

NORTHROP GRUMMAN

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

February 3, 1998
ETC98-027

Ms. Mary Henning
NYS Department of Environmental Conservation
SUNY - Building 40
Stony Brook, New York 11790

Subject: **Northrop Grumman Corporation**
Hangar 7 - Bethpage Facility

Enclosure: **Underground Storage Tank Closure Report**

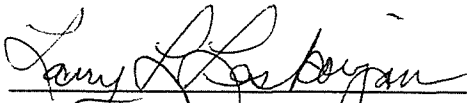
Dear Ms. Henning:

As requested in your phone conversation with John Cofman, of this office, enclosed please find a copy of the above mentioned Closure Report for the Hangar 7 Site prepared by our consultant, Eder Associates, dated December 1997.

If you have any questions or require further information, please call me at 516/575-2333 or John Cofman at 516/575-4680.

Very truly yours,

NORTHROP GRUMMAN CORPORATION



Larry L. Leskovjan, Manager
Environmental Technology & Compliance
M/S: D08-001



bcc: M. Mroz
P. Siegel
J. Cofman
A. Gershonowitz
M. Hill
R. Patac

NORTHROP GRUMMAN

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

December 22, 1997
ETC97-297

Mr. Michael Mangino
Public Health Sanitarian
Nassau County Department of Health
Bureau of Environmental Management
240 Old Country Road
Mineola, New York 11501

Subject: *Northrop Grumman Corporation
Hangar 7 - Bethpage Facility
Underground Storage Tank Closure*

Enclosure: Underground Storage Tank Closure Report - Hangar 7

Dear Mr. Mangino:

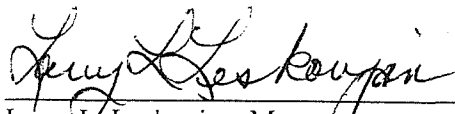
Enclosed please find one (1) copy of the above mentioned report for two (2) tanks at the Hangar 7 site prepared by our consultant, Eder Associates, dated December 1997. The report concludes that no soil sample contained greater than 100 mg/kg of TPH or volatile or semi-volatile organic compounds.

Based on Eder Associates' inspection of the work and results of the confirmatory soil sampling, there were no indications of contamination requiring further excavation, remediation, or sampling. The tank excavations have been backfilled with clean sand and will be covered with a concrete slab upon approval from your office. We therefore request your approval to cap the excavated area with concrete and close the piping in place by filling with a concrete slurry.

If you have any questions, please call me at 575-2333 or J. Selva, of my staff, at 575-8176.

Very truly yours,

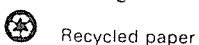
NORTHROP GRUMMAN CORPORATION



Larry E. Leskovjan, Manager
Environmental, Health, Safety
& Medical Services
M/S: D16-001

cc: w/o enclosure
T. Kelly (NCDPW)

USTClosHngr7



bcc: M. Mroz
P. Siegel
J. Cofman
- A. Gershonowitz, w/enclosure
R. Patac

NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

UNDERGROUND STORAGE TANK CLOSURE
HANGAR 7
BETHPAGE, NEW YORK

PROJECT #1145-17
DECEMBER 1997

Office Location:

EDER ASSOCIATES
480 Forest Avenue
Locust Valley, New York 11560

Office Contact:

Kevin J. Lumpe
Stephen R. Hix
(516) 671-8440

Offices in New York, Wisconsin, Michigan, Georgia, Florida, New Jersey and Massachusetts

LLV6407.RPT

121697

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1	Site Map

APPENDICES

APPENDIX A—ANALYTICAL RESULTS

1.0 INTRODUCTION

Eder Associates (EDER) observed the closure of the two 2000-gallon underground storage tanks (UST) at Hangar 7, located on the Northrop Grumman Corporation's (NGC) Bethpage facility. Both 2000-gallon fiberglass-wall tanks were used to store washwater collected from the floor drains inside Hangar 7. The USTs were located on either side of the hangar, as indicated in Figure 1. The tanks were approximately eight feet below grade under a ten to thirteen inch thick concrete slab. Due to the depth of the piping and the thickness of the rebar-reinforced slab, the piping was capped and closed in-place. Nassau County is purchasing the hangar and plans to replace the tanks and reuse the piping.

Timothy Kelly from the Nassau County Department of Public Works observed the tank removal and sampling work. Michael W. Mangino, a Nassau County Department of Health (NCDH) inspector, also examined the excavation, UST removal, and post-excavation soil sampling.

