
2A-13

NORTHROP GRUMMAN

BETHPAGE FACILITY

Building 23
Phase II
Site Assessment

Northrop Grumman Corporation
Bethpage, New York

October 2006

DVIRKA AND BARTILUCCI
CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

RLA/JOBS/NORTHROP/1965/Building 23 Phase II(07/18/06)

Dvirka and Bartilucci
CONSULTING ENGINEERS

330 Crossways Park Drive, Woodbury, New York, 11797-2015
516-364-9890 ▪ 718-460-3634 ▪ Fax: 516-364-9045
e-mail: findingsolutions@db-eng.com

October 10, 2006

Fred Weber, Environmental Engineer
Environmental, Safety, Health & Medical Services
Northrop Grumman Corporation
600 Grumman Road West
Mail Stop: Z18-025
Bethpage, NY 11714-3583

Re: Phase II Site Assessment
Building 23
Bethpage, New York
D&B No. 1965-15

Dear Mr. Weber:

Enclosed please find eight (8) copies of the document entitled:

"Phase II Site Assessment
Northrop Grumman Corporation
Building 23
Bethpage, New York"

If you have any questions and/or comments, please do not hesitate to contact Mr. Michael R. Hofgren or me at (516) 364-9890.

Very truly yours,

Brian M. Veith, P.E.
Vice President

BMV/MG/kap
Enclosure
cc: M. Hofgren (D&B)
♦1965\BMV06LTR-23

PHASE II SITE ASSESSMENT

NORTHROP GRUMMAN CORPORATION
BUILDING 23
BETHPAGE, NEW YORK

Prepared for:

NORTHROP GRUMMAN CORPORATION
BETHPAGE, NEW YORK

Prepared by:

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK

OCTOBER 2006

PHASE II SITE ASSESSMENT
NORTHROP GRUMMAN CORPORATION
BUILDING 23
BETHPAGE, NEW YORK

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Section 1

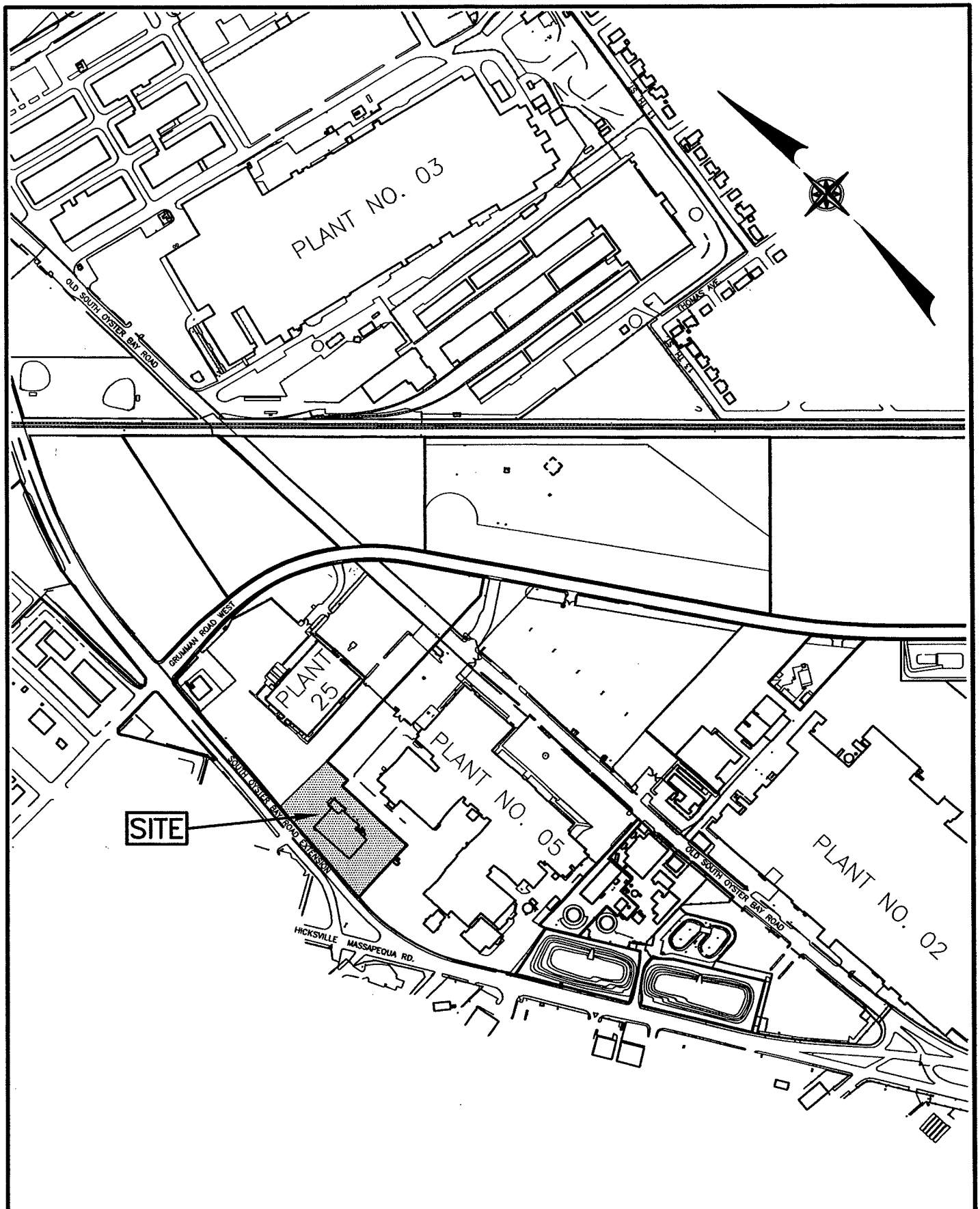
1.0 INTRODUCTION

This report documents the findings of a Phase II Site Assessment, which addresses the recommendations presented in the Phase I Site Assessment, undertaken for Northrop Grumman Corporation's (NGC's) Building 23.

The Building 23 parcel is located on the east side of the South Oyster Bay Road Extension at the intersection with Hicksville-Massapequa Road (Route 107) in Bethpage, New York. A site location map is presented as Figure 1-1. The site is approximately 2.14 acres (current Tax ID No.: Section 46, Block 323, Lot 274 [partial]) of land currently owned by NGC, formerly known as Grumman Aerospace Corporation (GAC) or Grumman. The property is currently zoned Industrial H. Zoning to the north, east, south and west is also industrial. Zoning further west, south and east is high density residential. Also, areas of commercial zoning are located west and south of the property along Hicksville-Massapequa Road and portions of Central Avenue.

The site was once comprised of the former Building 23 location, also known as the Sensor Test and Integration Laboratory (STIL), surrounded by an asphalt parking lot. Building 23, which was demolished in early 2006, was approximately 22,000 square feet. The footprint where the building once stood is currently unpaved, unleveled sand. A floor plan of the former building is presented as Figure 1-2.

