

1-30-01-003

NORTHROP GRUMMAN

Electronics & Systems Integration Division
Northrop Grumman Corporation
South Oyster Bay Road
Bethpage, New York 11714-3580

May 13, 1998
ETC98-126

RECEIVED
NYSDEC

Mr. Stan Farkas
NYS Department of Environmental Conservation
SUNY - Building 40
Stony Brook, New York 11794

MAY 14 1998

BUREAU OF
HAZARDOUS WASTE FACILITIES
DIV. OF SOLID & HAZ. MATERIALS

Subject: **Northrop Grumman Corporation - Building 03, Bethpage Site
Area of Concern 33-09 - Former Waste Accumulation Area
Area of Concern 34 - Old Autoclave Area
Area of Concern 33-11/12 - Former Waste Accumulation Area
Area of Concern 6 - Chem Mill Clean Area
Remediation End Point Sample Results**

- Enclosures: 1) End Point Soil Sample Location Drawings
2) End Point Soil Sample Data for AOC 33-09
3) End Point Soil Sample Data for AOC 34
4) End Point Soil Sample Data for AOC 33-11/12
5) End Point Soil Sample Data for AOC 6

Dear Mr. Farkas:

As you know, Northrop Grumman has been conducting environmental remediation at the Bethpage Building 03 location for Areas of Concern (AOCs) that have significant exceedances of the TAGM 4046 soil criteria. One such location, AOC 33-09 - Former Waste Accumulation Area, was recently excavated to depths of eight and twelve feet below grade surface (bgs). Another location, AOC 34 - Old Autoclave Area, was excavated to depths of thirty and sixteen feet bgs. Similarly, AOC 33-11/12 - Former Waste Accumulation Area, was also excavated to depths of eight and ten feet. Lastly, AOC 6 - Chem Mill Clean Area, was excavated to depths of four and twelve feet bgs. Sketches showing the excavated areas and end point sample locations for AOCs 33-09, 34, 33-11/12, and 6 are provided in Enclosure 1.

In a previous meeting, we agreed to sample and analyze the side wall samples prior to excavation. This sampling methodology was chosen to ensure that the horizontal extent of impacted soil for each AOC was accurately defined. A few sidewall samples at the 2'-4' interval for AOC 33-11/12 were not collected because the sidewall sample locations were taken within a 5-foot thick concrete floor slab.

The following Table illustrates the end point analysis conducted for each of the AOCs remediated. The end point sample results are presented for your review in Enclosures 2 through 4.

AOC	Analysis	Method Number
33-09	VOCs	8270
	SVOCs	8240
34	PCBs	8082
	SVOCs	8270
33-11/12	Priority Pollutant Metals	6010/7471
	SVOCs	8270
6	Priority Pollutant Metals	6010/7471

AOC 33-09 - Former Waste Accumulation Area

The end point sample results for AOC 33-09 are provided in Enclosure 2. There are no VOC exceedances of the TAGM criteria. There are, however, minor exceedances of individual SVOCs constituents in sidewall sample AOC 33-09C and floor sample AOC 33-09M. Because the total concentration of carcinogenic SVOCs are well below the TAGM criteria of 10,000 µg/kg for these samples, the environmental impacts are negligible.

AOC 34- Old Autoclave

The end point sample results for AOC 34 are provided in Enclosure 3. The endpoint data does not indicate any PCBs or SVOCs exceedances of the TAGM criteria.

AOC 33-11/12 - Former Waste Accumulation Area

The end point sample results for AOC 33-11/12 are provided in Enclosure 4. There are no priority pollutant metal exceedances of the TAGM criteria. Sample AOC 33-12A₁₂ (2.5'-4') exhibited individual exceedances of the following SVOCs: benzo (a) anthracene, chrysene, benzo (b) fluoranthene, benzo (k) fluoranthene, and benzo (a) pyrene. However, the average concentration of these constituents for the 2-4 foot interval was well below each of the individual SVOC TAGM criteria. It is important to note that the extract for samples AOC 33-11/12 C_{FL}, E_{FL}, I_{FL}, and H_{FL} was re-analyzed after performing a silica gel clean-up procedure (method 3630C). This clean-up procedure was utilized to reduce the method detection limit (MDL) associated with the polycyclic aromatic hydrocarbons (PAHs). It is believed that heavy end hydrocarbons caused interference during the initial scan of these samples resulting in a MDL that was about two orders of magnitude above acceptable limits.

S. Farkas
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AOC 6 - Chem Mill Clean Area

The end point sample results for AOC 6 are provided in Enclosure 5. The data indicates that there is only one exceedance of the priority pollutant metal TAGM criteria. Floor sample AOC 6F exhibited a concentration of chromium of 250 mg/kg. As a result of this exceedance, the sample was re-analyzed for hexavalent chromium. The data on page 3 of Enclosure 5 shows that the hexavalent chromium concentration of sample AOC 6F is 4.8 mg/kg. Since the hexavalent chromium concentration is well below the TAGM criteria of 50 mg/kg for total chromium, no further action is warranted for AOC 6.

In summary, Northrop Grumman effectively removed, transported, and disposed of impacted soils at AOCs 33-09, 34, 33-11/12, and 6. The end point analysis results demonstrate that soils immediately adjacent to the excavated areas do not exceed the TAGM criteria. It is therefore recommended that No Further Action is warranted at AOCs 33-09, 34, 33-11/12, and 6.

Upon your review and approval of the attached data and these recommendations, Northrop Grumman will backfill the excavation areas with certified clean bank-run sand and restore the area to match existing conditions. A complete engineering report documenting all field activities, laboratory data analysis, and waste disposal manifests shall be sent to your office at the completion of this project.

We have put together an ambitious schedule for the completion of the remediation work at the 105-Acre GOCO site and would appreciate your expeditious review and approval of this letter report.

If you have any questions, please call me at 516/575-2333 or A. Postyn, of this office, at 516/575-1566.

Very truly yours,

NORTHROP GRUMMAN CORPORATION



Larry L. Deskovjan, Manager

Environmental Technology and Compliance
M/S: D08-001

cc: w/enclosure
S. Kaminski, NYSDEC; H. Wilkie, NYSDEC; T. Mulvihill, NCDH; T. Kelly, NCDPW

w/o enclosure
J. Lovejoy, NCDH; B. Mackay, NCDH



ENCLOSURE 1

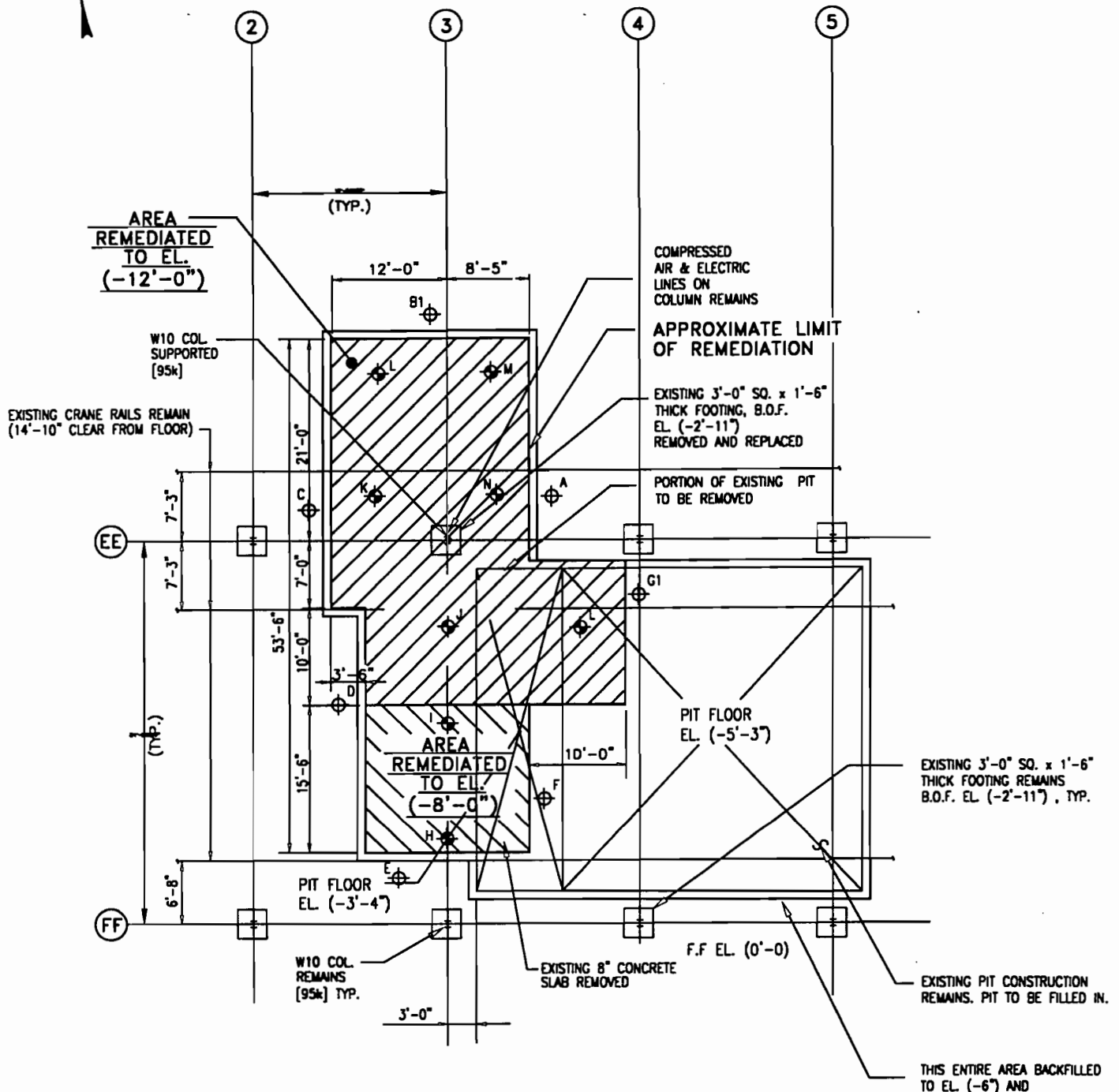
3-98 PROJECT NO. NY000008.0140 FILE: G:\PROJECT\GRUMMAN\NY0008.0140\ DRAWING: AOC 33-09 CHECKED: GN APPROVED: GN DRA: MS

NOTES:

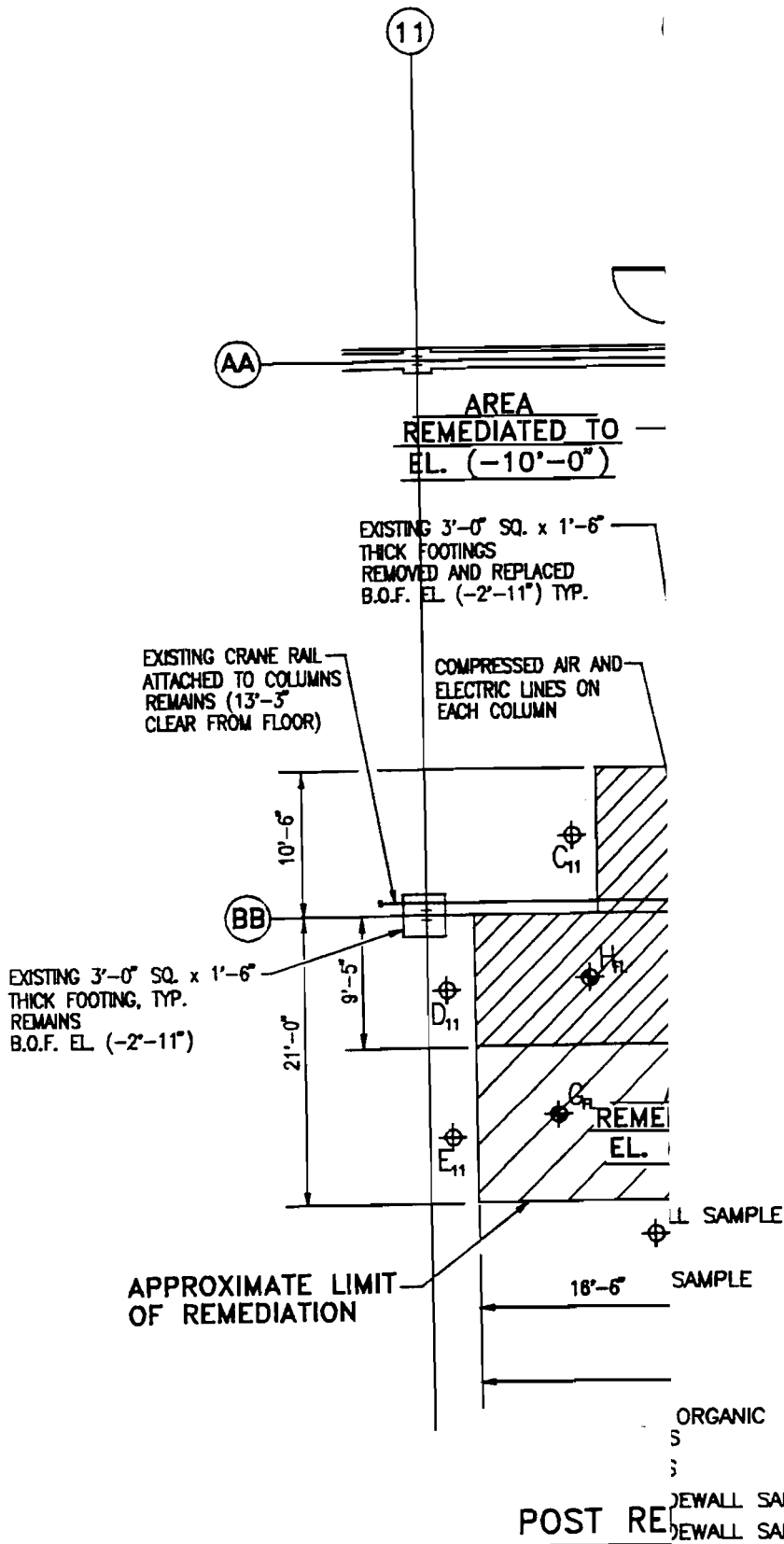
- SOIL SAMPLES ANALYZED FOR VOLATILE ORGANIC COMPOUNDS AND SEMI-VOLATILE ORGANIC COMPOUNDS

LEGEND:

-  POST REMEDIATION SIDEWALL SAMPLE
-  POST REMEDIATION FLOOR SAMPLE



POST REMEDIATION PLAN - AOC 33-09
N.T.S.