2.0 SITE WORK

Northrop Grumman Corporation retained Tyree Brothers Environmental Services, Inc., (Tyree) to remove, clean, and dispose of the USTs. Several weeks before the tanks were removed, Tyree saw-cut and removed the concrete slab, and excavated the soil to expose the tops of the tanks. At that time, they cut and capped the vent and drain piping. NGC had pumped out most of the washwater before the UST removal work. Tyree had drained the residual water from the vent and fill piping back into the tank before cutting and capping the piping.

The tanks were removed on November 21, 1997. EDER inspected the tank and the excavation for signs of leakage. EDER observed a crack along the bottom of the south tank. Discolored moist soil was observed under the area of the crack. A musty odor was observed. The moist discolored soil was excavated and stockpiled to the extent possible due to undermining of the slab.

No cracks were observed on the north tank, and the soils under the tank were not stained. After the tank was removed and placed on the slab, some of the tank's contents leaked from a crack in the tank caused during its removal. Some spilled liquid drained into the excavation. The NCHD inspector recommended that additional soil be excavated from the north tank excavation due to the liquid that drained into the excavation. These soils were excavated, as described later.

Tyree suspended work on November 21, due to the depth of the excavation and limitation of the excavation equipment. On November 24, 1997, soil which was presumed to be contaminated was removed from both excavations and stockpiled separately, pending confirmatory analysis of the excavation soil samples.

After the tanks were removed, they were cut open and the residual liquid and solids were transferred to a 55-gallon drum. No sheen or petroleum odors were observed. The waste liquid and solids were turned over to NGC for disposal. The tanks were rendered unusable and were disposed of off-site by Tyree.

3.0 SAMPLING AND ANALYSIS

Post excavation soil samples were collected from the side walls and bottom of the excavations, in accord with the August 1, 1994 New York State Department of Environmental Conservation (NYSDEC) Spill Prevention Operations Technology Series (SPOTS) Memo #14. The samples were analyzed for volatile organic compounds (VOCs) by USEPA Method 8120, and semi-volatile organic compounds (SVOCs) by Method 8270. The total petroleum hydrocarbons (TPH) were quantified and fingerprinted by Modified Method 8015. The laboratory analysis was conducted by EcoTest Laboratories, Inc., a New York State ELAP-accredited laboratory (Certification No. 10320). The laboratory report is provided in Appendix A.

No volatile or semi-volatile organic compounds were detected in any of the soil samples. Low levels of total petroleum hydrocarbons were detected in the soil samples. No sample concentration exceeded 100 milligrams per kilogram (mg/kg), well below the County's guideline of 1,000 mg/kg. The TPH fingerprint identified the petroleum hydrocarbon as lubricating oil, which would be expected in the waste washwater.