The Building 23 parcel is generally level and appears to be well drained. Ground elevation is approximately 110 feet above mean sea level. The Soil Conservation Service (SCS) classifies the majority of the site as Urban Land, with a small area northwest of the site as Udipsaments (nearly level) and the recharge basins south of the site as Pits (groundwater recharge). Urban Land is defined as an area with at least 85 percent asphalt, concrete or other impervious building material, with most of the remaining small areas of soil being well drained Riverhead, Hempstead or Enfield soils, or excessively drained Udipsaments. Udipsaments (nearly level) are defined as manmade fills or borrow areas, most of which are grassed with



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BETHPAGE, NEW YORK
BUILDING 23 - PHASE II SITE ASSESSMENT

SITE LOCATION MAP

FIGURE 1-1

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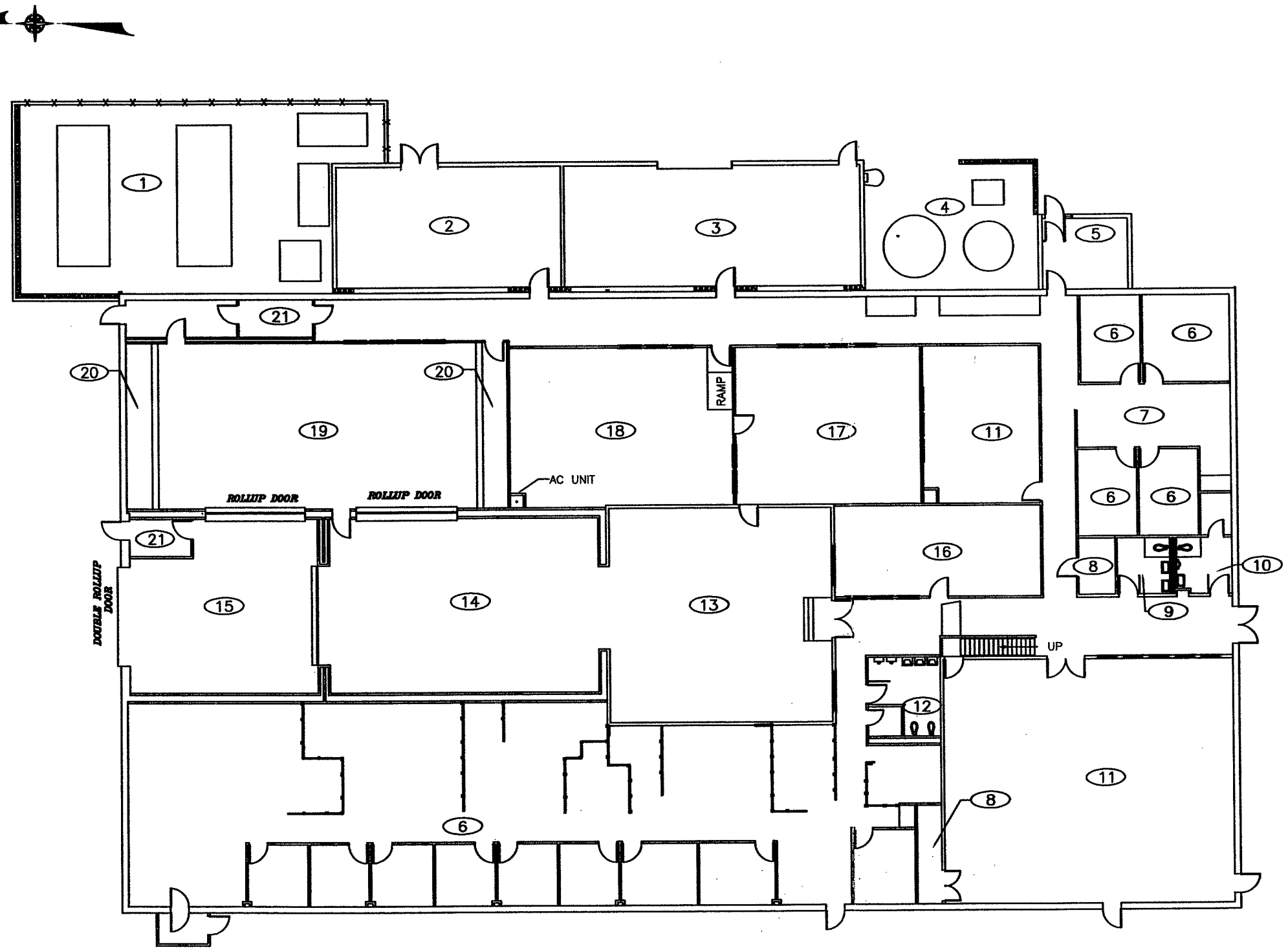

LEGEND

1. 125 TON CHILLER UNITS, STORAGE TANK, PUMPS AND EMERGENCY GENERATOR AREA
2. ELECTRICAL ROOM
3. MECHANICAL ROOM
4. VAPORIZER AND STORAGE TANK AREA
5. LOBBY
6. OFFICE AREAS
7. RECEPTION
8. STORAGE AREAS
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BUILDING 23 - PHASE II SITE ASSESSMENT

FORMER BUILDING 23 FLOOR PLAN

FIGURE 1-2

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0 to 3 percent slopes, which consist of very deep soils that are excessively drained to well-drained. Pits (groundwater recharge) are defined as basins with steep sides and nearly level bottoms that are used for the recharge of storm water runoff originating from streets, parking lots and buildings.

The objective of the Phase II Site Assessment is to document the investigation activities undertaken in accordance with the initial scope of work developed from the recommendations of the Phase I Site Assessment. This report also presents the results obtained from the laboratory analysis of the environmental samples collected as part of the field program and provides an interpretation of the analytical results with respect to appropriate environmental standards, guidance values and criteria.

Section 2.0 of this document presents an overview of the findings and conclusions of the Phase I Site Assessment undertaken for the Building 23 property. The recommended technical scope of work for the Phase II Site Assessment as presented in the Phase I Site Assessment for Building 23 is presented in Section 3.0. A description of the Phase II field activities is presented in Section 4.0. The findings of the Phase II field program are presented in Section 5.0. The conclusions of the Phase II Site Assessment and recommendations regarding further investigation and/or remedial activities at the identified areas of environmental concern (AOCs) are presented in Section 6.0.

Appendix A contains Chain of Custody forms utilized to ship the soil samples collected during the field program to the laboratory. Boring logs presenting field observations noted during the field program are included in Appendix B. Appendix C presents the laboratory results of the soil samples collected during the field program. Correspondence concerning the Building 23 parcel is included in Appendix D.