NO.	DATE	REVISION DESCRIPTION	BY
			CKD

PLANT 3
NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

AOC 33-11 & AOC 33-12



88 Duryea Road
Bethpage, New York 11747
Tel: 516/240-7800 Fax: 516/240-7810

PROJECT MANAGER TE	DEPARTMENT MANAGER
LEAD DESIGN PROF.	CHECKED TE
DRAWN MS	DATE 4/9/98
PROJECT NUMBER NY00008.0140	DRAWING NUMBER 19

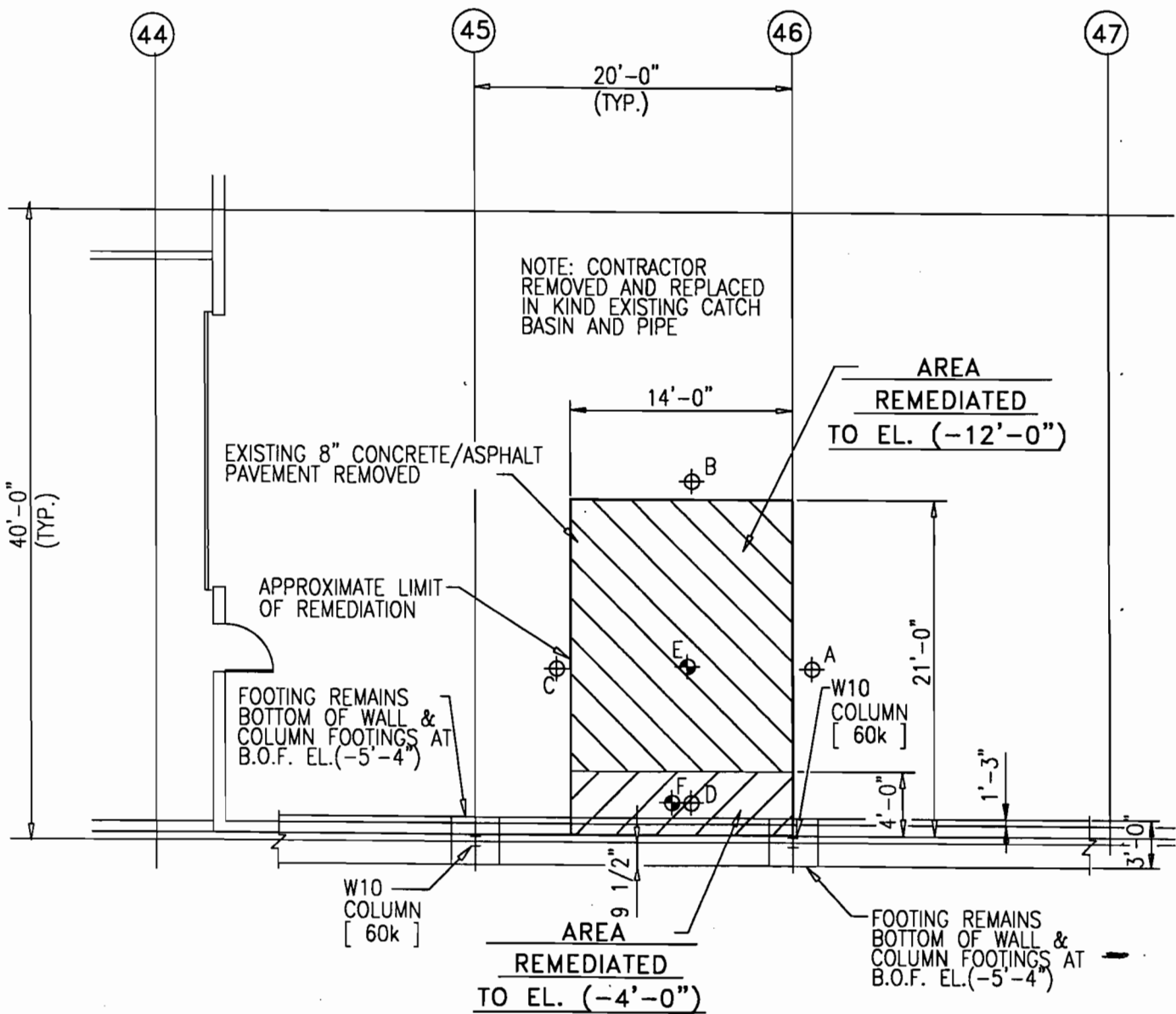
NOTES:

- 1. SOIL SAMPLES ANALYZED FOR PRIORITY POLLUTANT METALS

LEGEND:

- ⊕ IN-SITU SIDEWALL SAMPLE
- ⊙ POST REMEDIATION FLOOR SAMPLE

DWG DATE: 4-2-98 PROJECT NO. NY000008.0140 FILE: G:\PROJECT\GRUMMAN\NY0008.0140\CADD DRAWING: AOC 6 CHECKED: GN APPROVED: GN AFTER: MS



POST REMEDIATION PLAN - AOC 6
N.T.S.





PROJECT NUMBER	NY000008.0140
FIGURE NUMBER	11

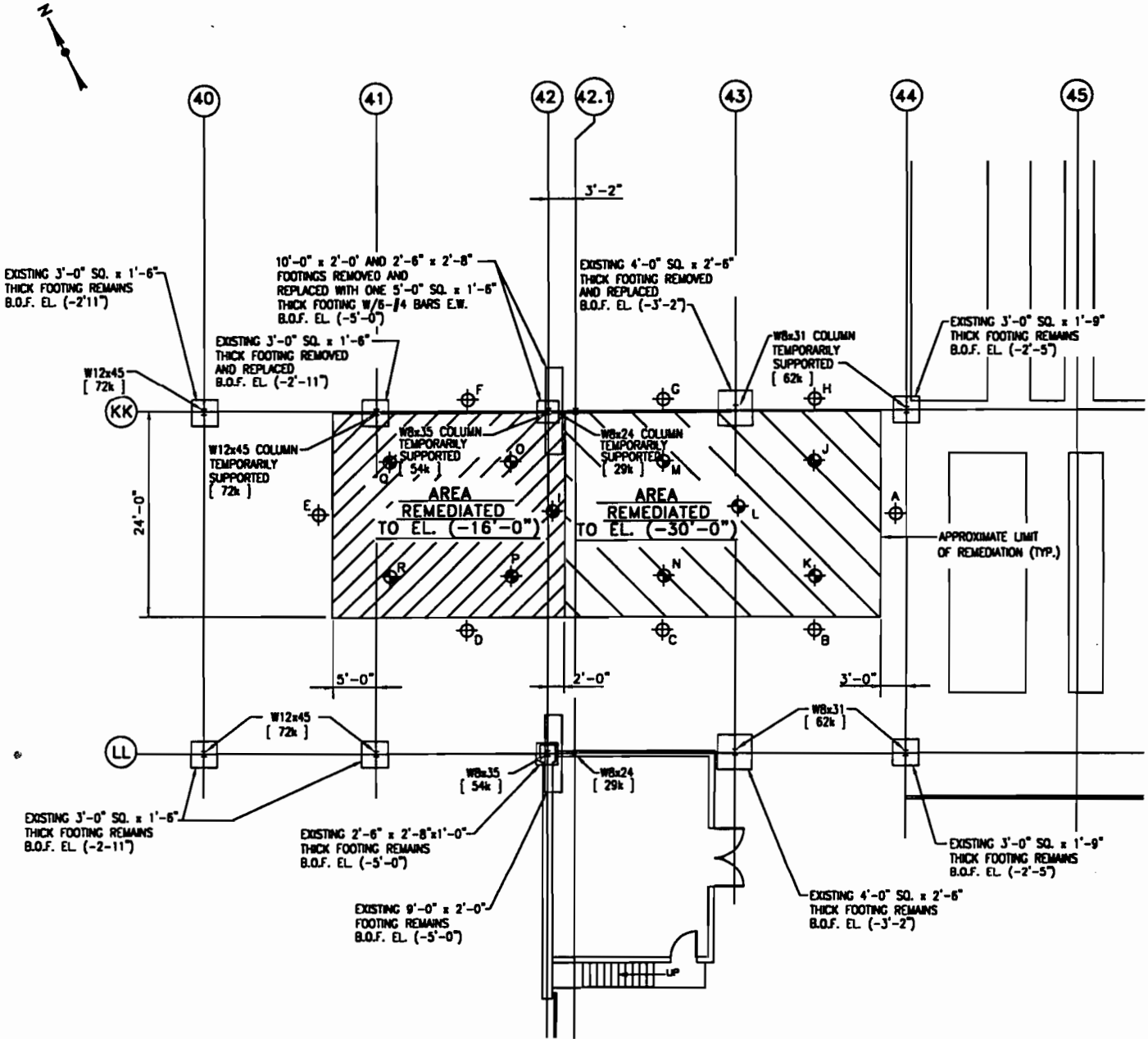
MS DP-STER: GN APPROVED: GN CHECKED: GN AOC 34 DRAWING: AOC 34 CADD FILE: G:\PROJECT\GRUMMAN\NY00008.0140\ PROJECT. NO. NY000008.0140 DWG DATE: 4-2-98

NOTES:

- SOIL SAMPLES ANALYZED FOR SEMI-VOLATILE ORGANIC COMPOUNDS

LEGEND:

-  IN-SITU SIDEWALL SAMPLE
-  POST REMEDIATION FLOOR SAMPLE



POST REMEDIATION PLAN - AOC 34
N.T.S.



ENCLOSURE 2

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09A		AOC 33-09A		AOC 33-09A		AOC 33-09B1		AOC 33-09B1					
		Sample Interval: 2-4'	Date Sampled: 2/25/98	Units: ug/kg	6-8'	Date Sampled: 2/25/98	Units: ug/kg	8-10'	Date Sampled: 4/29/98	Units: ug/kg	2-4'	Date Sampled: 3/10/98	Units: ug/kg	5-7'	Date Sampled: 4/29/98
Chlorobenzene	1,700	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethyl Benzene	5,500	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
o Xylene	1,200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
m+p Xylene	1,200	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylene	1,200	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
% Solids		97	97	97	97	97	97	97	97	97	97	97	97	97	97

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in excess of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

¹ NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09B1		AOC 33-09C		AOC 33-09C		AOC 33-09C		AOC 33-09D	
		Sample Interval: 8-10'	Date Sampled: 4/29/98	2-4'	6-8'	10-12'	2-4'	2-4'	2-4'	2-4'	2-4'
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Chlorobenzene	1,700	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethyl Benzene	5,500	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
o Xylene	1,200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
m+p Xylene	1,200	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Xylene	1,200	<15	<15	<15	<15	<15	<15	<15	<15	<15	<15
% Solids		99	97	99	99	99	99	99	99	99	99

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09D		AOC 33-09D		AOC 33-09E		AOC 33-09F		AOC 33-09GI		
		Sample Interval: 6-8'	Date Sampled: 2/25/98	8-10'	4/29/98	2-4'	2/25/98	5-7'	2/25/98	5-7'	2/24/98	7-9'
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Chlorobenzene	1,700	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethyl Benzene	5,500	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	N/A	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
o Xylene	1,200	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
m+p Xylene	1,200	<10	<10	<10	<10	<10	<10	<10	<11	<10	<10	<10
Xylene	1,200	<15	<15	<15	<15	<15	<15	<15	<16	<15	<15	<15
% Solids		99	99	99	98	99	99	94	99	99	94	99