4.0 CONCLUSION

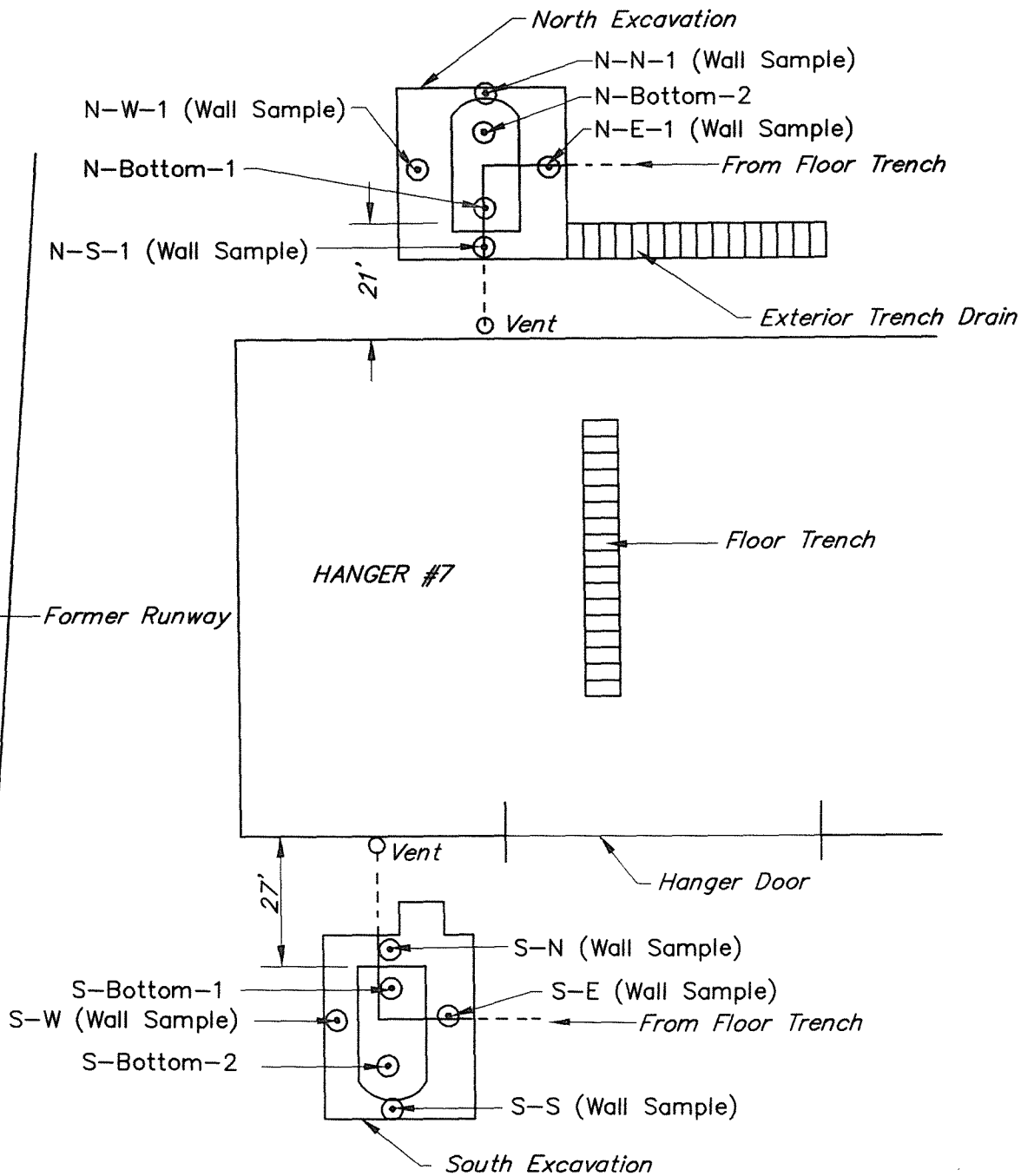
Based on our inspection of the work and results of the confirmatory soil sampling, there were no indications of contamination requiring further excavation, remediation, or sampling. Additionally, the tank excavations have been backfilled with clean sand and will be covered with a concrete slab.



Actual North

Assumed North

Top Of Tank Approximately
7.5 Below Grade



NOTE:



Sample Locations

Not To Scale

Top Of Tank Approximately
6' Below Grade

HANGER #7 USTs SAMPLE LOCATIONS

NORTHROP GRUMMAN CORP.

BETHPAGE, NEW YORK

APPENDIX A

ANALYTICAL RESULTS

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/1

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-W

ANALYTICAL PARAMETERS

Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR 

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LAB NO. C974967/1

12/03/97

Northrop Grumman Aerospace Corporation
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SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-W
UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB. NO. C974967/1

12/03/97

Northrop Grumman Aerospace Corporation
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ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-W

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	4000*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 89

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/2

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-E

ANALYTICAL PARAMETERS

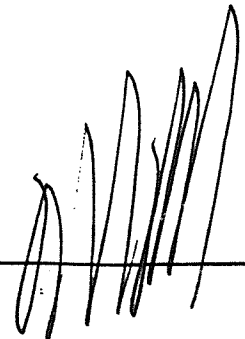
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



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LAB NO. C974967/2

12/03/97

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COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-E
UNITS: ug/Kg

ANALYTICAL PARAMETERS

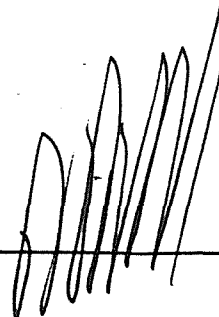
Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/2

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-E

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	22000*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

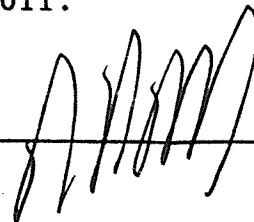
% Solids 89

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/3

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-N

ANALYTICAL PARAMETERS

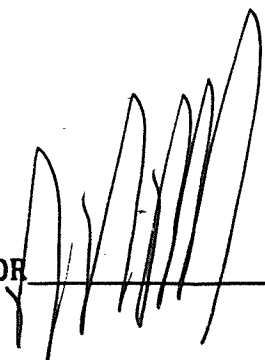
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