Section 2

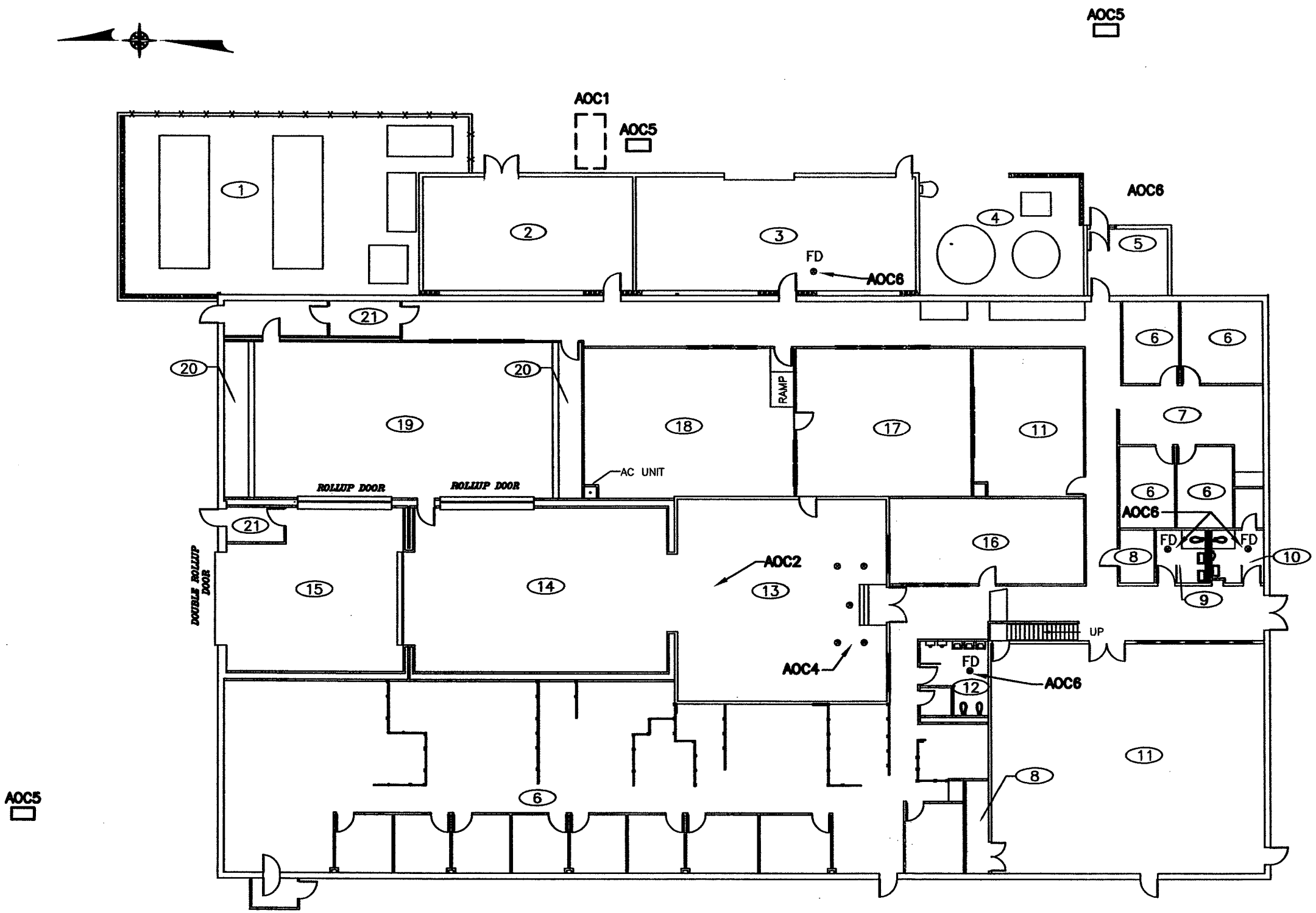
2.0 OVERVIEW OF PHASE I SITE ASSESSMENT

This section provides an overview of the findings and conclusions of the Phase I Site Assessment undertaken for Building 23.

The Phase I Site Assessment for Building 23 was conducted by Dvirka and Bartilucci Consulting Engineers (D&B) and the report entitled, "Phase I Site Assessment, Building 23, New York" was prepared by D&B in June 2005. Information utilized in the preparation of the Phase I Site Assessment included available aerial photographs dated 1953 to 1994; historical topographic maps dated 1900 to 1994; available files and construction drawings at NGC; available files at the New York State Department of Environmental Conservation Region 1 office; interviews with representatives of NGC; a state and federal environmental database report obtained in March 2005; and a site inspection performed by D&B on March 8, 2005. Based upon the findings of the Phase I Site Assessment, the following areas were identified as potential areas of concern (AOCs):

- AOC 1 – Tank 23-01-1
- AOC 2 – Thermal Vacuum Chamber Foundation
- AOC 3 – Former Leaching Pools
- AOC 4 – "Xit-Rod" Grounding Pits
- AOC 5 – Drainage Features
- AOC 6 – Phase I Discrepancies

The locations of the areas identified as potential AOCs are depicted on Figures 2-1 and 2-2. A brief description of each of the AOCs identified above is provided below as presented in the Phase I Site Assessment.



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BUILDING 23 - PHASE II SITE ASSESSMENT