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09H FLOOR 4/29/98	Sample Interval: Date Sampled: 4/29/98	Units: ug/kg	AOC 33-09I FLOOR 4/29/98	ug/kg	AOC 33-09J FLOOR 4/29/98	ug/kg	AOC 33-09K FLOOR 4/29/98	ug/kg
<u>Volatile Organic Compounds:</u>										
Chloromethane	N/A	<5			<5		<5		<5	
Bromomethane	N/A	<5			<5		<5		<5	
Vinyl Chloride	200	<5			<5		<5		<5	
Chloroethane	1,900	<5			<5		<5		<5	
Methylene Chloride	100	<5			<5		<5		<5	
Acetone	200	<51			<51		<51		<51	
Carbon disulfide	2,700	<5			<5		<5		<5	
1,1 Dichloroethene	400	<5			<5		<5		<5	
1,1 Dichloroethane	200	<5			<5		<5		<5	
1,2 Dichloroethene	250	<10			<10		<10		<10	
Chloroform	300	<5			<5		<5		<5	
1,2 Dichloroethane	100	<5			<5		<5		<5	
2-Butanone	300	<51			<51		<51		<51	
111 Trichloroethane	800	<5			<5		<5		<5	
Carbon Tetrachloride	600	<5			<5		<5		<5	
Bromodichloromethane	N/A	<5			<5		<5		<5	
1,2 Dichloropropane	N/A	<5			<5		<5		<5	
c-1,3Dichloropropene	N/A	<5			<5		<5		<5	
Trichloroethene	700	<5			<5		<5		<5	
Chlorodibromomethane	N/A	<5			<5		<5		<5	
112 Trichloroethane	N/A	<5			<5		<5		<5	
Benzene	60	<5			<5		<5		<5	
t-1,3Dichloropropene	N/A	<5			<5		<5		<5	
Bromoform	N/A	<5			<5		<5		<5	
4-Methyl-2-Pentanone	1,000	<51			<51		<51		<51	
2-Hexanone	N/A	<51			<51		<51		<51	
Tetrachloroethene	1,400	<5			<5		<5		<5	
Toluene	1,500	<5			<5		<5		<5	
1122Tetrachloroethane	600	<5			<5		<5		<5	

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09H		AOC 33-09I		AOC 33-09J		AOC 33-09K	
		Sample Interval: FLOOR	Date Sampled: 4/29/98	Sample Interval: FLOOR	Date Sampled: 4/29/98	Sample Interval: FLOOR	Date Sampled: 4/29/98	Sample Interval: FLOOR	Date Sampled: 4/29/98
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Chlorobenzene	1,700	<5	<5	<5	<5	<5	<5	<5	<5
Ethyl Benzene	5,500	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	N/A	<5	<5	<5	<5	<5	<5	<5	<5
o Xylene	1,200	<5	<5	<5	<5	<5	<5	<5	<5
m+p Xylene	1,200	<10	<10	<10	<10	<10	<10	<10	<10
Xylene	1,200	<15	<15	<15	<15	<15	<15	<15	<15
% Solids		99	99	99	99	99	99	99	99

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

¹ NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09L FLOOR	Sample Interval: 4/29/98	Units: ug/kg	AOC 33-09M FLOOR	4/29/98	ug/kg	AOC 33-09N FLOOR	4/29/98	ug/kg	AOC 33-09O FLOOR	4/29/98	ug/kg	AOC 33-09P FLOOR	4/29/98	ug/kg
Chlorobenzene	1,700				<5			<5			<5			<5		
Ethyl Benzene	5,500				<5			<5			<5			<5		
Styrene	N/A				<5			<5			<5			<5		
o Xylene	1,200				<5			<5			<5			<5		
m+p Xylene	1,200				<10			<10			<10			<10		
Xylene	1,200				<15			<15			<15			<15		
% Solids					99			99			99			99		

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 33-09A 2-4' 2/25/98 ug/kg	AOC 33-09A 6-8' 2/25/98 ug/kg	AOC 33-09A 8-10' 4/29/98 ug/kg	AOC 33-09B1 5-7' 4/29/98 ug/kg
<u>Semivolatile Organic Compounds:</u>						
N-Nitrosodimethylamine	N/A		<31	<31	<30	<30
Bis (2-Chloroethyl) ether	N/A		<31	<31	<30	<30
1,3-Dichlorobenzene	N/A		<31	<31	<30	<30
1,4-Dichlorobenzene	N/A		<31	<31	<30	<30
1,2-Dichlorobenzene	N/A		<31	<31	<30	<30
Bis (2-chloroisopropyl) ether	N/A		<31	<31	<30	<30
N-Nitrosodi-n-propylamine	N/A		<31	<31	<30	<30
Hexachloroethane	N/A		<31	<31	<30	<30
Nitrobenzene	200		<31	<31	<30	<30
Isophorone	4400		<31	<31	<30	<30
Bis (2-chloroethoxy) methane	N/A		<31	<31	<30	<30
124-Trichlorobenzene	N/A		<31	<31	<30	<30
Naphthalene	13000		<31	<31	<30	<30
Hexachlorobutadiene	N/A		<31	<31	<30	<30
Hexachlorocyclopentadiene	N/A		<31	<31	<30	<30
2-Chloronaphthalene	N/A		<310	<310	<300	<300
Dimethyl Phthalate	N/A		<31	<31	<30	<30
Acenaphthylene	41000		<31	<31	<30	<30
2,6-Dinitrotoluene	1000		<31	<31	<30	<30
Acenaphthene	50000		<31	<31	<30	<30
2,4-Dinitrotoluene	N/A		<31	<31	<30	<30
Diethyl Phthalate	N/A		<31	<31	<30	<30
Fluorene	50000		<31	<31	<30	<30
4-Chlorophenyl phenyl ether	N/A		<31	<31	<30	<30
N-Nitrosodiphenylamine	N/A		<31	<31	<30	<30
1,2-Diphenylhydrazine	N/A		<31	<31	<30	<30
4-Bromophenyl phenyl ether	N/A		<31	<31	<30	<30
Hexachlorobenzene	410		<31	<31	<30	<30
Phenanthrene	50000		<31	<31	<30	<300

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09A	Sample Interval: 2-4'	Date Sampled: 2/25/98	Units: ug/kg	AOC 33-09A 6-8'	Date Sampled: 2/25/98	Units: ug/kg	AOC 33-09A 8-10'	Date Sampled: 4/29/98	Units: ug/kg	AOC 33-09B1 5-7'	Date Sampled: 4/29/98	Units: ug/kg
Anthracene	50000		<31			<31			<30			36		
Di-n-Butyl Phthalate	8100		<31			<31			<30			<30		
Fluoranthene	50000		<31			<31			<30			360		
Benzidine	N/A		<310			<310			<30			<30		
Pyrene	5000		<31			<31			<30			280		
Benzyl Butyl Phthalate	N/A		<31			<31			<30			<30		
Benzo (a) anthracene*	224		<31			<31			<30			120		
3,3-Dichlorobenzidine	N/A		<310			<310			<300			<300		
Chrysene*	400		<31			<31			<30			160		
Bis (2-ethylhexyl) phthalate	50000		32			<31			<30			<30		
Di-n-octyl Phthalate	50000		<31			<31			<30			<30		
Benzo (b) fluoranthene*	224		<31			<31			<30			120 ^{AA}		
Benzo (k) fluoranthene*	224		<31			<31			<30			120 ^{AA}		
Benzo (a) pyrene*	61		<31			<31			<30			110		
Indeno (1,2,3-cd) pyrene*	3200		<31			<31			<30			95		
Dibenzo (a,h) anthracene*	14		<31			<31			<30			37		
Benzo (ghi) perylene	N/A		<31			<31			<30			100		
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg		ND			ND			ND			762 ug/kg		
TOTAL SVOCs	500,000 ug/kg		32 ug/kg			ND			ND			1538 ug/kg		

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.
 ug/kg Micrograms per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09B1		AOC 33-09C	AOC 33-09C	AOC 33-09C
		Sample Interval: Date Sampled:	8-10' 4/29/98	2-4' 2/25/98	6-8' 2/25/98	8-10' 2/25/98
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
<u>Semivolatile Organic Compounds:</u>						
N-Nitrosodimethylamine	N/A	<30	<31	<30	<30	<30
Bis (2-Chloroethyl) ether	N/A	<30	<31	<30	<30	<30
1,3-Dichlorobenzene	N/A	<30	<31	<30	<30	<30
1,4-Dichlorobenzene	N/A	<30	<31	<30	<30	<30
1,2-Dichlorobenzene	N/A	<30	<31	31	<30	50
Bis (2-chloroisopropyl) ether	N/A	<30	<31	<30	<30	<30
N-Nitrosodi-n-propylamine	N/A	<30	<31	<30	<30	<30
Hexachloroethane	N/A	<30	<31	<30	<30	<30
Nitrobenzene	200	<30	<31	<30	<30	<30
Isophorone	4400	<30	<31	<30	<30	<30
Bis (2-chloroethoxy) methane	N/A	<30	<31	<30	<30	<30
124-Trichlorobenzene	N/A	<30	<31	<30	<30	<30
Naphthalene	13000	<30	<31	<30	<30	130
Hexachlorobutadiene	N/A	<30	<31	<30	<30	<30
Hexachlorocyclopentadiene	N/A	<300	<310	<300	<300	<300
2-Chloronaphthalene	N/A	<30	<31	<30	<30	<30
Dimethyl Phthalate	N/A	<30	<31	<30	<30	<30
Acenaphthylene	41000	<30	<31	<30	<30	<30
2,6-Dinitrotoluene	1000	<30	<31	<30	<30	<30
Acenaphthene	50000	<30	<31	<30	<30	300
2,4-Dinitrotoluene	N/A	<30	<31	<30	<30	<30
Diethyl Phthalate	N/A	<30	<31	<30	<30	<30
Fluorene	50000	<30	<31	<30	<30	260
4-Chlorophenyl phenyl ether	N/A	<30	<31	<30	<30	<30
N-Nitrosodiphenylamine	N/A	<30	<31	<30	<30	<30
1,2-Diphenylhydrazine	N/A	<30	<31	<30	<30	<30
4-Bromophenyl phenyl ether	N/A	<30	<31	<30	<30	<30
Hexachlorobenzene	410	<30	<31	<30	<30	<30
Phenanthrene	50000	<30	230	<30	<30	3400

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 33-09B1 8-10' 4/29/98 ug/kg	AOC 33-09C 2-4' 2/25/98 ug/kg	AOC 33-09C 6-8' 2/25/98 ug/kg	AOC 33-09C 8-10' 2/25/98 ug/kg
Anthracene	50000		<30	33	<30	620
Di-n-Butyl Phthalate	8100		<30	<31	<30	<30
Fluoranthene	50000		<30	290	<30	3800
Benzidine	N/A		<30	<310	<300	<300
Pyrene	5000		<30	250	<30	3000
Benzyl Butyl Phthalate	N/A		<30	<31	<30	<30
Benzo (a) anthracene*	224		<30	100	<30	1300
3,3'-Dichlorobenzidine	N/A		<300	<310	<300	<300
Chrysene*	400		<30	120	<30	1300
Bis (2-ethylhexyl) phthalate	50000		<30	<31	<30	210
Di-n-octyl Phthalate	50000		<30	<31	<30	56
Benzo (b) fluoranthene*	224		<30	90 ^{AA}	<30	1150 ^{AA}
Benzo (k) fluoranthene*	224		<30	90 ^{AA}	<30	1150 ^{AA}
Benzo (a) pyrene*	61		<30	86	<30	1100
Indeno (1,2,3-cd) pyrene*	3200		<30	47	<30	450
Dibenzo (a,h) anthracene*	14		<30	<31	<30	210
Benzo (ghi) perylene	N/A		<30	47	<30	400
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg		ND	533 ug/kg	ND	6,660 ug/kg
TOTAL SVOCs	500,000 ug/kg		ND	580 ug/kg	31	18,886 ug/kg

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.
 ug/kg Micrograms per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09D	Sample Interval: 2-4'	Date Sampled: 2/25/98	Units: ug/kg	AOC 33-09D 6-8'	Date Sampled: 2/25/98	Units: ug/kg	AOC 33-09D 8-10'	Date Sampled: 4/29/98	Units: ug/kg	AOC 33-09E 2-4'	Date Sampled: 2/25/98	Units: ug/kg
<u>Semivolatile Organic Compounds:</u>														
N-Nitrosodimethylamine	N/A		<30			<30			<30			<31		
Bis (2-Chloroethyl) ether	N/A		<30			<30			<30			<31		
1,3-Dichlorobenzene	N/A		<30			<30			<30			<31		
1,4-Dichlorobenzene	N/A		<30			<30			<30			<31		
1,2-Dichlorobenzene	N/A		<30			<30			<30			<31		
Bis (2-chloroisopropyl) ether	N/A		<30			<30			<30			<31		
N-Nitrosodi-n-propylamine	N/A		<30			<30			<30			<31		
Hexachloroethane	N/A		<30			<30			<30			<31		
Nitrobenzene	200		<30			<30			<30			<31		
Isophorone	4400		<30			<30			<30			<31		
Bis (2-chloroethoxy) methane	N/A		<30			<30			<30			<31		
124-Trichlorobenzene	N/A		<30			<30			<30			<31		
Naphthalene	13000		<30			<30			<30			<31		
Hexachlorobutadiene	N/A		<30			<30			<30			<31		
Hexachlorocyclopentadiene	N/A		<30			<30			<30			<31		
2-Chloronaphthalene	N/A		<300			<300			<300			<310		
Dimethyl Phthalate	N/A		<30			<30			<30			<31		
Acenaphthylene	N/A		<30			<30			<30			<31		
2,6-Dinitrotoluene	41000		<30			<30			<30			<31		
Acenaphthene	1000		<30			<30			<30			<31		
2,4-Dinitrotoluene	50000		<30			<30			<30			<31		
Diethyl Phthalate	N/A		<30			<30			<30			<31		
Fluorene	N/A		<30			<30			<30			<31		
4-Chlorophenyl phenyl ether	50000		<30			<30			<30			<31		
N-Nitrosodiphenylamine	N/A		<30			<30			<30			<31		
1,2-Diphenylhydrazine	N/A		<30			<30			<30			<31		
4-Bromophenyl phenyl ether	N/A		<30			<30			<30			<31		
Hexachlorobenzene	N/A		<30			<30			<30			<31		
Phenanthrene	410		<30			<30			<30			<31		
	50000		<30			<30			<30			<31		

