



Infrastructure, environment, facilities

Steven M. Scharf, P.E.  
Project Engineer  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Remedial Action, Bureau A  
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Albany, New York 12233-7015

Subject:  
Addendum to August 2006 Monthly Progress Report,  
Northrop Grumman Systems Corporation,  
Operable Unit 3,  
NYSDEC Site ID # 1-30-003A, Bethpage, New York  
ARCADIS Project No. NY001348.0906.00003

Dear Mr. Scharf:

In accordance with Section III of Administrative Order on Consent (AOC) Index # W1-0018-04-01, this letter addendum has been prepared to report additional data collected for Operable Unit 3 (OU3) by Northrop Grumman Systems Corporation (NGC). This report supplements the sixth AOC monthly progress report, submitted September 11, 2006, per the June 24, 2005 AOC between NGC and the New York State Department of Environmental Conservation (NYSDEC).

Attached, please find Table 1 that provides the results of soil gas samples collected on NGC and Bethpage Community Park properties.

Please contact us if you have any questions.

Sincerely,

ARCADIS G&M, Inc.

Carlo San Giovanni  
Project Manager

Enclosure

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Imagine the result

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ENVIRONMENT

Date,  
September 19, 2006

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Table 1. Concentrations of Volatile Organic Compounds in On-Site Soil Gas Samples, Former Grumman Settling Ponds (Operable Unit 3 - Bethpage Community Park), Bethpage, New York.

Constituent	Sample ID:	SGP5-(7-7.5)	SGP5-(34-34.5)	SGP5-(49-49.5)			
	Depth (ft bls):	7-7.5	34-34.5	49-49.5			
	Date:	5/5/2006	5/5/2006	5/5/2006			
	Units:	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>			
Acetone		<b>59</b>	360	U	<b>4,300</b>		
Benzene		<b>5.4</b>	19	U	<b>96</b>		
Bromodichloromethane		2	U	41	U	66	U
Bromoform		3.1	U	63	U	100	U
Bromomethane		1.2	U	24	U	38	U
1,3-Butadiene		<b>13</b>		<b>71</b>		<b>150</b>	
Carbon Disulfide		<b>11</b>		47	U	78	U
Carbon Tetrachloride		<b>8.2</b>		<b>88</b>		<b>63</b>	
Chlorobenzene		1.4	U	28	U	46	U
Chloroethane		2	U	40	U	66	U
Chloroform		1.5	U	<b>68</b>		<b>73</b>	
Chloromethane		1.5	U	31	U	52	U
Dibromochloromethane		2.6	U	52	U	84	U
Dichlorodifluoromethane		3.7	U	74	U	120	U
1,1-Dichloroethane		1.2	U	25	U	40	U
1,2-Dichloroethane		1.2	U	25	U	40	U
1,1-Dichloroethene		<b>1.5</b>		<b>26</b>		<b>52</b>	
cis-1,2-Dichloroethene		1.2	U	24	U	39	U
trans-1,2-Dichloroethene		1.2	U	24	U	39	U
1,2-Dichloroethene (total)		1.2	U	24	U	39	U
1,2-Dichloropropane		1.4	U	28	U	46	U
cis-1,3-Dichloropropene		1.4	U	28	U	45	U
trans-1,3-Dichloropropene		1.4	U	28	U	45	U
1,3-Dichloropropene (total) (a)		1.4	U	28	U	45	U
Ethylbenzene		<b>2.5</b>		26	U	43	U
Freon 22		<b>5</b>		53	U	88	U
Freon TF		<b>2.5</b>		47	U	76	U
Methyl Butyl Ketone		3.1	U	61	U	100	U
Methylene Chloride		2.6	U	52	U	87	U
Methyl Ethyl Ketone		<b>12</b>		44	U	<b>590</b>	
Methyl Isobutyl Ketone		3.1	U	61	U	100	U
Styrene		1.3	U	26	U	42	U
1,1,2,2-Tetrachloroethane		2.1	U	42	U	68	U
Tetrachloroethene		<b>18</b>		<b>140</b>		<b>100</b>	
Toluene		<b>21</b>		23	U	<b>75</b>	
1,1,1-Trichloroethane		<b>10</b>		<b>110</b>		<b>130</b>	
1,1,2-Trichloroethane		1.6	U	33	U	54	U
Trichloroethene		<b>230</b>		<b>4,600</b>		<b>3,700</b>	
Vinyl Chloride		0.77	U	16	U	25	U
Xylene (m,p)		<b>4.3</b>		65	U	110	U
Xylene (o)		<b>2.2</b>		26	U	43	U
Xylene (total)		<b>6.5</b>		26	U	43	U