AREAS OF ENVIRONMENTAL CONCERN

FIGURE 2-1

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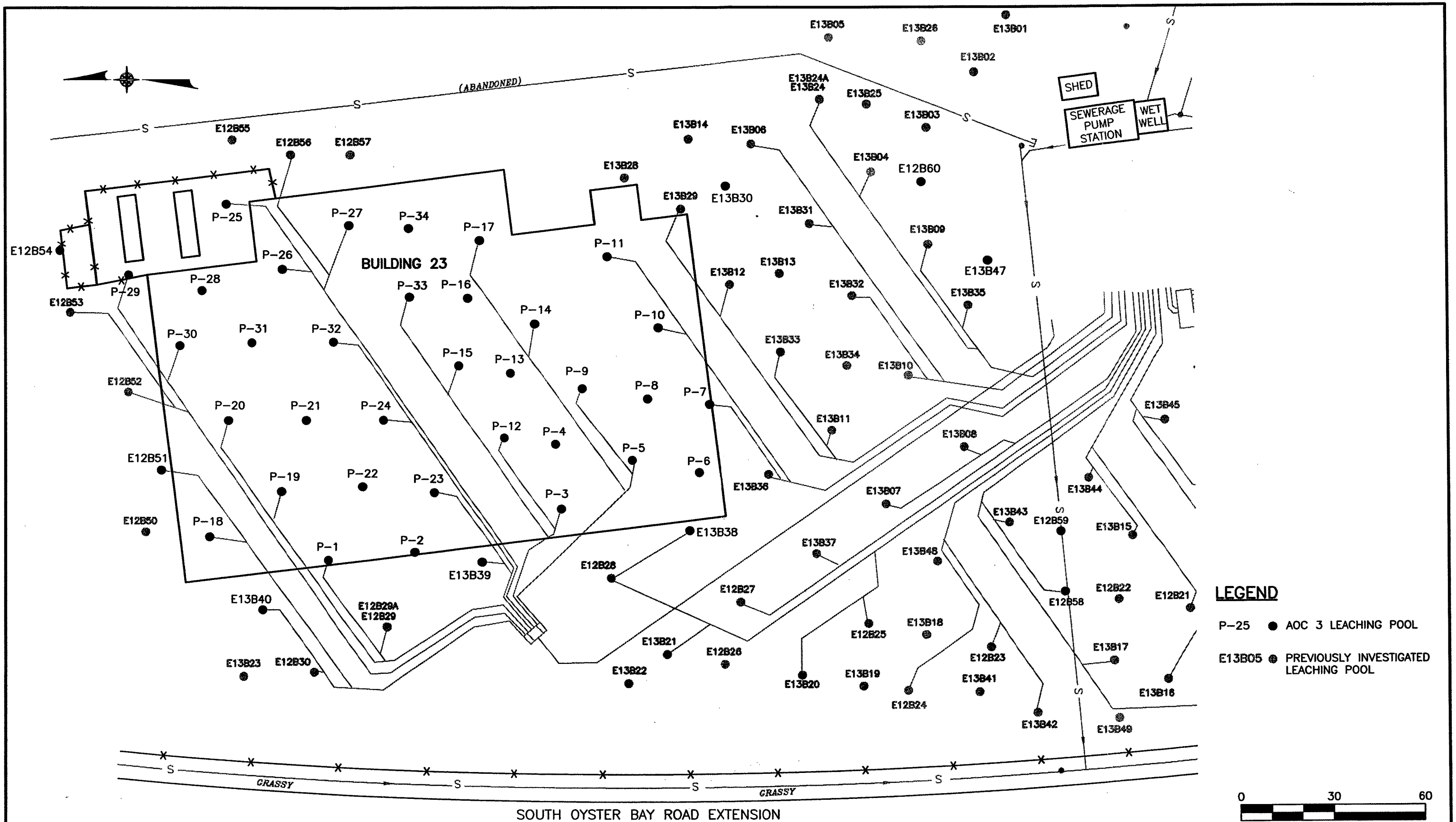

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AOC 3 SITE LOCATION MAP

FIGURE 2-2

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AOC 1 - Tank 23-01-1

A 550-gallon double-walled FRP underground storage tank equipped with a level gauge, high level alarm and leak detection is located on the Building 23 property and is utilized to store diesel fuel for an on-site emergency generator. According to representatives of NGC, inventory control is performed on this tank. Furthermore, no measurable inventory losses have been detected and no spills have been reported during filling operations. However, since the building will be demolished and this tank will be removed, further investigation to assess soil quality surrounding and underlying this storage tank is warranted at the time of tank removal.

AOC 2 - Thermal Vacuum Chamber Foundation

A drawing entitled "STIL Sections and Details" dated January 27, 1988 depicts the foundation for the Thermal Vacuum Chamber which was installed as part of the 1988 building upgrade. The drawing indicates a gap between the new foundation for the vacuum chamber and the existing building foundation. Since vacuum pump oil was utilized in this area, this gap could potentially provide a pathway for constituents of concern to reach the subsurface environment. As a result, further investigation is warranted to assess soil quality beneath the Thermal Vacuum Chamber. Additionally, upon removal of the vacuum unit itself, the integrity of the pad should be assessed and any potential routes of discharge investigated.

AOC 3 - Former Leaching Pools

Sanitary waste generated within Plant 5 was formerly discharged to a sanitary disposal system consisting of a sewage pump station, settling tanks/basins and a series of interconnected leaching pools. The majority of the accessible leaching pools were investigated and remediated (as necessary) during the investigation/remediation program conducted at Plant 5. However, the approximate 34 leaching pools located beneath Building 23 were not previously investigated or remediated. According to available information, these 34 leaching pools were backfilled prior to the construction of Building 23; the source of this backfill material is unknown. As a result, further investigation is warranted to assess soil quality within and beneath these leaching pools.

AOC 4 – "Xit-Rod" Grounding Pits

Five "Xit-Rod" Grounding Pits are located in the Vacuum Chamber area and one pit is located in the Outer Chamber Room. These grounding rod pits provide a direct pathway for constituents of concern to reach the subsurface environment. Since vacuum pump oil was utilized in these areas, these pits may have potentially received discharges of constituents of concern. As a result, further investigation is warranted to assess soil quality within and beneath these pits.

AOC 5 - Drainage Features

A drawing entitled "Main Floor Plumbing Phase C" dated March 25, 1988 indicates various "Indirect Waste" streams, including a floor drain in the Mechanical Room, discharging to the storm water system for the building. However, a Drainage Discharge Determination report prepared by H2M Group in March 1999 indicates that all wastewater from Building 23 was either redirected to the Nassau County sewer system or to floor drains fitted with sensors that discharge to a holding tank, the contents of which would require proper off-site transportation and disposal.

However, a drawing entitled "STIL Phase B Site Plan" dated March 5, 1988 indicates the installation of two new drainage manholes and the location of one existing drainage manhole associated with the storm water drainage system. No details regarding the construction of the drainage manholes are provided. According to the construction drawings reviewed as part of this investigation, since the storm water drainage system previously received non-storm water discharges, further investigation is warranted regarding the discharge of constituents of concern to the subsurface environment from these drainage manholes.

AOC 6 - Phase I Discrepancies

The Building 23 site was included in the Phase I Site Assessment report prepared for Plant 5 dated August 1998. Comparing the findings of the site inspection conducted on March 8, 2005 with that conducted during the Plant 5 Phase I Site Assessment indicated some discrepancies. These discrepancies include missing floor drains in the Mechanical Room (3), the Ladies' Room (9), the Men's Room (10) and the Lavatory (12), as well as the missing UST located south of the Exterior Vaporizer and Storage Tank Area (4). (Note: Numbers in parentheses refer to the area numbers depicted on Figure 2-1). It is not clear whether these floor drains, if they existed, discharged to dry wells or whether the tank was properly removed. As a result, since the environmental quality of soil underlying these features cannot be assessed at this point, further investigation is warranted.

Section 3

3.0 SCOPE OF WORK

Based upon the recommendations of the Phase I Site Assessment, a detailed technical scope of work was developed to investigate the identified AOCs. The following investigation activities were recommended in the Phase I Site Assessment report:

AOC 1 - Tank 23-01-1

Following excavation and removal of this tank, one endpoint soil sample will be collected from beneath the tank and from each sidewall, five samples total. The samples will be analyzed for Spill Technology and Remediation Series (STARS) volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) by United States Environmental Protection Agency (USEPA) Method 8260/8270.