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: TAGM	Sample Interval: 2-4'	AOC 33-09D 2/25/98	Units: ug/kg	AOC 33-09D 8-10'	AOC 33-09D 4/29/98	Units: ug/kg	AOC 33-09E 2-4'	AOC 33-09E 2/25/98	Units: ug/kg
Anthracene	50000			<30		<30			<31		
Di-n-Butyl Phthalate	8100			<30		<30			<31		
Fluoranthene	50000			<30		<30			<31		
Benzidine	N/A			<300		<300			<310		
Pyrene	5000			<30		<30			<31		
Benzyl Butyl Phthalate	N/A			<30		<30			<31		
Benzo (a) anthracene*	224			<30		<30			<31		
3,3'-Dichlorobenzidine	N/A			<300		<300			<310		
Chrysene*	400			<30		<30			<31		
Bis (2-ethylhexyl) phthalate	50000			<30		<30			65		
Di-n-octyl Phthalate	50000			<30		<30			<31		
Benzo (b) fluoranthene*	224			<30		<30			<31		
Benzo (k) fluoranthene*	224			<30		<30			<31		
Benzo (a) pyrene*	61			<30		<30			<31		
Indeno (1,2,3-cd) pyrene*	3200			<30		<30			<31		
Dibenzo (a,h) anthracene*	14			<30		<30			<31		
Benzo (ghi) perylene	N/A			<30		<30			<31		
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg			ND		ND			ND		
TOTAL SVOCs	500,000 ug/kg			ND		ND			65 ug/kg		

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 33-09E 5-7' 4/29/98 ug/kg	AOC 33-09F 5-7' 2/24/98 ug/kg	AOC 33-09H FLOOR 4/29/98 ug/kg	AOC 33-09I FLOOR 4/29/98 ug/kg
<u>Semivolatile Organic Compounds:</u>						
N-Nitrosodimethylamine	N/A		<30	<32	<30	<30
Bis (2-Chloroethyl) ether	N/A		<30	<32	<30	<30
1,3-Dichlorobenzene	N/A		<30	<32	<30	<30
1,4-Dichlorobenzene	N/A		<30	<32	<30	<30
1,2-Dichlorobenzene	N/A		<30	<32	<30	<30
Bis (2-chloroisopropyl) ether	N/A		<30	<32	<30	<30
N-Nitrosodi-n-propylamine	N/A		<30	<32	<30	<30
Hexachloroethane	N/A		<30	<32	<30	<30
Nitrobenzene	200		<30	<32	<30	<30
Isophorone	4400		<30	<32	<30	<30
Bis (2-chloroethoxy) methane	N/A		<30	<32	<30	<30
124-Trichlorobenzene	N/A		<30	<32	<30	<30
Naphthalene	13000		<30	<32	<30	<30
Hexachlorobutadiene	N/A		<30	<320	<30	<30
Hexachlorocyclopentadiene	N/A		<300	<32	<300	<300
2-Chloronaphthalene	N/A		<30	<32	<30	<30
Dimethyl Phthalate	N/A		<30	<32	<30	<30
Acenaphthylene	41000		<30	<32	<30	<30
2,6-Dinitrotoluene	1000		<30	<32	<30	<30
Acenaphthene	50000		<30	<32	<30	<30
2,4-Dinitrotoluene	N/A		<30	<32	<30	<30
Diethyl Phthalate	N/A		<30	<32	<30	<30
Fluorene	50000		<30	<32	<30	<30
4-Chlorophenyl phenyl ether	N/A		<30	<32	<30	<30
N-Nitrosodiphenylamine	N/A		<30	<32	<30	<30
1,2-Diphenylhydrazine	N/A		<30	<32	<30	<30
4-Bromophenyl phenyl ether	N/A		<30	<32	<30	<30
Hexachlorobenzene	410		<30	<32	<30	<30
Phenanthrene	50000		<30	<32	<30	<30

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09E Sample Interval: 5-7' Date Sampled: 4/29/98 Units: ug/kg	AOC 33-09F 5-7' 2/24/98 ug/kg	AOC 33-09H FLOOR 4/29/98 ug/kg	AOC 33-09I FLOOR 4/29/98 ug/kg
Anthracene	50000	<30	<32	<30	<30
Di-n-Butyl Phthalate	8100	<30	<32	<30	<30
Fluoranthene	50000	<30	70	39	32
Benzidine	N/A	<30	<320	<30	<30
Pyrene	5000	<30	47	<30	<30
Benzyl Butyl Phthalate	N/A	<30	<32	<30	<30
Benzo (a) anthracene*	224	<30	<32	<30	<30
3,3'-Dichlorobenzidine	N/A	<300	<320	<300	<300
Chrysene*	400	<30	38	<30	<30
Bis (2-ethylhexyl) phthalate	50000	<30	62	<30	<30
Di-n-octyl Phthalate	50000	<30	<32	<30	<30
Benzo (b) fluoranthene*	224	<30	<32	<30	<30
Benzo (k) fluoranthene*	224	<30	<32	<30	<30
Benzo (a) pyrene*	61	<30	<32	<30	<30
Indeno (1,2,3-cd) pyrene*	3200	<30	<32	<30	<30
Dibenzo (a,h) anthracene*	14	<30	<32	<30	<30
Benzo (ghi) perylene	N/A	<30	<32	<30	<30
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg	ND	38 ug/kg	ND	ND
TOTAL SVOCs	500,000 ug/kg	ND	217 ug/kg	39 ug/kg	32 ug/kg

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-09J		AOC 33-09K		AOC 33-09L		AOC 33-09M	
		Sample Interval: Date Sampled:	FLOOR	4/29/98	FLOOR	4/29/98	FLOOR	4/29/98	FLOOR
		Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Anthracene	50000		<30	<30	<30	<30	<30	54	
Di-n-Butyl Phthalate	8100		<30	<30	<30	<30	<30	<30	
Fluoranthene	50000		<30	<30	<30	<30	<30	290	
Benzidine	N/A		<30	<30	<30	<30	<30	<30	
Pyrene	5000		<30	<30	<30	<30	<30	230	
Benzyl Butyl Phthalate	N/A		<30	<30	<30	<30	<30	<30	
Benzo (a) anthracene*	224		<30	<30	<30	<30	<30	140	
3,3'-Dichlorobenzidine	N/A		<300	<300	<300	<300	<300	<300	
Chrysene*	400		<30	<30	<30	<30	<30	130	
Bis (2-ethylhexyl) phthalate	50000		<30	<30	<30	<30	<30	<30	
Di-n-octyl Phthalate	50000		<30	<30	<30	<30	<30	<30	
Benzo (b) fluoranthene*	224		<30	<30	<30	<30	<30	105 ^{AA}	
Benzo (k) fluoranthene*	224		<30	<30	<30	<30	<30	105 ^{AA}	
Benzo (a) pyrene*	61		<30	<30	<30	<30	<30	110	
Indeno (1,2,3-cd) pyrene*	3200		<30	<30	<30	<30	<30	78	
Dibenzo (a,h) anthracene*	14		<30	<30	<30	<30	<30	38	
Benzo (ghi) perylene	N/A		<30	<30	<30	<30	<30	77	
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg		ND	ND	ND	ND	ND	706 ug/kg	
TOTAL SVOCs	500,000 ug/kg		ND	ND	ND	ND	ND	1597 ug/kg	

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.
 ug/kg Micrograms per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 33-09N FLOOR 4/29/98 ug/kg	AOC 33-09O FLOOR 4/29/98 ug/kg	AOC 33-09P FLOOR 4/29/98 ug/kg
<u>Semivolatile Organic Compounds:</u>					
N-Nitrosodimethylamine	N/A		<30	<31	<30
Bis (2-Chloroethyl) ether	N/A		<30	<31	<30
1,3-Dichlorobenzene	N/A		<30	<31	<30
1,4-Dichlorobenzene	N/A		<30	<31	<30
1,2-Dichlorobenzene	N/A		<30	<31	<30
Bis (2-chloroisopropyl) ether	N/A		<30	<31	<30
N-Nitrosodi-n-propylamine	N/A		<30	<31	<30
Hexachloroethane	N/A		<30	<31	<30
Nitrobenzene	200		<30	<31	<30
Isophorone	4000		<30	<31	<30
Bis (2-chloroethoxy) methane	N/A		<30	<31	<30
124-Trichlorobenzene	N/A		<30	<31	<30
Naphthalene	13000		<30	<31	<30
Hexachlorobutadiene	N/A		<30	<31	<30
Hexachlorocyclopentadiene	N/A		<300	<310	<300
2-Chloronaphthalene	N/A		<30	<31	<30
Dimethyl Phthalate	N/A		<30	<31	<30
Acenaphthylene	41000		<30	<31	<30
2,6-Dinitrotoluene	1000		<30	<31	<30
Acenaphthene	50000		<30	<31	<30
2,4-Dinitrotoluene	N/A		<30	<31	<30
Diethyl Phthalate	N/A		<30	<31	<30
Fluorene	50000		<30	<31	<30
4-Chlorophenyl phenyl ether	N/A		<30	<31	<30
N-Nitrosodiphenylamine	N/A		<30	<31	<30
1,2-Diphenylhydrazine	N/A		<30	<31	<30
4-Bromophenyl phenyl ether	N/A		<30	<31	<30
Hexachlorobenzene	410		<30	<31	<30
Phenanthrene	50000		<30	<31	<30

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 33-09N FLOOR 4/29/98 ug/kg	AOC 33-09O FLOOR 4/29/98 ug/kg	AOC 33-09P FLOOR 4/29/98 ug/kg
Anthracene	50000		<30	<31	<30
Di-n-Butyl Phthalate	8100		<30	<31	<30
Fluoranthene	50000		<30	<31	<30
Benzidine	N/A		<30	<31	<30
Pyrene	5000		<30	<31	<30
Benzyl Butyl Phthalate	N/A		<30	<31	<30
Benzo (a) anthracene*	224		<30	<31	<30
3,3'-Dichlorobenzidine	N/A		<300	<310	<300
Chrysene*	400		<30	<31	<30
Bis (2-ethylhexyl) phthalate	50000		<30	<31	<30
Di-n-octyl Phthalate	50000		<30	<31	<30
Benzo (b) fluoranthene*	224		<30	<31	<30
Benzo (k) fluoranthene*	224		<30	<31	<30
Benzo (a) pyrene*	61		<30	<31	<30
Indeno (1,2,3-cd) pyrene*	3200		<30	<31	<30
Dibenzo (a,h) anthracene*	14		<30	<31	<30
Benzo (ghi) perylene	N/A		<30	<31	<30
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg		ND	ND	ND
TOTAL SVOCs	500,000 ug/kg		ND	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

ENCLOSURE 3

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC34A	Sample Interval: 7-9'	Date Sampled: 2/12/98	Units: ug/kg	AOC34A 15-17'	AOC34A 23-26'	AOC34B 7-9'	AOC34B 15-17'
PCBs									
Atoclor 1016	N/A	<860				<100	<40	<100	<40
Atoclor 1221	N/A	<860				<100	<40	<100	<40
Atoclor 1232	N/A	<860				<100	<40	<100	<40
Atoclor 1242	N/A	<860				<100	<40	<100	<40
Atoclor 1248	N/A	8300				260	130	210	<40
Atoclor 1254	N/A	<860				<100	<40	<100	<40
Atoclor 1260	N/A	<860				<100	<40	<100	<40
Total PCBs	10000	8300				260	130	210	0
Semivolatile Organic Compounds:									
N-Nitrosodimethylamine	N/A	<32				<30	<30	<30	<30
Bis (2-Chloroethyl) ether	N/A	<32				<30	<30	<30	<30
1,3-Dichlorobenzene	N/A	<32				<30	<30	<30	<30
1,4-Dichlorobenzene	N/A	<32				<30	<30	<30	<30
1,2-Dichlorobenzene	N/A	<32				<30	<30	<30	<30
Bis (2-chloroisopropyl) ether	N/A	<32				<30	<30	<30	<30
N-Nitrosodi-n-propylamine	N/A	<32				<30	<30	<30	<30
Hexachloroethane	N/A	<32				<30	<30	<30	<30
Nitrobenzene	200	<32				<30	<30	<30	<30
Isophorone	4400	<32				<30	<30	<30	<30
Bis (2-chloroethoxy) methane	N/A	<32				<30	<30	<30	<30
124-Trichlorobenzene	N/A	<32				<30	<30	<30	<30
Naphthalene	13000	41				<30	<30	<30	<30
Hexachlorobutadiene	N/A	<32				<30	<30	<30	<30
Hexachlorocyclopentadiene	N/A	<320				<300	<300	<300	<300
2-Chloronaphthalene	N/A	<32				<30	<30	<30	<30
Dimethyl Phthalate	N/A	<32				<30	<30	<30	<30
Acenaphthylene	41000	<32				<30	<30	<30	<30
2,6-Dinitrotoluene	1000	<32				<30	<30	<30	<30
Acenaphthene	50000	<32				<30	<30	<30	<30
2,4-Dinitrotoluene	N/A	<32				<30	<30	<30	<30
Diethyl Phthalate	N/A	<32				<30	<30	<30	<30
Fluorene	50000	<32				<30	<30	<30	<30
4-Chlorophenyl phenyl ether	N/A	<32				<30	<30	<30	<30
N-Nitrosodiphenylamine	N/A	<32				<30	<30	<30	<30