Notes:

- U                   Constituent not detected
- ft bls             Feet below land surface
- µg/m<sup>3</sup>            Micrograms per cubic meter
- (a)                Total represents sum of cis and trans isomers

**Bold indicates a detection**

Table 1. Concentrations of Volatile Organic Compounds in On-Site Soil Gas Samples, Former Grumman Settling Ponds (Operable Unit 3 - Bethpage Community Park), Bethpage, New York.

Constituent	Sample ID:	SGP6-(8-8.5)	SGP6-(34-34.5)	SGP6-(49-49.5)		
	Depth (ft bls):	8-8.5	34-34.5	49-49.5		
	Date:	5/2/2006	5/2/2006	5/2/2006		
	Units:	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>		
Acetone		500	U	480	U	<b>1,900</b>
Benzene		26	U	26	U	<b>61</b>
Bromodichloromethane		55	U	54	U	110
Bromoform		85	U	83	U	170
Bromomethane		32	U	31	U	62
1,3-Butadiene		<b>82</b>	U	44	U	<b>350</b>
Carbon Disulfide		65	U	<b>75</b>	U	130
Carbon Tetrachloride		52	U	50	U	100
Chlorobenzene		38	U	37	U	74
Chloroethane		22	U	21	U	42
Chloroform		40	U	39	U	78
Chloromethane		43	U	41	U	85
Dibromochloromethane		70	U	68	U	140
Dichlorodifluoromethane		100	U	99	U	200
1,1-Dichloroethane		33	U	<b>300</b>	U	<b>400</b>
1,2-Dichloroethane		33	U	32	U	65
1,1-Dichloroethene		33	U	32	U	<b>520</b>
cis-1,2-Dichloroethene		<b>520</b>		<b>480</b>		<b>3,100</b>
trans-1,2-Dichloroethene		<b>83</b>		32	U	<b>130</b>
1,2-Dichloroethene (total)		<b>590</b>		<b>480</b>		<b>3,300</b>
1,2-Dichloropropane		38	U	37	U	74
cis-1,3-Dichloropropene		37	U	36	U	73
trans-1,3-Dichloropropene		37	U	36	U	73
1,3-Dichloropropene (total) (a)		37	U	36	U	73
Ethylbenzene		36	U	35	U	69
Freon 22		74	U	71	U	150
Freon TF		63	U	61	U	120
Methyl Butyl Ketone		86	U	82	U	170
Methylene Chloride		73	U	69	U	140
Methyl Ethyl Ketone		<b>62</b>		59	U	<b>560</b>
Methyl Isobutyl Ketone		86	U	82	U	170
Styrene		35	U	34	U	68
1,1,1,2-Tetrachloroethane		56	U	55	U	110
Tetrachloroethene		<b>170</b>		<b>110</b>		110
Toluene		31	U	30	U	60
1,1,1-Trichloroethane		<b>320</b>		<b>470</b>		<b>1,000</b>
1,1,2-Trichloroethane		45	U	44	U	87
Trichloroethene		<b>7,500</b>		<b>4,200</b>		<b>16,000</b>
Vinyl Chloride		21	U	20	U	<b>150</b>
Xylene (m,p)		91	U	87	U	180
Xylene (o)		36	U	35	U	69
Xylene (total)		36	U	35	U	69

Notes:

- U           Constituent not detected
- ft bls      Feet below land surface
- µg/m<sup>3</sup>     Micrograms per cubic meter
- (a)         Total represents sum of cis and trans isomers

**Bold indicates a detection**

Table 1. Concentrations of Volatile Organic Compounds in On-Site Soil Gas Samples, Former Grumman Settling Ponds (Operable Unit 3 - Bethpage Community Park), Bethpage, New York.