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LAB NO. C974967/3

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582
ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-N
UNITS: ug/Kg

ANALYTICAL PARAMETERS

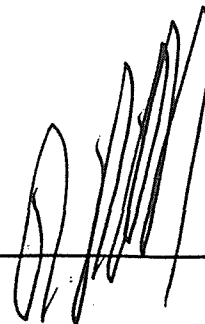
ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/3

12/03/97

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Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-N

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	<200
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 89

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/4

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-S

ANALYTICAL PARAMETERS

Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/4

12/03/97

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Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-S
UNITS: ug/Kg

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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12/03/97

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ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-S

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	<200
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 90

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB_NO.C974967/5

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D:11/24/97 RECEIVED:11/24/97

SAMPLE: Soil sample, S-Bottom-1

ANALYTICAL PARAMETERS

Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc:Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/5

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-Bottom-1
UNITS: ug/Kg

ANALYTICAL PARAMETERS

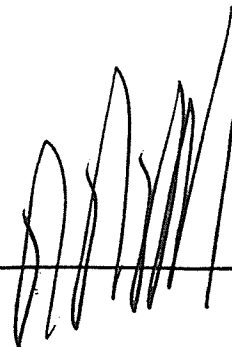
ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/5

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-Bottom-1

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	<200
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 90

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

DIRECTOR 

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LAB NO. C974967/6

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-Bottom-2

ANALYTICAL PARAMETERS

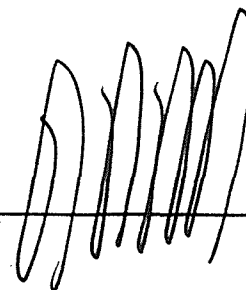
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR _____



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LAB NO. C974967/6

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-Bottom-2
UNITS: ug/Kg

ANALYTICAL PARAMETERS

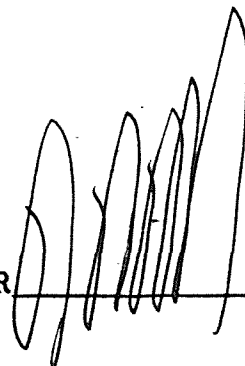
Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/6

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, S-Bottom-2

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	18000*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

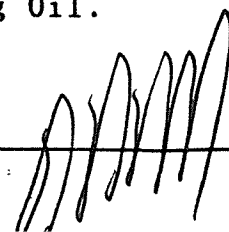
% Solids 88

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR _____



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LAB NO. C974967/7

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-W-1

ANALYTICAL PARAMETERS

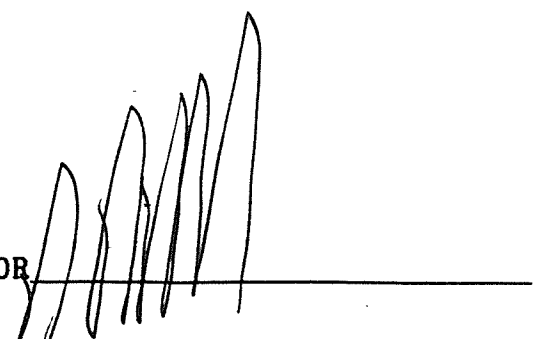
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

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LAB NO. C974967/7

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582
ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-W-1
UNITS: ug/Kg

ANALYTICAL PARAMETERS

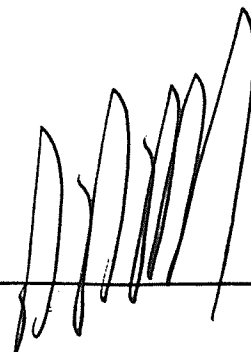
Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/7

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-W-1

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	71000*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

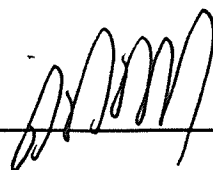
% Solids 95

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR _____



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LAB NO. C974967/8

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-E-1

ANALYTICAL PARAMETERS

Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



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LAB NO. C974967/8

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-E-1
UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/8

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582
ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-E-1

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	1600*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 95

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR 

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LAB NO. C974967/9

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-N-1

ANALYTICAL PARAMETERS

Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR 

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/9

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-N-1
UNITS: ug/Kg

ANALYTICAL PARAMETERS

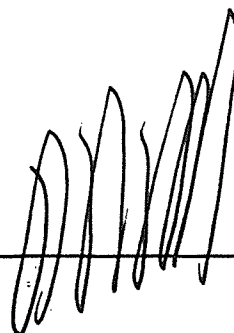
Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/9