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC34A	Sample Interval: 7-9'	Date Sampled: 2/12/98	Units: ug/kg	AOC34A 15-17' 2/12/98 ug/kg	AOC34B 7-9' 2/12/98 ug/kg	AOC34B 15-17' 2/12/98 ug/kg
1,2-Diphenylhydrazine	N/A				<32	<30	<30	<30
4-Bromophenyl phenyl ether	N/A				<32	<30	<30	<30
Hexachlorobenzene	410				<32	<30	<30	<30
Phenanthrene	50000				<32	<30	<30	<30
Anthracene	50000				<32	<30	<30	<30
Dj-n-Butyl Phthalate	8100				<32	<30	<30	<30
Fluoranthene	50000				<32	<30	<30	<30
Benzidine	N/A				<320	<300	<300	<300
Pyrene	50000				<32	<30	<30	<30
Benzyl Butyl Phthalate	N/A				<32	<30	<30	<30
Benzo (a) anthracene*	224				<32	<30	<30	<30
3,3'-Dichlorobenzidine	N/A				<320	<300	<300	<300
Chrysene*	400				<32	<30	<30	<30
Bis (2-ethylhexyl) phthalate	50000				400	170	92	32
Di-n-octyl Phthalate	50000				<32	<30	<30	<30
Benzo (b) fluoranthene*	224				<32	<30	<30	<30
Benzo (k) fluoranthene*	224				<32	<30	<30	<30
Benzo (a) pyrene*	61				<32	<30	<30	<30
Indeno (1,2,3-cd) pyrene*	3200				<32	<30	<30	<30
Dibenzo (a,h) anthracene*	14				<32	<30	<30	<30
Benzo (ghi) perylene	N/A				<32	<30	<30	<30
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg				ND	ND	ND	ND
TOTAL SVOCs	500,000 ug/kg				441	170	92	32

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria.

ug/kg Micrograms per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance
 Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC1-34B Sample Interval: 23-26' Date Sampled: 2/13/98 Units: ug/kg	AOC1-34C 7-9' 2/13/98 ug/kg	AOC1-34C 15-18' 2/13/98 ug/kg	AOC1-34C 23-25' 4/22/98 ug/kg	AOC 34D 4-6' 2/17/98 ug/kg
PCBs						
Aroclor 1016	N/A	<40	<40	<40	<810	<87
Aroclor 1221	N/A	<40	<40	<40	<810	<87
Aroclor 1232	N/A	<40	<40	<40	<810	<87
Aroclor 1242	N/A	<40	<40	<40	5200	<87
Aroclor 1248	N/A	<40	65	72	<810	460
Aroclor 1254	N/A	<40	<40	<40	<810	<87
Aroclor 1260	N/A	<40	<40	<40	<810	<87
Total PCBs	10000	0	65	72	5200	460
Semivolatile Organic Compounds:						
N-Nitrosodimethylamine	N/A	<30	<30	<30	<30	<32
Bis (2-Chloroethyl) ether	N/A	<30	<30	<30	<30	<32
1,3-Dichlorobenzene	N/A	<30	<30	<30	<30	<32
1,4-Dichlorobenzene	N/A	<30	<30	<30	<30	<32
1,2-Dichlorobenzene	N/A	<30	<30	<30	<30	<32
Bis (2-chloroisopropyl) ether	N/A	<30	<30	<30	<30	<32
N-Nitrosodi-n-propylamine	N/A	<30	<30	<30	<30	<32
Hexachloroethane	N/A	<30	<30	<30	<30	<32
Nitrobenzene	200	<30	<30	<30	<30	<32
Isophorone	4400	<30	<30	<30	<30	<32
Bis (2-chloroethoxy) methane	N/A	<30	<30	<30	<30	<32
124-Trichlorobenzene	N/A	<30	<30	<30	<30	<32
Naphthalene	13000	<30	<30	<30	<30	<32
Hexachlorobutadiene	N/A	<300	<300	<300	<300	<320
Hexachlorocyclopentadiene	N/A	<30	<30	<30	<30	<32
2-Chloronaphthalene	N/A	<30	<30	<30	<30	<32
Dimethyl Phthalate	N/A	<30	<30	<30	<30	<32
Acenaphthylene	41000	<30	<30	<30	<30	<32
2,6-Dinitrotoluene	1000	<30	<30	<30	<30	<32
Acenaphthene	50000	<30	<30	<30	<30	<32
2,4-Dinitrotoluene	N/A	<30	<30	<30	<30	<32
Diethyl Phthalate	N/A	<30	<30	<30	<30	<32
Fluorene	50000	<30	<30	<30	<30	<32
4-Chlorophenyl phenyl ether	N/A	<30	<30	<30	<30	<32
N-Nitrosodiphenylamine	N/A	<30	<30	<30	<30	<32

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC1-34B	Sample Interval: 23-26'	Date Sampled: 2/13/98	Units: ug/kg	AOC1-34C 7-9'	Date Sampled: 2/13/98	Units: ug/kg	AOC1-34C 15-18'	Date Sampled: 2/13/98	Units: ug/kg	AOC1-34C 23-25'	Date Sampled: 4/22/98	Units: ug/kg	AOC 34D 4-6'	Date Sampled: 2/17/98	Units: ug/kg
1,2-Diphenylhydrazine	N/A					<30			<30			<30			<32		
4-Bromophenyl phenyl ether	N/A					<30			<30			<30			<32		
Hexachlorobenzene	410					<30			<30			<30			<32		
Phenanthrene	50000					<30			<30			<30			<32		
Anthracene	50000					<30			<30			<30			<32		
Di-n-Butyl Phthalate	8100					<30			<30			<30			<32		
Fluoranthene	50000					<30			<30			<30			<32		
Benzidine	N/A					<300			<300			<300			<320		
Pyrene	50000					<30			<30			<30			<32		
Benzyl Butyl Phthalate	N/A					<30			<30			<30			<32		
Benzo (a) anthracene*	224					<30			<30			<30			<32		
3,3'-Dichlorobenzidine	N/A					<300			<300			<300			<320		
Chrysene*	400					<30			<30			<30			<32		
Bis (2-ethylhexyl) phthalate	50000					100			<30			<30			<32		
Di-n-octyl Phthalate	50000					<30			<30			<30			<32		
Benzo (b) fluoranthene*	224					<30			<30			<30			<32		
Benzo (k) fluoranthene*	224					<30			<30			<30			<32		
Benzo (a) pyrene*	61					<30			<30			<30			<32		
Indeno (1,2,3-cd) pyrene*	3200					<30			<30			<30			<32		
Dibenzo (a,h) anthracene*	14					<30			<30			<30			<32		
Benzo (ghi) perylene	N/A					<30			<30			<30			<32		
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg					ND			ND			ND			ND		
TOTAL SVOCs	500,000 ug/kg					100			75			ND			ND		

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in excess of NYSEDEC TAGM Criteria.
 ug/kg Micrograms per kilogram
 NYSEDEC New York State Department of Environmental Conservation
 1 NYSEDEC Technical and Administrative Guidance
 Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 34D Sample Interval: 10-12' Date Sampled: 2/17/98 Units: ug/kg	AOC1-34E 4-6' 2/13/98 ug/kg	AOC1-34E 10-12' 2/13/98 ug/kg	AOC1-34F 4-7' 2/13/98 ug/kg	AOC1-34F 10-12' 2/13/98 ug/kg
PCBs						
Aroclor 1016	N/A	<40	<43	<40	<46	<42
Aroclor 1221	N/A	<40	<43	<40	<46	<42
Aroclor 1232	N/A	<40	<43	<40	<46	<42
Aroclor 1242	N/A	<40	<43	<40	<46	<42
Aroclor 1248	N/A	88	<43	<40	<46	<42
Aroclor 1254	N/A	<40	<43	<40	<46	<42
Aroclor 1260	N/A	<40	<43	<40	<46	<42
Total PCBs	10000	88	0	0	0	0
Semivolatile Organic Compounds:						
N-Nitrosodimethylamine	N/A	<30	<33	<30	<34	<32
Bis (2-Chloroethyl) ether	N/A	<30	<33	<30	<34	<32
1,3-Dichlorobenzene	N/A	<30	<33	<30	<34	<32
1,4-Dichlorobenzene	N/A	<30	<33	<30	<34	<32
1,2-Dichlorobenzene	N/A	<30	<33	<30	<34	<32
Bis (2-chloroisopropyl) ether	N/A	<30	<33	<30	<34	<32
N-Nitrosodi-n-propylamine	N/A	<30	<33	<30	<34	<32
Hexachloroethane	N/A	<30	<33	<30	<34	<32
Nitrobenzene	200	<30	<33	<30	<34	<32
Isophorone	4000	<30	<33	<30	<34	<32
Bis (2-chloroethoxy) methane	N/A	<30	<33	<30	<34	<32
124-Trichlorobenzene	N/A	<30	<33	<30	<34	<32
Naphthalene	13000	<30	<33	<30	<34	<32
Hexachlorobutadiene	N/A	<30	<33	<30	<34	<32
Hexachlorocyclopentadiene	N/A	<30	<33	<30	<34	<32
2-Chloronaphthalene	N/A	<300	<330	<300	<340	<320
Dimethyl Phthalate	N/A	<30	<33	<30	<34	<32
Acenaphthylene	41000	<30	<33	<30	<34	<32
2,6-Dinitrotoluene	1000	<30	<33	<30	<34	<32
Acenaphthene	50000	<30	<33	<30	<34	<32
2,4-Dinitrotoluene	N/A	<30	<33	<30	<34	<32
Diethyl Phthalate	N/A	<30	<33	<30	<34	<32
Fluorene	50000	<30	<33	<30	<34	<32
4-Chlorophenyl phenyl ether	N/A	<30	<33	<30	<34	<32
N-Nitrosodiphenylamine	N/A	<30	<33	<30	<34	<32

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 34D	AOC 34E	AOC 34F	AOC 34F	AOC 34F
		Sample Interval: 10-12'	Sample Interval: 10-12'	Sample Interval: 4-7'	Sample Interval: 4-7'	Sample Interval: 10-12'
		Date Sampled: 2/17/98	Date Sampled: 2/13/98	Date Sampled: 2/13/98	Date Sampled: 2/13/98	Date Sampled: 2/13/98
		Units: ug/kg	Units: ug/kg	Units: ug/kg	Units: ug/kg	Units: ug/kg
1,2-Diphenylhydrazine	N/A	<30	<30	<34	<32	<32
4-Bromophenyl phenyl ether	N/A	<30	<30	<34	<32	<32
Hexachlorobenzene	410	<30	<30	<34	<32	<32
Phenanthrene	50000	<30	<30	<34	<32	<32
Anthracene	50000	<30	<30	<34	<32	<32
Di-n-Butyl Phthalate	8100	<30	<30	<34	<32	<32
Fluoranthene	50000	<30	<30	<34	34	34
Benzidine	N/A	<300	<300	<340	<320	<320
Pyrene	50000	<30	<30	<34	<32	<32
Benzyl Butyl Phthalate	N/A	<30	<30	<34	42	42
Benzo (a) anthracene*	224	<30	<30	<34	<32	<32
3,3'-Dichlorobenzidine	N/A	<300	<300	<340	<320	<320
Chrysene*	400	<30	<30	<34	<32	<32
Bis (2-ethylhexyl) phthalate	50000	<30	<30	68	730	730
Di-n-octyl Phthalate	50000	<30	<30	<34	<32	<32
Benzo (b) fluoranthene*	224	<30	<30	<34	<32	<32
Benzo (k) fluoranthene*	224	<30	<30	<34	<32	<32
Benzo (a) pyrene*	61	<30	<30	<34	<32	<32
Indeno (1,2,3-cd) pyrene*	3200	<30	<30	<34	<32	<32
Dibenzo (a,h) anthracene*	14	<30	<30	<34	<32	<32
Benzo (ghi) perylene	N/A	<30	<30	<34	<32	<32
*TOTAL CARCINOGENIC SVOCs		10,000 ug/kg	ND	ND	ND	ND
TOTAL SVOCs		500,000 ug/kg	ND	68	806	806

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in excess of NYSEDEC TAGM Criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSEDEC Technical and Administrative Guidance

Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC34G	Sample Interval: 7-9'	AOC34G 15-18'	AOC34G 23-25'	AOC1-34H 7-9'	AOC1-34H 15-18'
		Date Sampled: 2/12/98	Units: ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
1,2-Diphenylhydrazine	N/A	<30	<30	<30	<31	<30	<30
4-Bromophenyl phenyl ether	N/A	<30	<30	<30	<31	<30	<30
Hexachlorobenzene	410	<30	<30	<30	<31	<30	<30
Phenanthrene	50000	<30	<30	<30	<31	<30	<30
Anthracene	50000	<30	<30	<30	<31	<30	<30
Di-n-Butyl Phthalate	8100	<30	<30	<30	<31	<30	<30
Fluoranthene	50000	84	<30	<30	<31	<30	<30
Benzidine	N/A	<300	<300	<300	<310	<300	<300
Pyrene	50000	93	<30	<30	<31	<30	<30
Benzyl Butyl Phthalate	N/A	<30	<30	<30	<31	<30	<30
Benzo (a) anthracene*	224	64	<30	<30	<31	<30	<30
3,3'-Dichlorobenzidine	N/A	<300	<300	<300	<310	<300	<300
Chrysene*	400	57	<30	<30	<31	<30	<30
Bis (2-ethylhexyl) phthalate	50000	170	68	68	<31	280	220
Di-n-octyl Phthalate	50000	<30	<30	<30	<31	<30	<30
Benzo (b) fluoranthene*	224	60	<30	<30	<31	<30	<30
Benzo (k) fluoranthene*	224	60	<30	<30	<31	<30	<30
Benzo (a) pyrene*	61	71	<30	<30	<31	<30	<30
Indeno (1,2,3-cd) pyrene*	3200	48	<30	<30	<31	<30	<30
Dibenzo (a,h) anthracene*	14	30	<30	<30	<31	<30	<30
Benzo (ghi) perylene	N/A	48	<30	<30	<31	<30	<30
*TOTAL CARCINOGENIC SVOCs		390	ND	ND	ND	ND	ND
TOTAL SVOCs		785	68	280	ND	220	220