Constituent	Sample ID:	SGP7-(7-7.5)		SGP7-(34-34.5)		SGP7-(49-49.5)		SGP7-(99-99.5)	
	Depth (ft bls):	7-7.5		34-34.5		49-49.5		Dup. of SGP7(34-34.5)	
	Date:	5/3/2006		5/3/2006		5/3/2006		5/3/2006	
	Units:	µg/m <sup>3</sup>		µg/m <sup>3</sup>		µg/m <sup>3</sup>		µg/m <sup>3</sup>	
Acetone		1,200	U	950,000	U	5,900	U	590,000	U
Benzene		64	U	51,000	U	320	U	32,000	U
Bromodichloromethane		130	U	110,000	U	670	U	67,000	U
Bromoform		210	U	170,000	U	1,000	U	100,000	U
Bromomethane		78	U	62,000	U	390	U	39,000	U
1,3-Butadiene		110	U	88,000	U	550	U	55,000	U
Carbon Disulfide		<b>160</b>		<b>240,000</b>		780	U	<b>97,000</b>	
Carbon Tetrachloride		130	U	100,000	U	630	U	63,000	U
Chlorobenzene		92	U	74,000	U	460	U	46,000	U
Chloroethane		130	U	42,000	U	260	U	26,000	U
Chloroform		98	U	78,000	U	490	U	49,000	U
Chloromethane		100	U	83,000	U	520	U	52,000	U
Dibromochloromethane		170	U	140,000	U	850	U	85,000	U
Dichlorodifluoromethane		250	U	200,000	U	1,200	U	120,000	U
1,1-Dichloroethane		<b>9,300</b>		65,000	U	400	U	40,000	U
1,2-Dichloroethane		81	U	65,000	U	400	U	40,000	U
1,1-Dichloroethene		79	U	63,000	U	400	U	40,000	U
cis-1,2-Dichloroethene		<b>400</b>		63,000	U	<b>30,000</b>		40,000	U
trans-1,2-Dichloroethene		79	U	63,000	U	400	U	40,000	U
1,2-Dichloroethene (total)		<b>400</b>		63,000	U	<b>30,000</b>		40,000	U
1,2-Dichloropropane		92	U	74,000	U	460	U	46,000	U
cis-1,3-Dichloropropene		91	U	73,000	U	450	U	45,000	U
trans-1,3-Dichloropropene		91	U	73,000	U	450	U	45,000	U
1,3-Dichloropropene (total) (a)		91	U	73,000	U	450	U	45,000	U
Ethylbenzene		87	U	<b>220,000</b>		<b>1,200</b>		<b>110,000</b>	
Freon 22		180	U	140,000	U	880	U	88,000	U
Freon TF		150	U	120,000	U	770	U	77,000	U
Methyl Butyl Ketone		200	U	160,000	U	1,000	U	100,000	U
Methylene Chloride		170	U	140,000	U	870	U	87,000	U
Methyl Ethyl Ketone		150	U	120,000	U	<b>2,200</b>		74,000	U
Methyl Isobutyl Ketone		200	U	160,000	U	1,000	U	100,000	U
Styrene		85	U	68,000	U	430	U	43,000	U
1,1,1,2-Tetrachloroethane		140	U	110,000	U	690	U	69,000	U
Tetrachloroethene		140	U	110,000	U	680	U	68,000	U
Toluene		<b>530</b>		<b>6,400,000</b>		<b>57,000</b>		<b>3,800,000</b>	
1,1,1-Trichloroethane		<b>2,600</b>		87,000	U	550	U	55,000	U
1,1,2-Trichloroethane		110	U	87,000	U	550	U	55,000	U
Trichloroethene		<b>2,100</b>		86,000	U	<b>14,000</b>		54,000	U
Vinyl Chloride		51	U	<b>230,000</b>		<b>3,800</b>		<b>150,000</b>	
Xylene (m,p)		220	U	<b>560,000</b>		<b>2,800</b>		<b>270,000</b>	
Xylene (o)		<b>110</b>		<b>170,000</b>		<b>1,000</b>		<b>83,000</b>	
Xylene (total)		<b>110</b>		<b>740,000</b>		<b>4,000</b>		<b>360,000</b>	