AOC 2 - Thermal Vacuum Chamber Foundation

Following demolition of the building, if a drainage pathway to the subsurface environment exists, four soil probes will be advanced in areas exhibiting visual evidence of impacted soil or, if visual impacts are not observed, equally spaced around the foundation. Each probe will be advanced to a depth of 4 feet below the bottom of the foundation with soil samples collected from the 0 to 2-foot and 2 to 4-foot depth intervals and analyzed for STARS VOCs and SVOCs by USEPA Method 8260/8270, and select glycols by USEPA Method 8015.

AOC 3 - Former Leaching Pools

Following demolition of the building, one soil probe will be advanced within each of the 34 leaching pools to at least 22 feet below grade. Soil samples will be collected as follows: one from the 0 to 12-foot depth interval based on field observations, one from the former bottom of each leaching pool (approximately 12 to 14 feet below grade) and one from the 14 to 22-foot depth interval based on field observations. Each soil sample will be analyzed for VOCs by

USEPA Method 8260, SVOCs by USEPA Method 8270, polychlorinated biphenyls (PCBs) by USEPA Method 8082 and priority pollutant metals by USEPA Methods 6010/7471.

AOC 4 - "Xit-Rod" Grounding Pits

One soil probe will be advanced in each of the 6 pits to a depth of 4 feet below grade. Soil samples will be collected at 2-foot intervals and analyzed for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270, select glycols by USEPA Method 8015 and priority pollutant metals by USEPA Methods 6010/7471.

AOC 5 - Drainage Features

Each of the three manholes identified in the Phase I Site Assessment will be located and examined to determine whether each contains a solid bottom. Any manhole found to contain an earthen bottom will be closed in accordance with the USEPA's Underground Injection Control (UIC) Closure Program. If necessary, soil samples will be collected from 0 to 8 feet below the bottom of each structure at 2-foot intervals. Each soil sample will be analyzed for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270 and priority pollutant metals by USEPA Methods 6010/7471.

AOC 6 - Phase I Discrepancies

If the floor drains are located and found to discharge to dry wells or underlying soil, these floor drains will be closed in accordance with USEPA's UIC Closure Program. In addition, if the tank is found on the property, it will be excavated and removed during the demolition of Building 23 and the underlying soil will be investigated. If necessary, soil samples will be collected from 0 to 4 feet below the bottom of each floor drain at 2-foot intervals. In addition, as necessary, soil samples will be collected from the bottom of the tank excavation as well as from each tank sidewall. Each soil sample will be analyzed for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270 and priority pollutant metals by USEPA Methods 6010/7471.

It should be noted that AOCs 5 and 6 have been identified in the Phase I Site Assessment report prepared by D&B, dated June 2005, as potential Underground Injection Control (UIC) features that may require closure under the USEPA's UIC closure program. With regard to AOC 5, if any manhole is found to contain an earthen bottom, it will be closed as part of the Building 23 UIC Closure Program. With regard to AOC 6, if any of the floor drains are found to discharge to a dry well or underlying soil, the floor drains will be closed as part of the Building 23 UIC Closure Program. Following completion of the Phase II Site Assessment field activities, the closure activities at AOCs 5 and 6, if necessary, will be addressed under the Building 23 UIC Closure Program.

Section 4

4.0 FIELD ACTIVITIES

This section provides a description of the field activities conducted as part of the Phase II Site Assessment undertaken for Building 23. The AOCs investigated as part of this Phase II Site Assessment and associated sample locations are shown on Figures 4-1 and 4-2 and are summarized in Table 4-1. The information provided in Table 4-1 includes the AOC designation, the number of borings advanced and samples collected for each AOC, and the analytical parameters for each sample. Work performed during the Phase II Site Assessment included additional inspection activities and the collection and analysis of subsurface soil samples. Dedicated project field books, which are available in the project file, provide documentation of the daily field activities conducted at the site during the field program.

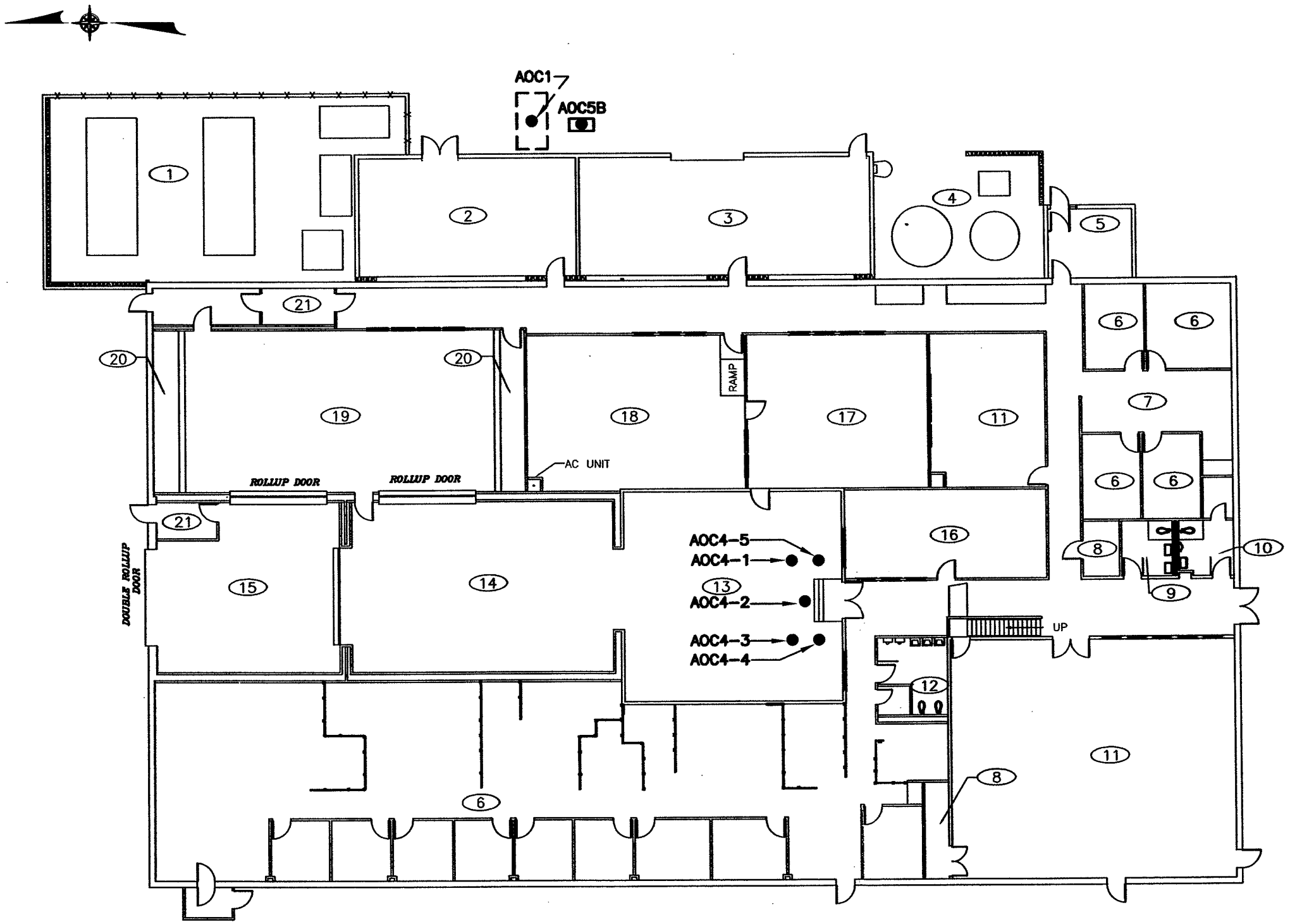
4.1 First Round of Investigation Activities