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NY SDEC TAGM Criteria.

ug/kg Micrograms per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NY SDEC Technical and Administrative Guidance

Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Enclosure 3. AOC 34, Plant 3, Northrop Grumman Corporation, Bethpage, New York PCBs and SVOCs Analytical Results of Endpoint Samples

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC1-34H	Sample Interval: 23-26'	Date Sampled: 2/13/98	Units: ug/kg	AOC 34I 23-25' 2/18/98 ug/kg	AOC 34J FLOOR 4/22/98 ug/kg	AOC 34K FLOOR 4/22/98 ug/kg	AOC 34L FLOOR 4/22/98 ug/kg
1,2-Diphenylhydrazine	N/A				<31	<30	<32	<32	<32
4-Bromophenyl phenyl ether	N/A				<31	<30	<32	<32	<32
Hexachlorobenzene	410				<31	<30	<32	<32	<32
Phenanthrene	50000				<31	<30	<32	<32	<32
Anthracene	50000				<31	<30	<32	<32	<32
Di-n-Butyl Phthalate	8100				<31	<30	<32	<32	<32
Fluoranthene	50000				<31	<30	<32	<32	<32
Benzidine	N/A				<310	<300	<320	<320	<320
Pyrene	50000				<31	<30	<32	<32	<32
Benzyl Butyl Phthalate	N/A				<31	<30	<32	<32	<32
Benzo (a) anthracene*	224				<31	<30	<32	<32	<32
3,3'-Dichlorobenzidine	N/A				<310	<300	<320	<320	<320
Chrysene*	400				<31	<30	<32	<32	<32
Bis (2-ethylhexyl) phthalate	50000				36	80	99	<32	<32
Di-n-octyl Phthalate	50000				<31	<30	<32	<32	<32
Benzo (b) fluoranthene*	224				<31	<30	<32	<32	<32
Benzo (k) fluoranthene*	224				<31	<30	<32	<32	<32
Benzo (a) pyrene*	61				<31	<30	<32	<32	<32
Indeno (1,2,3-cd) pyrene*	3200				<31	<30	<32	<32	<32
Dibenzo (a,h) anthracene*	14				<31	<30	<32	<32	<32
Benzo (ghi) perylene	N/A				<31	<30	<32	<32	<32
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg				ND	ND	ND	ND	ND
TOTAL SVOCs	500,000 ug/kg				36	80	99	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria.

- ug/kg Micrograms per kilogram
- NYSDEC New York State Department of Environmental Conservation
- 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
- ND Below Detection Limits
- N/A Criteria not available
- * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 34M	AOC 34N	AOC 34O	AOC 34P	AOC 34Q	AOC 34R
		FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR
		4/22/98	4/22/98	5/4/98	5/4/98	5/4/98	5/4/98
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
PCBs							
Aroclor 1016	N/A	<42	<420	<210	<83	<810	<40
Aroclor 1221	N/A	<42	<420	<210	<83	<810	<40
Aroclor 1232	N/A	<42	<420	<210	<83	<810	<40
Aroclor 1242	N/A	<42	1500	<210	<83	<810	<40
Aroclor 1248	N/A	<42	<420	530	270	4700	<40
Aroclor 1254	N/A	<42	<420	<210	<83	<810	<40
Aroclor 1260	N/A	<42	<420	<210	<83	<810	<40
Total PCBs	10000	0	1500	530	270	4700	0
Semivolatile Organic Compounds:							
N-Nitrosodimethylamine	N/A	<32	<32	<31	<31	<30	<30
Bis (2-Chloroethyl) ether	N/A	<32	<32	<31	<31	<30	<30
1,3-Dichlorobenzene	N/A	<32	<32	<31	<31	<30	<30
1,4-Dichlorobenzene	N/A	<32	<32	<31	<31	<30	<30
1,2-Dichlorobenzene	N/A	<32	<32	<31	<31	<30	<30
Bis (2-chloroisopropyl) ether	N/A	<32	<32	<31	<31	<30	<30
N-Nitrosodi-n-propylamine	N/A	<32	<32	<31	<31	<30	<30
Hexachloroethane	N/A	<32	<32	<31	<31	<30	<30
Nitrobenzene	200	<32	<32	<31	<31	<30	<30
Isophorone	4000	<32	<32	<31	<31	<30	<30
Bis (2-chloroethoxy) methane	N/A	<32	<32	<31	<31	<30	<30
124-Trichlorobenzene	N/A	<32	<32	<31	<31	<30	<30
Naphthalene	13000	<32	<32	<31	<31	<30	<30
Hexachlorobutadiene	N/A	<32	<32	<31	<31	<30	<30
Hexachlorocyclopentadiene	N/A	<32	<32	<31	<31	<30	<30
2-Chloronaphthalene	N/A	<320	<320	<310	<310	<300	<300
Dimethyl Phthalate	N/A	<32	<32	<31	<31	<30	<30
Acenaphthylene	N/A	<32	<32	<31	<31	<30	<30
2,6-Dinitrotoluene	41000	<32	<32	<31	<31	<30	<30
Acenaphthene	1000	<32	<32	<31	<31	<30	<30
2,4-Dinitrotoluene	50000	<32	<32	<31	<31	<30	<30
Diethyl Phthalate	N/A	<32	<32	<31	<31	<30	<30
Fluorene	N/A	<32	<32	<31	<31	<30	<30
4-Chlorophenyl phenyl ether	50000	<32	<32	<31	<31	<30	<30
N-Nitrosodiphenylamine	N/A	<32	<32	<31	<31	<30	<30
	N/A	<32	<32	<31	<31	<30	<30

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 34M	AOC 34N	AOC 34O	AOC 34P	AOC 34Q	AOC 34R
		FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR
		4/22/98	4/22/98	5/4/98	5/4/98	5/4/98	5/4/98
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
		Units:	Units:	Units:	Units:	Units:	Units:
1,2-Diphenylhydrazine	N/A	<32	<32	<31	<31	<30	<30
4-Bromophenyl phenyl ether	N/A	<32	<32	<31	<31	<30	<30
Hexachlorobenzene	410	<32	<32	<31	<31	<30	<30
Phenanthrene	50000	<32	<32	37	<31	<30	<30
Anthracene	50000	<32	<32	<31	<31	<30	<30
Di-n-Butyl Phthalate	8100	<32	<32	<31	<31	<30	<30
Fluoranthene	50000	<32	<32	65	<31	<30	<30
Benzidine	N/A	<320	<320	<310	<310	<300	<300
Pyrene	50000	<32	<32	55	<31	<30	<30
Benzyl Butyl Phthalate	N/A	<32	<32	<31	<31	<30	<30
Benzo (a) anthracene*	224	<32	<32	<31	<31	<30	<30
3,3'-Dichlorobenzidine	N/A	<320	<320	<310	<310	<300	<300
Chrysene*	400	<32	<32	32	<31	<30	<30
Bis (2-ethylhexyl) phthalate	50000	<32	<32	<31	<31	<30	<30
Di-n-octyl Phthalate	50000	<32	<32	<31	<31	<30	<30
Benzo (b) fluoranthene*	224	<32	<32	<31	<31	<30	<30
Benzo (k) fluoranthene*	224	<32	<32	<31	<31	<30	<30
Benzo (a) pyrene*	61	<32	<32	<31	<31	<30	<30
Indeno (1,2,3-cd) pyrene*	3200	<32	<32	<31	<31	<30	<30
Dibenzo (a,h) anthracene*	14	<32	<32	<31	<31	<30	<30
Benzo (ghi) perylene	N/A	<32	<32	<31	<31	<30	<30
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg	ND	ND	32	ND	ND	ND
TOTAL SVOCs	500,000 ug/kg	ND	ND	189	ND	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria.
 ug/kg Micrograms per kilogram
 1 NYSDEC New York State Department of Environmental Conservation
 NYSDEC Technical and Administrative Guidance
 Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

ENCLOSURE 4

Enclosure 4. AOC 33-11,-12, Plant 3, Northrop Grumman Corporation, Bethpage, New York
 Priority Pollutant Metals Analytical Results from Endpoint Samples

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: AOC 33-11B ₁₁ Sample Interval: 6-8' Date Sampled: 4/16/98 Units: mg/kg	AOC 33-11C ₁₁ 2-4' 2/25/98 mg/kg	AOC 33-11C ₁₁ 6-8' 2/25/98 mg/kg	AOC 33-11D ₁₁ 2-4' 2/24/98 mg/kg	AOC 33-11D ₁₁ 5-7' 2/24/98 mg/kg
Priority Pollutant Metals							
Antimony	N/A	N/A	<1	<1.3	<1.3	<1.5	<1.3
Arsenic	3-12	7.5	1.9	1.0	3.3	2.4	1.3
Beryllium	0-1.75	0.16	0.06	0.08	0.10	0.20	0.12
Cadmium	0.1-1	10	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	1.5-40	50	3.2	3.3	4.9	6.5	5.0
Copper	1-50	25	1.9	2.5	3.0	5.2	2.1
Lead	200-500	N/A	1.1	1.7	1.4	3.4	1.8
Mercury	0.001-0.2	0.1	<0.005	0.021	0.0093	0.010	0.0068
Nickel	0.5-25	13	1.5	1.5	3.2	3.4	3.5
Selenium	0.1-3.9	2	<0.4	<0.4	<0.4	<0.5	<0.4
Silver	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	N/A	N/A	<1	<1	<1	<1	<1
Zinc	9-50	20	5.3	4.5	9.0	11	12
% Solids			99	94	97	88	97

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria or Eastern USA Background.
 mg/kg Milligrams per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 N/A Criteria not available

Enclosure 4. AOC 33-11,-12, Plant 3, Northrop Grumman Corporation, Bethpage, New York
 Priority Pollutant Metals Analytical Results from Endpoint Samples

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: AOC 33-11E ₁₁		Sample ID: AOC 33-11E ₁₁		Sample ID: AOC 33-11E ₁₁		Sample ID: AOC 33-11F ₁₁		Sample ID: AOC 33-12A ₁₂		Sample ID: AOC 33-12A ₁₂		Sample ID: AOC 33-12C ₁₂				
			2-4'	5-7'	2/24/98	mg/kg	5-7'	2/24/98	mg/kg	5-7'	4/16/98	mg/kg	2.5-4'	2/23/98	mg/kg	6-8'	2/23/98	mg/kg	5-6'
Priority Pollutant Metals																			
Antimony	N/A	N/A	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1	<1	<1	<1
Arsenic	3-12	7.5	4.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.9	1.9	1.1	1.1	1.1	0.57	0.57	0.57	0.57
Beryllium	0-1.75	0.16	0.14	0.13	0.13	0.13	0.13	0.13	0.08	0.08	0.15	0.15	0.09	0.09	0.09	0.04	0.04	0.04	0.04
Cadmium	0.1-1	10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	1.5-40	50	5.0	6.1	6.1	6.1	6.1	6.1	1.6	1.6	4.7	4.7	7.6	7.6	7.6	1.4	1.4	1.4	1.4
Copper	1-50	25	6.2	2.5	2.5	2.5	2.5	2.5	1.9	1.9	4	4	2.2	2.2	2.2	1.7	1.7	1.7	1.7
Lead	200-500	N/A	12	1.9	1.9	1.9	1.9	1.9	<1	<1	2.8	2.8	1.1	1.1	1.1	<1	<1	<1	<1
Mercury	0.001-0.2	0.1	0.037	0.013	0.013	0.013	0.013	0.013	0.0051	0.0051	0.015	0.015	0.012	0.012	0.012	<0.005	<0.005	<0.005	<0.005
Nickel	0.5-25	13	2.6	3.1	3.1	3.1	3.1	3.1	1.2	1.2	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3
Selenium	0.1-3.9	2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	N/A	N/A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Zinc	9-50	20	12	10	10	10	10	10	3.9	3.9	7.9	7.9	8.4	8.4	8.4	3.5	3.5	3.5	3.5
% Solids			89	93	93	93	93	93	98	98	97	97	98	98	98	99	99	99	99

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria or Eastern USA Background.
 mg/kg Milligrams per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 N/A Criteria not available

Enclosure 4. AOC 33-11,-12, Plant 3, Northrop Grumman Corporation, Bethpage, New York
 Priority Pollutant Metals Analytical Results from Endpoint Samples