Notes:

- U            Constituent not detected
- ft bls      Feet below land surface
- µg/m<sup>3</sup>      Micrograms per cubic meter
- (a)         Total represents sum of cis and trans isomers

**Bold indicates a detection**

Table 1. Concentrations of Volatile Organic Compounds in On-Site Soil Gas Samples, Former Grumman Settling Ponds (Operable Unit 3 - Bethpage Community Park), Bethpage, New York.

Constituent	Sample ID:	SGP8-(7-7.5)	SGP8-(34-34.5)	SGP8-(49-49.5)		
	Depth (ft bls):	7-7.5	34-34.5	49-49.5		
	Date:	5/4/2006	5/4/2006	5/4/2006		
	Units:	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>		
Acetone		<b>290</b>	1,200	U	120,000	U
Benzene		<b>380</b>	64	U	6,400	U
Bromodichloromethane		27	U	130	U	13,000
Bromoform		41	U	210	U	21,000
Bromomethane		16	U	78	U	7,800
1,3-Butadiene		<b>110</b>		110	U	11,000
Carbon Disulfide		<b>78</b>		<b>170</b>		16,000
Carbon Tetrachloride		25	U	130	U	13,000
Chlorobenzene		18	U	92	U	9,200
Chloroethane		26	U	130	U	13,000
Chloroform		20	U	98	U	9,800
Chloromethane		21	U	100	U	10,000
Dibromochloromethane		34	U	170	U	17,000
Dichlorodifluoromethane		49	U	250	U	25,000
1,1-Dichloroethane		<b>280</b>		<b>2,500</b>		8,100
1,2-Dichloroethane		16	U	81	U	8,100
1,1-Dichloroethene		16	U	79	U	<b>28,000</b>
cis-1,2-Dichloroethene		<b>950</b>		79	U	<b>590,000</b>
trans-1,2-Dichloroethene		<b>120</b>		79	U	7,900
1,2-Dichloroethene (total)		<b>1,100</b>		79	U	<b>590,000</b>
1,2-Dichloropropane		18	U	92	U	9,200
cis-1,3-Dichloropropene		18	U	91	U	9,100
trans-1,3-Dichloropropene		18	U	91	U	9,100
1,3-Dichloropropene (total) (a)		18	U	91	U	9,100
Ethylbenzene		<b>43</b>		<b>17,000</b>		8,700
Freon 22		35	U	180	U	18,000
Freon TF		31	U	150	U	15,000
Methyl Butyl Ketone		41	U	200	U	20,000
Methylene Chloride		35	U	170	U	17,000
Methyl Ethyl Ketone		<b>59</b>		150	U	15,000
Methyl Isobutyl Ketone		41	U	200	U	20,000
Styrene		17	U	<b>220</b>		8,500
1,1,2,2-Tetrachloroethane		27	U	140	U	14,000
Tetrachloroethene		27	U	140	U	14,000
Toluene		<b>450</b>		<b>900</b>		<b>45,000</b>
1,1,1-Trichloroethane		<b>600</b>		110	U	11,000
1,1,2-Trichloroethane		22	U	110	U	11,000
Trichloroethene		<b>2,800</b>		110	U	<b>1,200,000</b>
Vinyl Chloride		10	U	<b>10,000</b>		<b>890,000</b>
Xylene (m,p)		<b>110</b>		<b>20,000</b>		22,000
Xylene (o)		<b>61</b>		<b>6,900</b>		8,700
Xylene (total)		<b>180</b>		<b>29,000</b>		8,700

Notes:

- U            Constituent not detected
- ft bls      Feet below land surface
- µg/m<sup>3</sup>      Micrograms per cubic meter
- (a)         Total represents sum of cis and trans isomers

**Bold indicates a detection**

Table 1. Concentrations of Volatile Organic Compounds in On-Site Soil Gas Samples, Former Grumman Settling Ponds (Operable Unit 3 - Bethpage Community Park), Bethpage, New York.