D&B initiated the Phase II investigation activities on December 7, 2005. All of the activities performed on December 7, 2005 were conducted prior to demolition of Building 23. Provided below is a summary of the first round activities.

AOC 1 – Tank 23-01-1

The Phase II scope of work specified that one endpoint soil sample would be collected from beneath the tank and one soil sample would be collected from each sidewall of the tank excavation following tank removal. However, after mobilizing to the site, D&B discovered that the tank had already been removed and the excavation backfilled.

As a result, a soil boring was advanced to a total depth of 18 feet below ground surface (bgs) through the former tank location. This depth was selected based on field observations which indicated that the bottom of the former tank was located approximately 10 feet below grade. Four soil samples were collected at 2-foot intervals from 10 to 18 feet below grade. The soil samples were collected by advancing soil probes utilizing a truck-mounted Geoprobe and tooling consisting of drill rods and a 2-inch outside diameter by



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● SOIL BORING LOCATION

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SAMPLE LOCATION MAP

FIGURE 4-1

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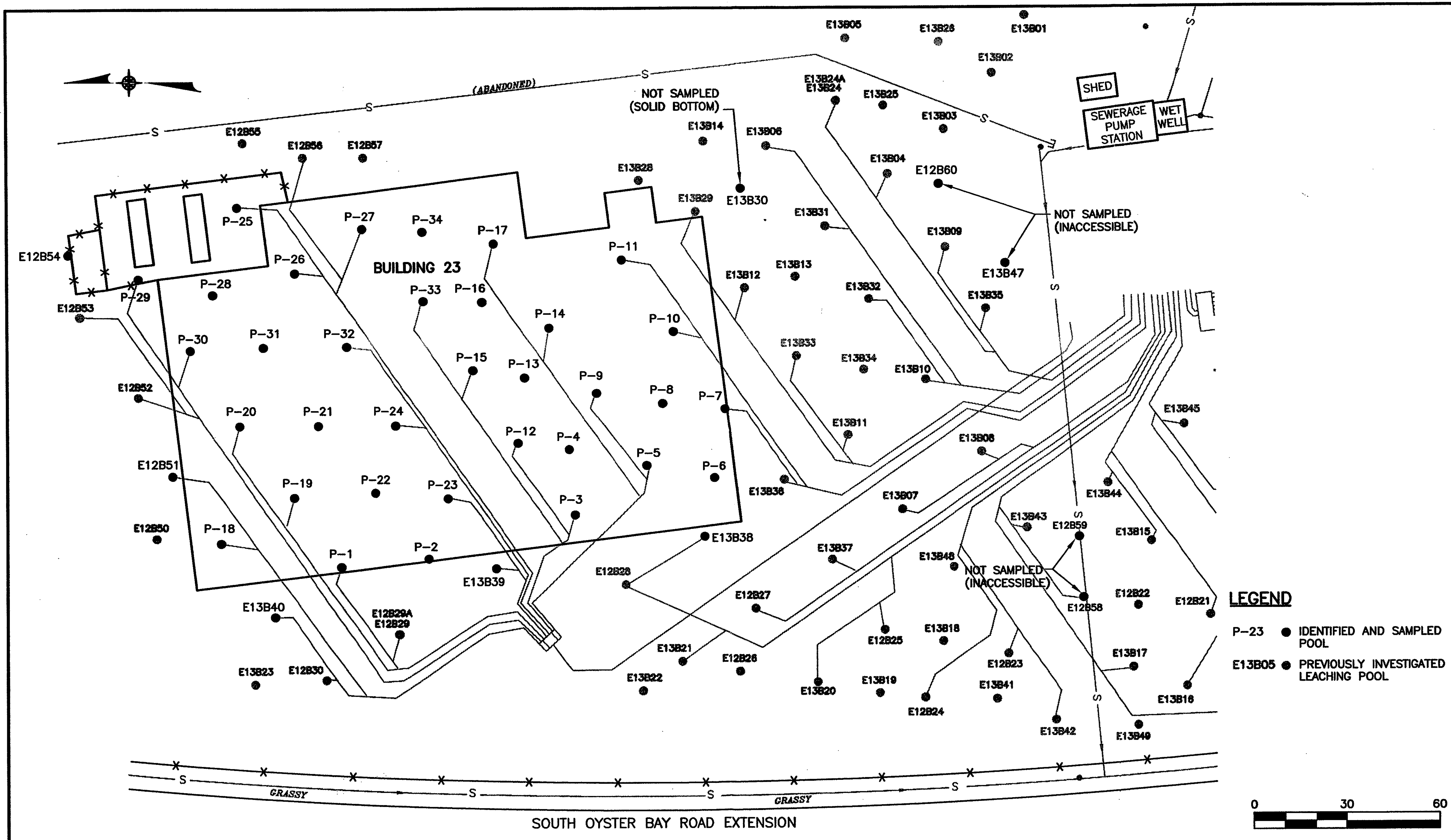

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AOC 3 SOIL BORING/SAMPLE LOCATION MAP

FIGURE 4-2

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TABLE 4-1
NORTHROP GRUMMAN CORPORATION
BUILDING 23
PHASE II SITE ASSESSMENT
SUMMARY OF FIELD ACTIVITIES