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: AOC 33-12F ₁₂		AOC 33-11/12A _{FL}		AOC 33-11/12B _{FL}		AOC 33-11/12C _{FL}		AOC 33-11/12D _{FL}	
			Sample Interval: Date Sampled:	6-8' 4/16/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98		
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Priority Pollutant Metals												
Antimony	N/A	N/A	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	3-12	7.5	0.78	1.1	1.1	0.65	1.0	0.64	1.0	0.64	0.64	0.64
Beryllium	0-1.75	0.16	0.06	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	0.1-1	10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	1.5-40	50	1.8	3.1	3.1	1.8	2.2	2.3	2.2	2.2	2.3	2.3
Copper	1-50	25	2.2	2.5	2.5	1.8	2.2	2.2	2.2	2.2	2.2	2.2
Lead	200-500	N/A	1.3	1.3	1.3	0.80	1.5	0.97	1.5	0.97	0.97	0.97
Mercury	0.001-0.2	0.1	0.0074	<0.005	<0.005	0.0061	0.010	0.0057	0.010	0.0057	0.0057	0.0057
Nickel	0.5-25	13	2.1	2	2	1.7	1.9	3.0	1.9	3.0	3.0	3.0
Selenium	0.1-3.9	2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	N/A	N/A	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc	9-50	20	5	6.6	6.6	4.7	6.7	3.2	6.7	3.2	3.2	3.2
% Solids			97	99	99	99	98	99	98	99	99	99

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria or Eastern USA Background.
 mg/kg Milligrams per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 N/A Criteria not available

Enclosure 4. AOC 33-11,-12, Plant 3, Northrop Grumman Corporation, Bethpage, New York
 Priority Pollutant Metals Analytical Results from Endpoint Samples

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: AOC 33-11/12E _{FL}		AOC 33-11/12G _{FL}		AOC 33-11/12H _{FL}		AOC 33-11/12I _{FL}	
			Sample Interval: Date Sampled:	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98	FLOOR 4/28/98
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			Units:							
Priority Pollutant Metals										
Antimony	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arsenic	3-12	7.5	1.4	0.85	0.87	0.97	0.49	0.97	0.49	0.49
Beryllium	0-1.75	0.16	0.1	<0.05	<0.05	0.05	<0.05	0.05	<0.05	<0.05
Cadmium	0.1-1	10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	1.5-40	50	4	1.9	2.6	2.3	2.4	2.3	2.4	2.4
Copper	1-50	25	2.7	1.8	2.8	2.0	0.99	2.0	0.99	0.99
Lead	200-500	N/A	1.8	1.1	1.1	1.3	0.44	1.3	0.44	0.44
Mercury	0.001-0.2	0.1	<0.005	0.0069	0.0053	0.0065	0.0059	0.0065	0.0059	0.0059
Nickel	0.5-25	13	2.8	1.5	1.7	1.7	0.75	1.7	0.75	0.75
Selenium	0.1-3.9	2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Silver	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	N/A	N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc	9-50	20	9.8	3.9	4.1	5.1	1.3	5.1	1.3	1.3
% Solids			99	99	99	99	99	99	99	99

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM Criteria or Eastern USA Background.
 mg/kg Milligrams per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (Rev. 4/95)
 N/A Criteria not available

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11B ₁₁ Sample Interval: 6-8' Date Sampled: 4/16/98	AOC 33-11C ₁₁ 2-4' 2/25/98	AOC 33-11C ₁₁ 6-8' 2/25/98	AOC 33-11D ₁₁ 2-4' 2/24/98	AOC 33-11D ₁₁ 5-7' 2/24/98	AOC 33-11E ₁₁ 2-4' 2/24/98
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
<u>Semivolatile Organic Compounds:</u>							
N-Nitrosodimethylamine	N/A	<30	<32	<31	<34	<31	<34
Bis (2-Chloroethyl) ether	N/A	<30	<32	<31	<34	<31	<34
1,3-Dichlorobenzene	N/A	<30	<32	<31	<34	<31	<34
1,4-Dichlorobenzene	N/A	<30	<32	<31	<34	<31	<34
1,2-Dichlorobenzene	N/A	<30	<32	<31	<34	<31	<34
Bis (2-chloroisopropyl) ether	N/A	<30	<32	<31	<34	<31	<34
N-Nitrosodi-n-propylamine	N/A	<30	<32	<31	<34	<31	<34
Hexachloroethane	N/A	<30	<32	<31	<34	<31	<34
Nitrobenzene	200	<30	<32	<31	<34	<31	<34
Isophorone	4400	<30	<32	<31	<34	<31	<34
Bis (2-chloroethoxy) methane	N/A	<30	<32	<31	<34	<31	<34
124-Trichlorobenzene	N/A	<30	<32	<31	<34	<31	<34
Naphthalene	13000	<30	<32	<31	<34	<31	<34
Hexachlorobutadiene	N/A	<30	<32	<31	<34	<31	<34
Hexachlorocyclopentadiene	N/A	<300	<320	<310	<340	<310	<340
2-Chloronaphthalene	N/A	<30	<32	<31	<34	<31	<34
Dimethyl Phthalate	N/A	<30	<32	<31	<34	<31	<34
Acenaphthylene	41000	<30	<32	<31	<34	<31	<34
2,6-Dinitrotoluene	1000	<30	<32	<31	<34	<31	<34
Acenaphthene	50000	<30	<32	<31	<34	<31	<34
2,4-Dinitrotoluene	N/A	<30	<32	<31	<34	<31	<34
Diethyl Phthalate	N/A	<30	<32	<31	<34	<31	<34
Fluorene	50000	<30	<32	<31	<34	<31	<34
4-Chlorophenyl phenyl ether	N/A	<30	<32	<31	<34	<31	<34
N-Nitrosodiphenylamine	N/A	<300	<32	<31	<34	<31	<34
1,2-Diphenylhydrazine	N/A	<300	<32	<31	<34	<31	<34
4-Bromophenyl phenyl ether	N/A	<300	<32	<31	<34	<31	<34
Hexachlorobenzene	410	<300	<32	<31	<34	<31	<34
Phenanthrene	50000	<300	73	<31	<34	<31	<34

Footnotes on last page.

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11B ₁₁ Sample Interval: 6-8' Date Sampled: 4/16/98 Units: ug/kg	AOC 33-11C ₁₁ 2-4' 2/25/98 ug/kg	AOC 33-11D ₁₁ 2-4' 2/24/98 ug/kg	AOC 33-11E ₁₁ 2-4' 2/24/98 ug/kg
Anthracene	50000	<300	<32	<34	<34
Di-n-Butyl Phthalate	8100	<300	<32	<34	<34
Fluoranthene	50000	<300	99	<34	<34
Benzo(a)anthracene*	N/A	<300	<320	<340	<340
Pyrene	5000	<300	84	<34	<34
Benzyl Butyl Phthalate	N/A	<300	<32	<34	<34
3,3'-Dichlorobenzidine	224	<300	44	<34	<34
Chrysene*	N/A	<3000	<320	<340	<340
Bis (2-ethylhexyl) phthalate	400	<300	51	<34	<34
Di-n-octyl Phthalate	50000	<300	<32	<34	<34
Benzo (b) fluoranthene*	50000	<3000	<32	<34	<34
Benzo (k) fluoranthene*	224	<3000	39.5 ^{AA}	<34	<34
Benzo (a) pyrene*	224	<3000	39.5 ^{AA}	<34	<34
Indeno (1,2,3-cd) pyrene*	61	<3000	38	<34	<34
Dibenzo (a,h) anthracene*	3200	<3000	<32	<34	<34
Benzo (ghi) perylene	14	<3000	<32	<34	<34
	N/A	<3000	<32	<34	<34
*TOTAL CARCINOGENIC SVOCs		ND	212	ND	ND
TOTAL SVOCs		ND	468	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

** Samples 33-11/12 E, I, and H were reanalyzed after performing silica gel clean-up procedure 3630C on the extract.

ug/kg Micrograms per kilogram

mg/kg Milligrams per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC's Technical and Administrative Guidance

Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

** AOC-33 11C Total = 79 ug/kg, unable to separate isomers.

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11E ₁₁	Sample Interval: 5-7'	Date Sampled: 2/24/98	Units: ug/kg	AOC 33-11F ₁₁	Sample Interval: 5-7'	Date Sampled: 4/16/98	Units: ug/kg	AOC 33-12A ₁₂	Sample Interval: 2.5-4'	Date Sampled: 2/23/98	Units: ug/kg	AOC 33-12C ₁₂	Sample Interval: 5-6'	Date Sampled: 4/16/98	Units: ug/kg	AOC 33-12F ₁₂	Sample Interval: 6-8'	Date Sampled: 4/16/98	Units: ug/kg
<u>Semivolatile Organic Compounds:</u>																					
N-Nitrosodimethylamine	N/A					<31															
Bis (2-Chloroethyl) ether	N/A					<31															
1,3-Dichlorobenzene	N/A					<31															
1,4-Dichlorobenzene	N/A					<31															
1,2-Dichlorobenzene	N/A					<31															
Bis (2-chloroisopropyl) ether	N/A					<31															
N-Nitrosodi-n-propylamine	N/A					<31															
Hexachloroethane	N/A					<31															
Nitrobenzene	200					<31															
Isophorone	4400					<31															
Bis (2-chloroethoxy) methane	N/A					<31															
124-Trichlorobenzene	N/A					<31															
Naphthalene	13000					<31															
Hexachlorobutadiene	N/A					<31															
Hexachlorocyclopentadiene	N/A					<31															
2-Chloronaphthalene	N/A					<310															
Dimethyl Phthalate	N/A					<31															
Acenaphthylene	41000					<31															
2,6-Dinitrotoluene	1000					<31															
Acenaphthene	50000					<31															
2,4-Dinitrotoluene	N/A					<31															
Diethyl Phthalate	N/A					<31															
Fluorene	50000					<31															
4-Chlorophenyl phenyl ether	N/A					<31															
N-Nitrosodiphenylamine	N/A					<31															
1,2-Diphenylhydrazine	N/A					<31															
4-Bromophenyl phenyl ether	N/A					<31															
Hexachlorobenzene	410					<31															
Phenanthrene	50000					<31															

Footnotes on last page.

Parameters	NYSDEC TAGM Criteria' (ug/kg)	Sample ID: AOC 33-11E ₁₁	AOC 33-11F ₁₁	AOC 33-12A ₁₂	AOC 33-12A ₁₂	AOC 33-12C ₁₂	AOC 33-12F ₁₂
		Sample Interval: 5-7'	5-7'	2.5-4'	6-8'	5-6'	6-8'
		Date Sampled: 2/24/98	4/16/98	2/23/98	2/23/98	4/16/98	4/16/98
		Units: ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Anthracene	50000	<32	<31	240	<31	<30	<310
Di-n-Butyl Phthalate	8100	<32	<31	<310	<31	<30	<310
Fluoranthene	50000	<32	<31	800	<31	<30	<310
Benzo(a)anthracene*	N/A	<320	<310	<3100	<310	<300	<3100
Pyrene	5000	<32	<31	970	<31	<30	<310
Benzyl Butyl Phthalate	N/A	<32	<31	<310	<31	<30	<310
Benzo (a) anthracene*	224	<32	<31	410	<31	<30	<310
3,3'-Dichlorobenzidine	N/A	<320	<310	<3100	<310	<300	<3100
Chrysene*	400	<32	<31	420	<31	<30	<310
Bis (2-ethylhexyl) phthalate	50000	35	<31	<310	31	<30	<310
Di-n-octyl Phthalate	50000	<32	<31	<310	<31	<30	<3100
Benzo (b) fluoranthene*	224	<32	<31	335 ^{AA}	<31	<30	<3100
Benzo (k) fluoranthene*	224	<32	<31	335 ^{AA}	<31	<30	<3100
Benzo (a) pyrene*	61	<32	<31	320	<31	<30	<3100
Indeno (1,2,3-cd) pyrene*	3200	<32	<31	<310	<31	<30	<3100
Dibenzo (a,h) anthracene*	14	<32	<31	<310	<31	<30	<3100
Benzo (ghi) perylene	N/A	<32	<31	<310	<31	<30	<3100
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg	ND	ND	1820	ND	ND	ND
TOTAL SVOCs	500,000 ug/kg	35	ND	1820	31	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

** Samples 33-11/12 E, I, and H were reanalyzed after performing silica gel clean-up procedure 3630C on the extract.

ug/kg Micrograms per kilogram

mg/kg Milligrams per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC's Technical and Administrative Guidance

Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

^^ AOC-33 11C Total = 79 ug/kg, unable to separate isomers.

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11/12A _{FL}		AOC 33-11/12B _{FL}		AOC 33-11/12C _{FL} **		AOC 33-11/12D _{FL}		AOC 33-11/12E _{FL} **	
		FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR
		4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
<u>Semivolatile Organic Compounds:</u>											
N-Nitrosodimethylamine	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Bis (2-Chloroethyl) ether	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
1,3-Dichlorobenzene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
1,4-Dichlorobenzene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
1,2-Dichlorobenzene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Bis (2-chloroisopropyl) ether	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
N-Nitrosodi-n-propylamine	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Hexachloroethane	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Nitrobenzene	200	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Isophorone	4400	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Bis (2-chloroethoxy) methane	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
124-Trichlorobenzene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Naphthalene	13000	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Hexachlorobutadiene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Hexachlorocyclopentadiene	N/A	<300	<300	<300	<300	<310	<300	<300	<300	<300	<300
2-Chloronaphthalene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Dimethyl Phthalate	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Acenaphthylene	41000	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
2,6-Dinitrotoluene	1000	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Acenaphthene	50000	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
2,4-Dinitrotoluene	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Diethyl Phthalate	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Fluorene	50000	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
4-Chlorophenyl phenyl ether	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
N-Nitrosodiphenylamine	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
1,2-Diphenylhydrazine	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
4-Bromophenyl phenyl ether	N/A	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Hexachlorobenzene	410	<30	<30	<30	<30	<31	<30	<30	<30	<30	<30
Phenanthrene	50000	<30	<30	<30	<30	87	<30	<30	<30	<30	<30

Footnotes on last page.