Constituent	Sample ID:	SGP-9(8.5-9)	SGP9-(34-34.5)	SGP9-(49-49.5)
	Depth (ft bls):	8.5-9	34-34.5	49-49.5
	Date:	4/28/2006	5/1/2006	5/1/2006
	Units:	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Acetone		120 U	31,000 U	48,000 U
Benzene		11	1,600 U	2,600 U
Bromodichloromethane		13 U	3,400 U	5,400 U
Bromoform		21 U	5,200 U	8,300 U
Bromomethane		8 U	1,900 U	3,100 U
1,3-Butadiene		13	2,900 U	4,400 U
Carbon Disulfide		16 U	4,000 U	6,200 U
Carbon Tetrachloride		13 U	3,100 U	5,000 U
Chlorobenzene		9 U	2,300 U	3,700 U
Chloroethane		5 U	1,300 U	2,100 U
Chloroform		10 U	2,400 U	3,900 U
Chloromethane		10 U	2,700 U	4,100 U
Dibromochloromethane		17 U	4,300 U	6,800 U
Dichlorodifluoromethane		25 U	6,400 U	9,900 U
1,1-Dichloroethane		1,100	2,000 U	3,200 U
1,2-Dichloroethane		8 U	2,000 U	3,200 U
1,1-Dichloroethene		8 U	2,000 U	3,200 U
cis-1,2-Dichloroethene		630	220,000	440,000
trans-1,2-Dichloroethene		71	2,000 U	3,200 U
1,2-Dichloroethene (total)		710	220,000	440,000
1,2-Dichloropropane		9 U	2,300 U	3,700 U
cis-1,3-Dichloropropene		9 U	2,300 U	3,600 U
trans-1,3-Dichloropropene		9 U	2,300 U	3,600 U
1,3-Dichloropropene (total) (a)		9 U	2,300 U	3,600 U
Ethylbenzene		9 U	2,200 U	3,500 U
Freon 22		18 U	4,600 U	7,100 U
Freon TF		15 U	3,800 U	6,100 U
Methyl Butyl Ketone		20 U	5,300 U	8,200 U
Methylene Chloride		17 U	4,500 U	6,900 U
Methyl Ethyl Ketone		50	3,800 U	5,900 U
Methyl Isobutyl Ketone		20 U	5,300 U	8,200 U
Styrene		9 U	2,100 U	3,400 U
1,1,2,2-Tetrachloroethane		14 U	3,400 U	5,500 U
Tetrachloroethene		100	3,400 U	5,400 U
Toluene		23	1,900 U	3,000 U
1,1,1-Trichloroethane		45	2,700 U	4,400 U
1,1,2-Trichloroethane		11 U	2,700 U	4,400 U
Trichloroethene		480	13,000	86,000
Vinyl Chloride		280	1,300 U	2,000 U
Xylene (m,p)		22 U	5,600 U	8,700 U
Xylene (o)		9 U	2,200 U	3,500 U
Xylene (total)		9 U	2,200 U	3,500 U

Notes:

- U                    Constituent not detected
- ft bls               Feet below land surface
- µg/m<sup>3</sup>               Micrograms per cubic meter
- (a)                   Total represents sum of cis and trans isomers

**Bold indicates a detection**

Table 1. Concentrations of Volatile Organic Compounds in On-Site Soil Gas Samples, Former Grumman Settling Ponds (Operable Unit 3 - Bethpage Community Park), Bethpage, New York.