AOC Number	AOC Description	Soil Probe ID Number	Soil Sampling Interval	No. of Soil Probes	No. of Soil Probe Samples	Laboratory Analysis*	Comments
1	Tank 23-01-1	AOC 1	10'-12' and 12'-14' (14'-16' and 16'-18' on-hold)	1	4	STARS VOCs and SVOCs	Tank 23-01-1 removed prior to field activities. Four soil samples collected from the estimated depth of the former tank bottom. Deeper samples placed on-hold pending analysis of shallower samples.
2	Thermal Vacuum Chamber Foundation	--	--	--	--	--	Thermal vacuum chamber foundation inspected for gaps, cracks or other features that would provide a pathway for contaminants to reach the subsurface environment.
3	Former Leaching Pools	P-1 through P-34, E12B-51, E12B-54, E13B-28, E13B-38, E13B-39, E13B-40	Sample A collected from pool backfill material, Sample B collected from the former leaching pool bottom, Sample C collected from soil underlying pool and Sample D collected from the boring completion depth (on-hold)	40	157	VOCs, SVOCs, PCBs and PP metals	Forty leaching pools beneath and surrounding the former Building 23 were sampled. P-34 "A" was not collected since the pool was filled with concrete and gravel. E12B-54 "A" and E13B-40 "A" were not collected since these pools were not backfilled. Deeper samples placed on-hold pending analysis of shallower samples.
4	"Xit-Rod" Grounding Pits	AOCs 4-1 through 4-5	0-2' and 2'-4' (4'-6' and 6'-8' on-hold)	5	20	VOCs, SVOCs, PP metals and select glycols	Deeper samples placed on-hold pending analysis of shallower samples.
5	Drainage Features	5a	0-2' and 2'-4' (4'-6' and 6'-8' on-hold)	1	4	VOCs, SVOCs and PP metals	During field activities, storm water pool 5a added at the request of NGC. One of three remaining pools could not be located and second determined to be solid bottomed. Deeper samples placed on-hold pending analysis of shallower samples.
		5b	13'-15' and 15'-17' (17'-19' and 19'-21' on-hold)	1	4	VOCs, SVOCs and PP metals	
6	Phase I Discrepancies	--	--	--	--	--	During field activities, suspected floor drains and UST determined to not exist.

* Target Constituents/Analytical Methods
STARS Table 2 VOCs/SVOCs analyzed by USEPA Methods 8260 and 8270.
Volatile organic compounds (VOCs) analyzed by USEPA Method 8260.
Semivolatile organic compounds (SVOCs) analyzed by USEPA Method 8270.
Priority pollutant (PP) metals analyzed by USEPA Method 6010/7471.
Select glycols analyzed by USEPA Method 8015.

4-foot long soil probe sampler. A clear polyethylene terephthalate-G (PETG) sample tube liner, dedicated to each soil probe sample, was used to contain the sample within the sampler. Each soil probe was advanced utilizing the Geoprobe to drive the soil probe sampler, sample tube liner and drill rods to the desired depth to retrieve the soil sample.

All soil samples collected were geologically characterized, inspected for staining, discoloration or odors, and screened for volatile organic compounds (VOCs) utilizing a photoionization detector (PID). These field observations are included on the soil boring logs provided in Appendix B. All soil samples were collected from the sample tube liners and placed in pre-cleaned, laboratory-supplied sample jars, labeled, placed on ice and sent under Chain of Custody procedures to Mitkem Corporation for analysis. Mitkem Corporation participates in the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP). All soil samples sent to the laboratory were analyzed for STARS VOCs and SVOCs by USEPA Method 8260/8270. It should be noted that the soil samples collected from the 14 to 16-foot and 16 to 18-foot depth intervals were placed on hold at the laboratory pending the analytical results of the shallower samples.

While advancing soil probes, a PID was used to monitor VOCs in the workers' breathing zone and at the boreholes. Air monitoring results are documented in the project field books. The PID was calibrated on at least a daily basis, using isobutylene gas at a concentration of 100 parts per million in air. Equipment calibration is documented in the project field books.

Any excess sample material not required for analysis was returned to the borehole. The remainder of the borehole was filled with clean sand and/or bentonite pellets. The borehole was restored at grade to match preexisting conditions.

All nondedicated sampling equipment was decontaminated following use. Decontamination procedures consisted of:

- External wash with a solution of non-phosphate detergent and potable water;
- Potable water rinse; and

- Distilled/deionized water rinse.

All disposable sampling equipment was properly discarded following its one-time use.

AOC 2 – Thermal Vacuum Chamber Foundation

During the building demolition activities, the foundation of the thermal vacuum chamber was inspected for gaps, cracks or other features which would provide a drainage pathway for constituents of concern to reach the subsurface environment. Based on that inspection, it was determined that a pathway to the subsurface did not exist. As a result, soil sampling was not conducted in this AOC.

AOC 4 – "Xit-Rod" Grounding Pits

The Phase II scope of work specified that five pits are located in the Vacuum Chamber area and one pit is located in the Outer Chamber Room. During the Phase I activities, the drawing review indicated that one pit was located in the Outer Chamber Room, but this area was not accessible during the Phase I site inspection since this area was a clean room. Upon mobilizing to the site for the Phase II activities, D&B discovered that a pit is not located in the Outer Chamber Room.

As a result, soil borings were advanced to depths of 8 feet bgs in each of the five pits located in the Vacuum Chamber area. Four soil samples were collected at 2-foot intervals from each boring from surface to 8 feet below grade. The samples were packaged as described previously and sent to the laboratory for analysis for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270, select glycols by USEPA Method 8015 and priority pollutant metals by USEPA Method 6010/7471. It should be noted that the soil samples collected from the 4 to 6-foot and 6 to 8-foot depth intervals were placed on hold at the laboratory pending the analytical results of the shallower samples. These soil samples were collected utilizing the same procedures discussed previously, except that a hammer drill and Geoprobe hand tools were utilized in lieu of a truck-mounted unit since these soil probes were located indoors.

AOC 5 – Drainage Features

The Phase II scope of work specified that the locations of three manholes would be identified and investigated to determine whether each manhole is solid bottomed. One of the three manholes was identified and determined to be solid bottomed. As a result, no further investigation is warranted related to that manhole. A second manhole was identified and determined to be earthen bottomed. This manhole was designated "5B." A soil boring was advanced to a depth of 21 feet bgs through the bottom of manhole 5B. Four soil samples were collected at 2-foot intervals from this boring from 13 to 21 feet below grade. The samples were packaged as described previously and sent to the laboratory for analysis for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270 and priority pollutant metals by USEPA Method 6010/7471. It should be noted that the soil samples collected from the 17 to 19-foot and 19 to 21-foot depth intervals were placed on hold at the laboratory pending the analytical results of the shallower samples. The third drainage manhole identified during the drawing review conducted as part of the Phase I Site Assessment could not be located in the field and was presumed to not exist.

It should be noted that, during the Phase II field activities, an earthen-bottomed storm water dry well was discovered at the site and designated "5A." At the request of NGC, a soil boring was advanced to a depth of 8 feet below the bottom of this dry well. Four soil samples were collected at 2-foot intervals from this boring from 0 to 8 feet below the bottom of this dry well. The samples were packaged as described previously and sent to the laboratory for analysis for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270 and priority pollutant metals by USEPA Method 6010/7471. It should be noted that the soil samples collected from the 4 to 6-foot and 6 to 8-foot depth intervals were placed on-hold at the laboratory pending the analytical results of the shallower samples.