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11/12A _{FL}		AOC 33-11/12B _{FL}		AOC 33-11/12C _{FL} **		AOC 33-11/12D _{FL}		AOC 33-11/12E _{FL} **	
		Sample Interval: FLOOR	Date Sampled: 4/28/98	Sample Interval: FLOOR	Date Sampled: 4/28/98	Sample Interval: FLOOR	Date Sampled: 4/28/98	Sample Interval: FLOOR	Date Sampled: 4/28/98	Sample Interval: FLOOR	Date Sampled: 4/28/98
	Units:	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Anthracene	50000	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Di-n-Butyl Phthalate	8100	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Fluoranthene	50000	<30	<30	<30	<30	130	<30	<30	<30	<30	<30
Benzo(a)anthracene*	N/A	<300	<300	<300	<300	<3100	<300	<300	<300	<30000	<30000
Pyrene	5000	<30	<30	<30	<30	150	<30	<30	<30	<300	<300
Benzyl Butyl Phthalate	N/A	<30	<30	<30	<30	<310	<30	<30	<30	<3000	<3000
Benzo (a) anthracene*	224	<30	<30	<30	<30	59	<30	<30	<30	<300	<300
3,3'-Dichlorobenzidine	N/A	<300	<300	<300	<300	<31000	<300	<300	<300	<30000	<30000
Chrysene*	400	<30	<30	<30	<30	65	<30	<30	<30	<300	<300
Bis (2-ethylhexyl) phthalate	50000	<30	<30	<30	<30	<310	<30	<30	<30	<3000	<3000
Di-n-octyl Phthalate	50000	<30	<30	<30	<30	<3100	<30	<30	<30	<3000	<3000
Benzo (b) fluoranthene*	224	<30	<30	<30	<30	<300	<30	<30	<30	<300	<300
Benzo (k) fluoranthene*	224	<30	<30	<30	<30	<300	<30	<30	<30	<300	<300
Benzo (a) pyrene*	61	<30	<30	<30	<30	<300	<30	<30	<30	<300	<300
Indeno (1,2,3-cd) pyrene*	3200	<30	<30	<30	<30	<300	<30	<30	<30	<300	<300
Dibenzo (a,h) anthracene*	14	<30	<30	<30	<30	<300	<30	<30	<30	<300	<300
Benzo (ghi) perylene	N/A	<30	<30	<30	<30	<300	<30	<30	<30	<300	<300
*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg	ND	ND	ND	ND	124	ND	ND	ND	ND	ND
TOTAL SVOCs	500,000 ug/kg	ND	ND	ND	ND	491	ND	ND	ND	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.

* Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046

** Samples 33-11/12 E, I, and H were reanalyzed after performing silica gel clean-up procedure 3630C on the extract.

ug/kg Micrograms per kilogram

mg/kg Milligrams per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSEDEC's Technical and Administrative Guidance

Memorandum (TAGM) #4046 (Rev. 4/95)

ND Below Detection Limits

N/A Criteria not available

** AOC-33 11C Total = 79 ug/kg, unable to separate isomers.

Parameters	NYSDC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11/12F _{FL}		AOC 33-11/12G _{FL}		AOC 33-11/12H _{FL} **		AOC 33-11/12I _{FL} *	
		FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR	FLOOR
		4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98	4/28/98
		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
<u>Semivolatile Organic Compounds:</u>									
N-Nitrosodimethylamine	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Bis (2-Chloroethyl) ether	N/A	<30	<30	<30	<30	<30	<30	<30	<30
1,3-Dichlorobenzene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
1,4-Dichlorobenzene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
1,2-Dichlorobenzene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Bis (2-chloroisopropyl) ether	N/A	<30	<30	<30	<30	<30	<30	<30	<30
N-Nitrosodi-n-propylamine	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Hexachloroethane	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Nitrobenzene	200	<30	<30	<30	<30	<30	<30	<30	<30
Isophorone	4400	<30	<30	<30	<30	<30	<30	<30	<30
Bis (2-chloroethoxy) methane	N/A	<30	<30	<30	<30	<30	<30	<30	<30
124-Trichlorobenzene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Naphthalene	13000	<30	<30	<30	<30	<30	<30	<30	<30
Hexachlorobutadiene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Hexachlorocyclopentadiene	N/A	<300	<300	<300	<300	<300	<300	<300	<300
2-Chloronaphthalene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Dimethyl Phthalate	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Acenaphthylene	41000	<30	<30	<30	<30	<30	<30	<30	<30
2,6-Dinitrotoluene	1000	<30	<30	<30	<30	<30	<30	<30	<30
Acenaphthene	50000	<30	<30	<30	<30	<30	<30	<30	<30
2,4-Dinitrotoluene	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Diethyl Phthalate	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Fluorene	50000	<30	<30	<30	<30	<30	<30	<30	<30
4-Chlorophenyl phenyl ether	N/A	<30	<30	<30	<30	<30	<30	<30	<300
N-Nitrosodiphenylamine	N/A	<30	<30	<30	<30	<30	<30	<30	<300
1,2-Diphenylhydrazine	N/A	<30	<30	<30	<30	<30	<30	<30	<300
4-Bromophenyl phenyl ether	N/A	<30	<30	<30	<30	<30	<30	<30	<300
Hexachlorobenzene	410	<30	<30	<30	<30	<30	<30	<30	<300
Phenanthrene	50000	<30	<30	<30	<30	<30	<30	<30	<300

Footnotes on last page.

Parameters	NYSDEC TAGM Criteria ¹ (ug/kg)	Sample ID: AOC 33-11/12F _{FL}		Sample ID: AOC 33-11/12H _{FL} **		Sample ID: AOC 33-11/12I _{FL} *			
		Sample Interval: FLOOR	Date Sampled: 4/28/98	Units: ug/kg	Sample Interval: FLOOR	Date Sampled: 4/28/98	Units: ug/kg	Sample Interval: FLOOR	Date Sampled: 4/28/98
Anthracene	50000	<30	<30	<30	<30	<30	<30	<30	<30
Di-n-Butyl Phthalate	8100	<30	<30	<30	<30	<30	<30	<30	<30
Fluoranthene	50000	<30	31	<30	<30	<30	<30	<30	<30
Benzo(a)anthracene*	N/A	<30	<30	<30	<30	<30	<30	<30	<30
3,3'-Dichlorobenzidine	5000	<30	32	<30	<30	<30	<30	<30	<30
Chrysene*	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Bis(2-ethylhexyl) phthalate	224	<30	<30	<30	<30	<30	<30	<30	<30
Di-n-octyl Phthalate	N/A	<30	<30	<30	<30	<30	<30	<30	<30
Benzo (b) fluoranthene*	50000	<30	<30	<30	<30	<30	<30	<30	<30
Benzo (k) fluoranthene*	224	<30	<30	<30	<30	<30	<30	<30	<30
Benzo (a) pyrene*	224	<30	<30	<30	<30	<30	<30	<30	<30
Indeno (1,2,3-cd) pyrene*	61	<30	<30	<30	<30	<30	<30	<30	<30
Dibenzo (a,h) anthracene*	3200	<30	<30	<30	<30	<30	<30	<30	<30
Benzo (ghi) perylene	14	<30	<30	<30	<30	<30	<30	<30	<30
	N/A	<30	<30	<30	<30	<30	<30	<30	<30

*TOTAL CARCINOGENIC SVOCs	10,000 ug/kg	ND	ND	ND	ND	ND	ND
TOTAL SVOCs	500,000 ug/kg	ND	63	ND	ND	ND	ND

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.
 Bold entries are concentrations in exceedence of NYSDEC TAGM criteria.
 * Total Carcinogenic SVOC's limit is < 10ppm as per TAGM #4046
 ** Samples 33-11/12 E, I, and H were reanalyzed after performing silica gel clean-up procedure 3630C on the extract.
 ug/kg Micrograms per kilogram
 mg/kg Milligrams per kilogram
 NYSDEC New York State Department of Environmental Conservation
 1 NYSDEC's Technical and Administrative Guidance
 Memorandum (TAGM) #4046 (Rev. 4/95)
 ND Below Detection Limits
 N/A Criteria not available
 ** AOC-33 11C Total = 79 ug/kg, unable to separate isomers.

ENCLOSURE 5

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: Sample Interval: Date Sampled:	AOC 6A 5-7' 2/20/98 mg/kg	AOC 6A 8-10' 2/20/98 mg/kg	AOC 6B 2-4' 2/20/98 mg/kg	AOC 6B 5-7' 2/20/98 mg/kg
Priority Pollutant Metals							
Antimony	N/A	N/A	AOC 6A 2-4' 2/20/98 mg/kg	<1.3	<1.3	<1.3	<1.3
Arsenic	3-12	7.5		1.7	0.89	<1	0.63
Beryllium	0-1.75	0.16		0.33	0.08	0.06	0.1
Cadmium	0.1-1	10	Units:	<0.1	<0.1	<0.1	<0.1
Chromium	1.5-40	50		7.8	9.2	1.7	2.4
Copper	1-50	25		6.8	2.7	1.3	1.8
Lead	200-500	N/A		5.5	2.5	1.6	1.5
Mercury	0.001-0.2	0.1		0.0063	<0.005	<0.005	<0.005
Nickel	0.5-25	13		6.4	1.8	1.1	1.9
Selenium	0.1-3.9	2		<0.4	<0.4	<0.4	<0.4
Silver	N/A	N/A		<0.2	<0.2	<0.2	<0.2
Thallium	N/A	N/A		<1	<1	<1	<1
Zinc	9-50	20		18	4.4	2.7	3.9
% Solids				89	97	97	96

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM

Criteria or Eastern USA Background.

mg/kg Milligrams per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum

(TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

* Sample re-analyzed for hexavalent chromium.

-- Not analyzed.

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 6B 8-10' 2/20/98 mg/kg	AOC 6C 2-4' 2/20/98 mg/kg	AOC 6C 5-7' 2/20/98 mg/kg	AOC 6C 8-10' 2/20/98 mg/kg	AOC 6D 5-7' 2/20/98 mg/kg
Priority Pollutant Metals								
Antimony	N/A	N/A		<1.4	<1.3	<1.4	<1.3	<1.4
Arsenic	3-12	7.5		1.2	<1	5.1	<1	1.4
Beryllium	0-1.75	0.16		0.14	0.1	0.19	0.12	0.11
Cadmium	0.1-1	10		<0.1	0.38	<0.1	<0.1	0.64
Chromium	1.5-40	50		10	34	6.3	3.8	47
Copper	1-50	25		4.7	4.8	4.1	2	7
Lead	200-500	N/A		3.9	8.3	4.5	2.1	4.1
Mercury	0.001-0.2	0.1		0.0073	0.017	0.011	<0.005	0.007
Nickel	0.5-25	13		3.4	2.3	2.4	1.6	3
Selenium	0.1-3.9	2		<0.4	<0.4	<0.4	<0.4	<0.4
Silver	N/A	N/A		0.24	<0.2	<0.2	<0.2	<0.2
Thallium	N/A	N/A		<1	<1	<1	<1	<1
Zinc	9-50	20		8.9	13	11	5.1	35
% Solids				91	93	89	96	91

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM

Criteria or Eastern USA Background.

mg/kg Milligrams per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum

(TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

* Sample re-analyzed for hexavalent chromium.

-- Not analyzed.

Parameters	Eastern USA Background ¹ (mg/kg)	NYSDEC TAGM Criteria ¹ (mg/kg)	Sample ID: Sample Interval: Date Sampled: Units:	AOC 6D 8-10' 2/20/98 mg/kg	AOC 6E FLOOR 4/29/98 mg/kg	AOC 6F FLOOR 4/29/98 mg/kg	AOC 6F FLOOR 4/29/98 mg/kg
Priority Pollutant Metals							
Antimony	N/A	N/A		<1.5	<0.2	<3	--
Arsenic	3-12	7.5		0.88	0.69	1.6	--
Beryllium	0-1.75	0.16		0.08	0.08	0.11	--
Cadmium	0.1-1	10		0.22	<0.1	0.91	--
Chromium	1.5-40	50		21	4.3	250	4.8*
Copper	1-50	25		2.9	3.1	13	--
Lead	200-500	N/A		2.9	1.4	14	--
Mercury	0.001-0.2	0.1		0.0069	<0.005	0.023	--
Nickel	0.5-25	13		1.6	1.3	3.3	--
Selenium	0.1-3.9	2		<0.4	<0.4	<0.4	--
Silver	N/A	N/A		<0.2	<0.4	<0.4	--
Thallium	N/A	N/A		<1	<0.05	<0.5	--
Zinc	9-50	20		13	2.9	50	--
% Solids				96	96	94	94

Analysis Performed by: Ecotest Laboratories, North Babylon, NY.

Bold entries are concentrations in exceedence of NYSDEC TAGM

Criteria of Eastern USA Background.

mg/kg Milligrams per kilogram

NYSDEC New York State Department of Environmental Conservation

1 NYSDEC Technical and Administrative Guidance Memorandum

(TAGM) #4046 (Rev. 4/95)

N/A Criteria not available

* Sample re-analyzed for hexavalent chromium.

-- Not analyzed.