Constituent	Sample ID:	SGP10-(7.5-8)	SGP10-(34-34.5)	SGP10-(49-49.5)	SGP11-(7-7.5)
	Depth (ft bls):	7.5-8	34-34.5	49-49.5	7-7.5
	Date:	4/27/2006	4/27/2006	4/27/2006	5/5/2006
	Units:	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>
Acetone		31,000 U	24,000 U	95,000 U	950 U
Benzene		1,700 U	1,300 U	5,100 U	51 U
Bromodichloromethane		3,600 U	2,700 U	11,000 U	110 U
Bromoform		5,500 U	4,100 U	17,000 U	170 U
Bromomethane		2,100 U	1,600 U	6,200 U	62 U
1,3-Butadiene		2,900 U	2,200 U	8,800 U	88 U
Carbon Disulfide		<b>5,000</b>	3,100 U	12,000 U	<b>180</b>
Carbon Tetrachloride		3,300 U	2,500 U	10,000 U	100 U
Chlorobenzene		2,400 U	1,800 U	7,400 U	74 U
Chloroethane		1,400 U	1,100 U	4,200 U	110 U
Chloroform		2,600 U	2,000 U	7,800 U	78 U
Chloromethane		2,700 U	2,100 U	8,300 U	83 U
Dibromochloromethane		4,500 U	3,400 U	14,000 U	140 U
Dichlorodifluoromethane		<b>16,000</b>	<b>22,000</b>	<b>46,000</b>	200 U
1,1-Dichloroethane		2,100 U	1,600 U	6,500 U	65 U
1,2-Dichloroethane		2,100 U	1,600 U	6,500 U	65 U
1,1-Dichloroethene		2,100 U	1,600 U	6,300 U	63 U
cis-1,2-Dichloroethene		2,100 U	1,600 U	6,300 U	<b>370</b>
trans-1,2-Dichloroethene		2,100 U	1,600 U	6,300 U	63 U
1,2-Dichloroethene (total)		2,100 U	1,600 U	6,300 U	<b>370</b>
1,2-Dichloropropane		2,400 U	1,800 U	7,400 U	74 U
cis-1,3-Dichloropropene		2,400 U	1,800 U	7,300 U	73 U
trans-1,3-Dichloropropene		2,400 U	1,800 U	7,300 U	73 U
1,3-Dichloropropene (total) (a)		2,400 U	1,800 U	7,300 U	73 U
Ethylbenzene		2,300 U	1,700 U	6,900 U	69 U
Freon 22		<b>160,000</b>	<b>240,000</b>	<b>600,000</b>	140 U
Freon TF		4,100 U	3,100 U	12,000 U	120 U
Methyl Butyl Ketone		5,300 U	4,100 U	16,000 U	160 U
Methylene Chloride		4,500 U	3,500 U	14,000 U	140 U
Methyl Ethyl Ketone		3,800 U	2,900 U	12,000 U	120 U
Methyl Isobutyl Ketone		5,300 U	4,100 U	16,000 U	160 U
Styrene		2,300 U	1,700 U	6,800 U	68 U
1,1,2,2-Tetrachloroethane		3,600 U	2,700 U	11,000 U	110 U
Tetrachloroethene		3,600 U	2,700 U	11,000 U	110 U
Toluene		2,000 U	1,500 U	6,000 U	60 U
1,1,1-Trichloroethane		2,900 U	2,200 U	8,700 U	<b>980</b>
1,1,2-Trichloroethane		2,900 U	2,200 U	8,700 U	87 U
Trichloroethene		2,800 U	2,100 U	8,600 U	<b>11,000</b>
Vinyl Chloride		1,400 U	1,000 U	4,100 U	41 U
Xylene (m,p)		5,600 U	4,300 U	17,000 U	170 U
Xylene (o)		2,300 U	1,700 U	6,900 U	69 U
Xylene (total)		2,300 U	1,700 U	6,900 U	69 U