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-N-1

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	24000*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

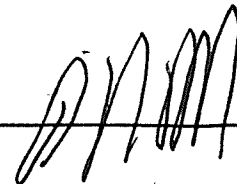
% Solids 94

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/10

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-S-1

ANALYTICAL PARAMETERS

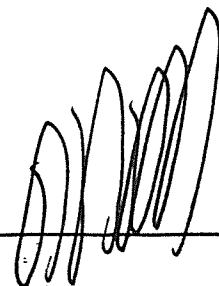
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/10

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-S-1
UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/10

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-S-1

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	2300*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

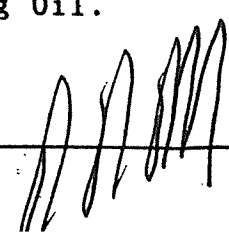
% Solids 94

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
closest match found is Lubricating Oil.
Quality of match = Good.

DIRECTOR _____



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C974967/11

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-Bottom-1

ANALYTICAL PARAMETERS

Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



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LAB NO. C974967/11

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Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-Bottom-1
UNITS: ug/Kg

ANALYTICAL PARAMETERS

ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

DIRECTOR



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LAB NO. C974967/11

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Mail Station D08-GHQ
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ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-Bottom-1

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	1400*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 94

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

*GC analysis indicates sample contains product for which
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Quality of match = Good.

DIRECTOR 

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LAB NO.C974967/12

12/03/97

Northrop Grumman Aerospace Corporation
Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D:11/24/97 RECEIVED:11/24/97

SAMPLE: Soil sample, N-Bottom-2

ANALYTICAL PARAMETERS


Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethyl Benzene	ug/Kg	<5
o Xylene	ug/Kg	<5
m + p Xylene	ug/Kg	<10
1,2 Dibromoethane	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
ter. ButylMethylEther	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
123-Trimethylbenzene	ug/Kg	<5
124-Trimethylbenzene	ug/Kg	<5
135-Trimethylbenzene	ug/Kg	<5
sec-Butylbenzene	ug/Kg	<5
tert-Butylbenzene	ug/Kg	<5
Isopropylbenzene	ug/Kg	<5
Cyclohexanone	ug/Kg	<50
Naphthalene	ug/Kg	<5
1245 Tetramethylbenz	ug/Kg	<5
Cyclopropylbenzene	ug/Kg	<5

ANALYTICAL PARAMETERS

cc:Steve Hix, Eder

REMARKS: EPA Method 8260

DIRECTOR



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Mail Station D08-GHQ
Bethpage, NY 11714-3582

ATTN: John Selva

SOURCE OF SAMPLE: Grumman, Hanger #7 USTS, #1145-17
COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-Bottom-2
UNITS: ug/Kg

ANALYTICAL PARAMETERS

Naphthalene	<30
Anthracene	<30
Fluorene	<30
Phenanthrene	<30
Pyrene	<30
Acenaphthene	<30
Benzo(a)anthracene	<30
Fluoranthene	<30
Benzo(b)fluoranthene	<30
Benzo(k)fluoranthene	<30
Chrysene	<30
Benzo(a)pyrene	<30
Benzo(ghi)perylene	<30
Indeno(1,2,3-cd)pyrene	<30
Dibenzo(a,h)anthracene	<30

ANALYTICAL PARAMETERS

cc: Steve Hix, Eder

REMARKS: EPA Method 8270

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COLLECTED BY: EDER DATE COL'D: 11/24/97 RECEIVED: 11/24/97

SAMPLE: Soil sample, N-Bottom-2

ANALYTICAL PARAMETERS

Diesel	ug/Kg	<200
#2 Fuel Oil	ug/Kg	<200
#4 Fuel Oil	ug/Kg	<200
#6 Fuel Oil	ug/Kg	<200
Lubricating Oil	ug/Kg	2300*
Mineral Spirits	ug/Kg	<200
JP4	ug/Kg	<200
JP5	ug/Kg	<200
Jet A	ug/Kg	<200
Kerosene	ug/Kg	<200

ANALYTICAL PARAMETERS

% Solids 95

cc: Steve Hix, Eder

REMARKS: Diesel Range Organics.
Analyses performed by Modified 8015 Method.

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Quality of match = Good.

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