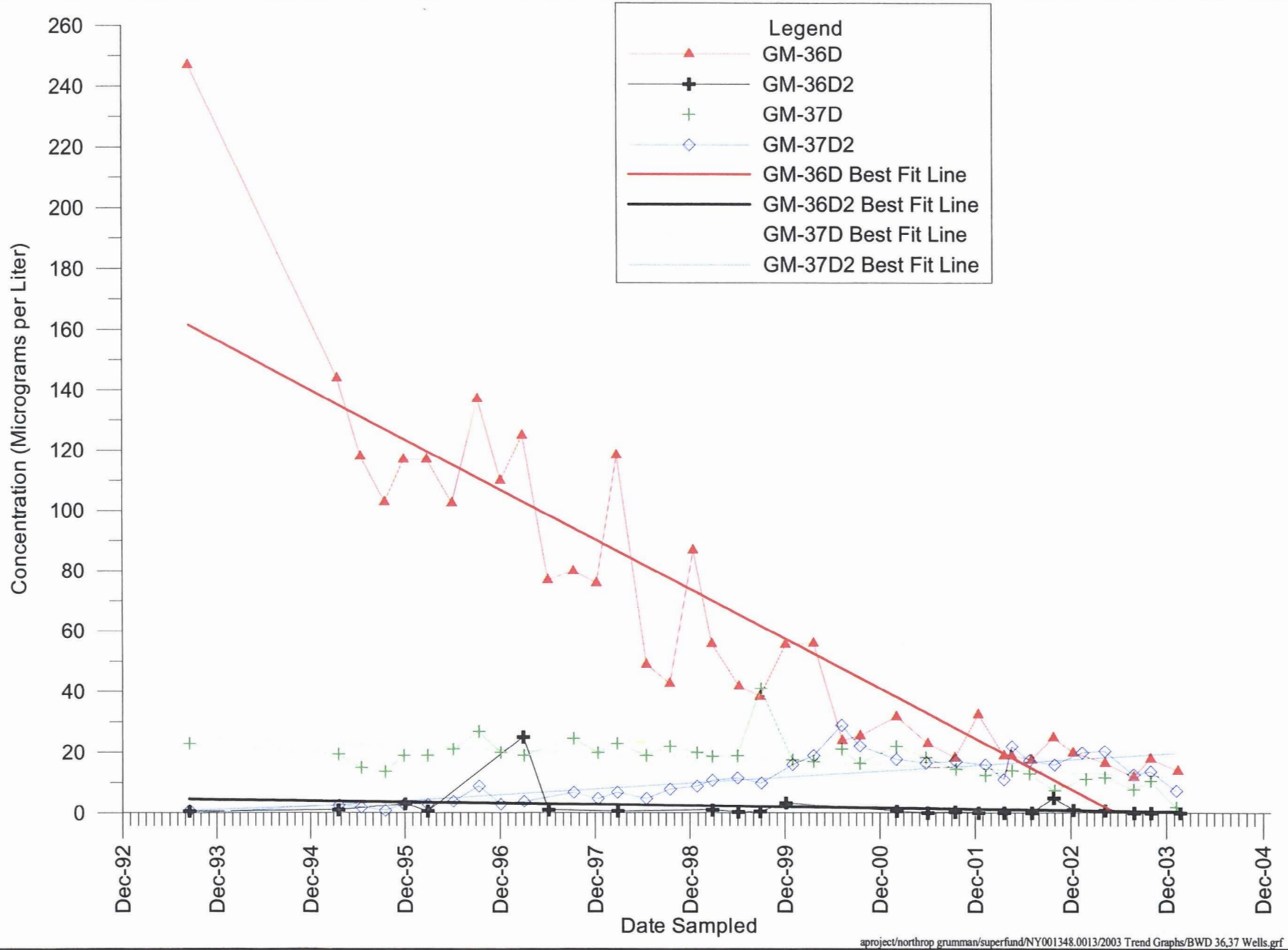
Total Volatile Organic Compound Concentrations in GM-38 Area Deep and Deep2 Monitoring Wells Northrop Grumman Corporation, Bethpage, New York

FIGURE 2



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Total Volatile Organic Compound Concentrations in Selected Deep and Deep2 Monitoring Wells Northrop Grumman Corporation, Bethpage, New York

FIGURE 3