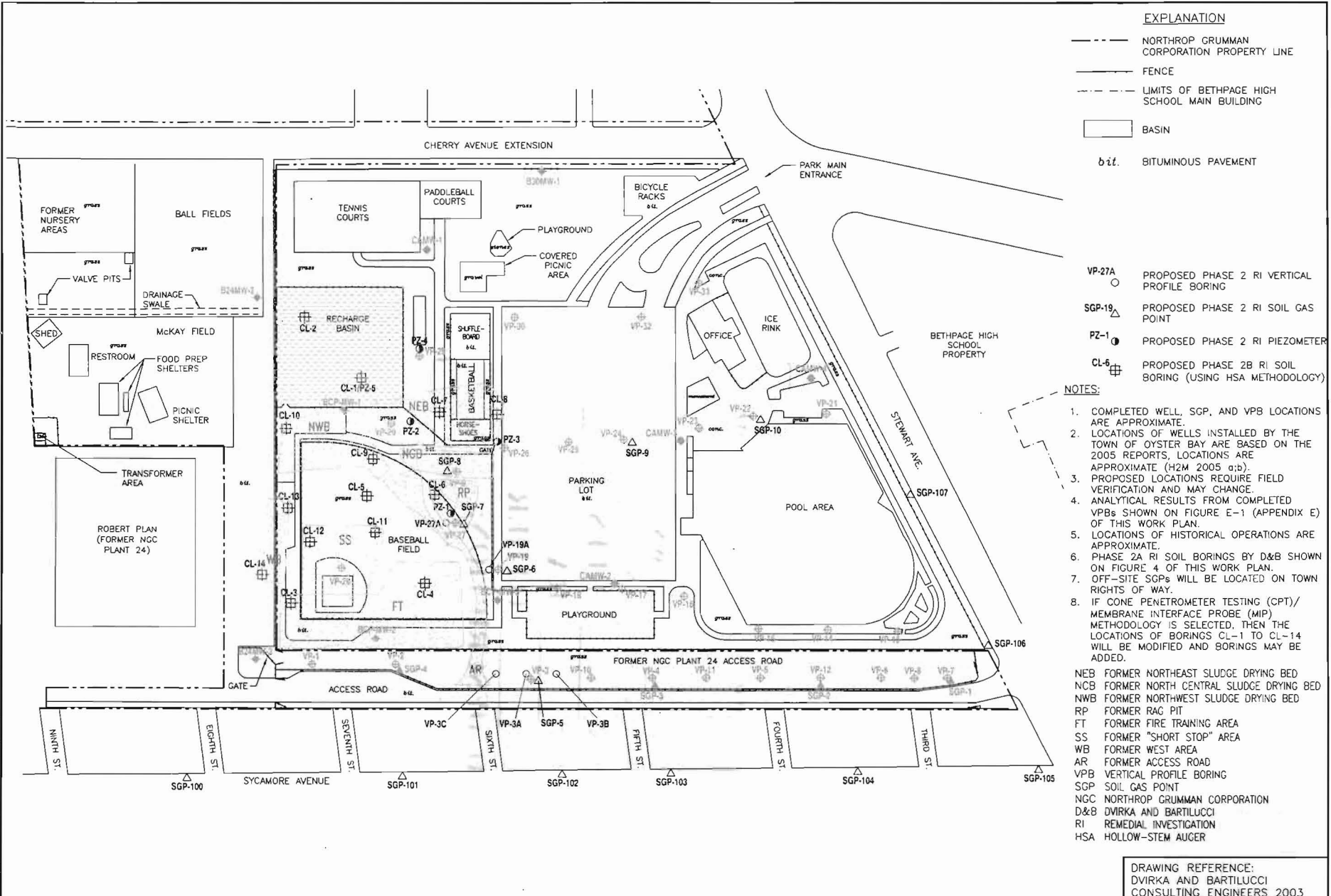
Notes:

- U           Constituent not detected
- ft bls     Feet below land surface
- µg/m<sup>3</sup>     Micrograms per cubic meter
- (a)        Total represents sum of cis and trans isomers

**Bold indicates a detection**

Date/TIME : Fri, 10 Mar 2006 - 9:58am  
 Path/Name : G:\PROJECT\Northrop Grumman\Cadd\REPORT 2005\FIG 3 VPB-SGP WELLS.dwg

Acad Version : R16.2a (MC Tech)  
 User Name : ehughes



**EXPLANATION**

- NORTHROP GRUMMAN CORPORATION PROPERTY LINE
- FENCE
- LIMITS OF BETHPAGE HIGH SCHOOL MAIN BUILDING
- BASIN

bit. BITUMINOUS PAVEMENT

- VP-27A ○ PROPOSED PHASE 2 RI VERTICAL PROFILE BORING
- SGP-19 △ PROPOSED PHASE 2 RI SOIL GAS POINT
- PZ-1 ● PROPOSED PHASE 2 RI PIEZOMETER
- CL-6 ⊕ PROPOSED PHASE 2B RI SOIL BORING (USING HSA METHODOLOGY)

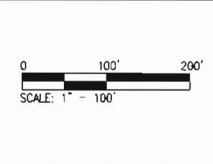
**NOTES:**

1. COMPLETED WELL, SGP, AND VPB LOCATIONS ARE APPROXIMATE.
2. LOCATIONS OF WELLS INSTALLED BY THE TOWN OF OYSTER BAY ARE BASED ON THE 2005 REPORTS. LOCATIONS ARE APPROXIMATE (H2M 2005 a,b).
3. PROPOSED LOCATIONS REQUIRE FIELD VERIFICATION AND MAY CHANGE.
4. ANALYTICAL RESULTS FROM COMPLETED VPBs SHOWN ON FIGURE E-1 (APPENDIX E) OF THIS WORK PLAN.
5. LOCATIONS OF HISTORICAL OPERATIONS ARE APPROXIMATE.
6. PHASE 2A RI SOIL BORINGS BY D&B SHOWN ON FIGURE 4 OF THIS WORK PLAN.
7. OFF-SITE SGPs WILL BE LOCATED ON TOWN RIGHTS OF WAY.
8. IF CONE PENETROMETER TESTING (CPT)/MEMBRANE INTERFACE PROBE (MIP) METHODOLOGY IS SELECTED, THEN THE LOCATIONS OF BORINGS CL-1 TO CL-14 WILL BE MODIFIED AND BORINGS MAY BE ADDED.

- NEB FORMER NORTHEAST SLUDGE DRYING BED
- NCB FORMER NORTH CENTRAL SLUDGE DRYING BED
- NWB FORMER NORTHWEST SLUDGE DRYING BED
- RP FORMER RAC PIT
- FT FORMER FIRE TRAINING AREA
- SS FORMER "SHORT STOP" AREA
- WB FORMER WEST AREA
- AR FORMER ACCESS ROAD
- VPB VERTICAL PROFILE BORING
- SGP SOIL GAS POINT
- NGC NORTHROP GRUMMAN CORPORATION
- D&B DVIRKA AND BARTILUCCI
- RI REMEDIAL INVESTIGATION
- HSA HOLLOW-STEM AUGER

DRAWING REFERENCE:  
 DVIRKA AND BARTILUCCI  
 CONSULTING ENGINEERS 2003

NO.	DATE	REVISION DESCRIPTION	BY
0	3/8/2006	REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN	CKD



**ARCADIS**

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PROJECT TITLE  
**OPERABLE UNIT 3  
 FORMER GRUMMAN SETTLING PONDS  
 BETHPAGE, NEW YORK**

PROJECT MANAGER  
 C. SAN GIOVANNI

DEPARTMENT MANAGER  
 M. WOLFERT

SHEET TITLE  
**LOCATIONS OF HISTORICAL OPERATIONS  
 AND PHASE 2 RI VPBs, SGPs,  
 AND PHASE 2B RI SOIL BORINGS**

LEAD DESIGNER	CHECKED BY
TASK/PHASE NUMBER 00002	D. STERN
PROJECT NUMBER NY001348.0706	DRAWN BY E. HUGHES
	<b>5</b>