It should be noted that manhole 5B was later determined to be one of the leaching pools associated with the former Plant 5 subsurface wastewater disposal system and previously investigated during the Plant 5 program. As a result, only one of the three manholes of concern

was discovered during the Building 23 Phase II investigation activities. The remaining two manholes were presumed to not exist. Since these manholes were part of the storm water collection system, it is likely that, if installed, they would also be solid-bottomed.

AOC 6 – Phase I Discrepancies

The Phase II scope of work specified that further investigation was warranted related to floor drains reportedly present in the Mechanical Room (3), Ladies' Room (9), Men's Room (10) and Lavatory (12) within Building 23, and an UST reportedly present south of the Exterior Vaporizer and Storage Tank Area (4). (Note: Numbers in parentheses refer to the area numbers depicted on Figure 2-1.)

During building demolition, the floors in these areas were removed and observed to determine whether these floor drains or any drainage structures were present in these areas. Based on the Phase II field activities, floor drains and/or other drainage structures were not located in these areas. As a result, sampling activities were not conducted in these areas.

Prior to building demolition, the pipes previously suspected to be UST fill ports were further investigated and determined to not be fill ports, but valves associated with the existing underground utilities present in the area. Additionally, during building demolition, excavation in this area did not reveal the presence of an UST. As a result, sampling activities were not conducted in this area.

4.2 Second Round of Investigation Activities

The Phase II investigation activities were resumed on April 13, 2006 following demolition of Building 23.

AOC 3 – Former Leaching Pools

The Phase II scope of work specified that investigation of the 34 leaching pools located beneath Building 23 was warranted. However, at the request of NGC, an additional 11 pools were also investigated during the Building 23 Phase II field activities. These additional pools are also located on the Building 23 property and were included in the investigation activities conducted during the Plant 5 Phase II Site Assessment. However, subsurface soil sampling was not conducted in these 11 pools during that previous investigation program. As a result, NGC requested that these pools be sampled during the Building 23 Phase II field activities.

On April 13 and 14, 2006, a geophysical survey was conducted using ground penetrating radar to locate the 34 leaching pools that were previously located beneath the building and the 11 additional pools identified by NGC for further investigation. A site plan showing the location of the former Building 23 and the leaching pools investigated as part of the Phase II investigation activities is presented as Figure 4-2.

Soil sampling activities were conducted on April 17, 2006 through April 26, 2006. Of the 45 leaching pools designated for investigation (34 located beneath the former Building 23 and 11 additional identified by NGC on the Building 23 property), only 40 leaching pools were sampled. One of the additional pools was discovered to be solid bottomed, while four of the additional pools were inaccessible. The locations of these unsampled leaching pools are shown of Figure 4-2. As a result, only six of the 11 additional pools identified by NGC were sampled.

The original Phase II scope of work specified that one sample would be collected from the 0 to 12-foot depth interval based on field observations, one from the former bottom of the leaching pool (approximately 12 to 14 feet below grade) and one from the 14 to 22-foot depth interval based on field observations. However, it was subsequently discovered that, prior to the construction of Building 23, the covers and domes of each pool were removed to facilitate regrading the property and construction of the building. As a result, a soil boring was advanced through each of the 40 pools with soil samples collected at 2-foot intervals. The following soil samples were selected for laboratory analysis: one soil sample was selected of the backfill

material and denoted sample "A"; one sample was selected from the former bottom of the leaching pool and denoted sample "B"; and one sample was selected from the remainder of the borehole to 10 feet below the leaching pool invert and denoted sample "C." The apparent depth of the leaching pool invert was determined based on field observations. Soil samples were selected for analysis based on visual observation of staining/discoloration, odor and/or photoionization detector readings above background concentrations. In addition, a soil sample was collected from the final completion depth of each boring (10 feet below the invert), denoted sample "D," and placed on hold at the laboratory pending analysis of the shallower soil samples. The samples were packaged as described previously and sent to the laboratory for analysis for VOCs by USEPA Method 8260, SVOCs by USEPA Method 8270, PCBs by USEPA Method 8082 and priority pollutant metals by USEPA Methods 6010/7471.

It should be noted that a sample of the backfill material was not collected from former leaching pool P-34, since this pool was filled with concrete and gravel and sample recovery was not possible. In addition, a sample of the backfill material was not collected from former leaching pools E12B-54 and E13B-40, since these pools did not contain any backfill material.

Section 5

5.0 FINDINGS

This section presents the findings of the Phase II Site Assessment, including a summary of the analytical results of the soil samples obtained during the field program. Soil sample results are generally compared to the Recommended Soil Cleanup Objectives (RSCOs) presented in Appendix A of the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) No. 4046 (referred to in this document as "TAGM 4046 Recommended Soil Cleanup Objectives"), as well as the typical Eastern USA Background concentration ranges included in TAGM 4046 (referred to in this document as "Eastern USA Background Levels"). However, it should be noted that the Building 23 property was originally included in the Plant 5 Phase I/II Site Assessments. As outlined in the Remediation Plan for Plant 5 dated March 1999, site-specific cleanup criteria were developed and approved by the NYSDEC for the purposes of determining the extent of required remediation. As a result, analytical results obtained during this field program are also compared to the previously approved site-specific cleanup criteria.

As stated previously, the Phase II field investigation was conducted at the following AOCs on the Building 23 property:

- AOC 1 – Tank 23-01-1
- AOC 2 – Thermal Vacuum Chamber Foundation
- AOC 3 – Former Leaching Pools
- AOC 4 – "Xit-Rod" Grounding Pits
- AOC 5 – Drainage Features
- AOC 6 – Phase I Discrepancies

A total of 48 soil probes were advanced and a total of 133 subsurface soil samples were collected in these areas during the Building 23 Phase II field investigation.

An area by area discussion of the analytical results obtained from the soil sampling program is provided in the sections that follow. Table 5-1 provides a summary of the soil samples exceeding NYSDEC TAGM RSCOs and site-specific cleanup criteria.

5.1 Discussion of Investigation Findings and Analytical Results

AOC 1 – Tank 23-01-1

A total of four soil samples were collected from a soil probe advanced through the former Tank 23-01-1 location. Soil samples were collected from the 10 to 12-foot, 12 to 14-foot, 14 to 16-foot and 16 to 18-foot depth intervals. The two shallower samples were analyzed for STARS VOCs and SVOCs, and the deeper samples were placed on hold at the laboratory pending the results of the shallower samples. The laboratory results of the sample analyses are presented on Table C-1 provided in Appendix C.

As shown on Table 5-1, none of the compounds analyzed for in the shallower samples were detected. As a result, the deeper soil samples were not analyzed.

AOC 2 – Thermal Vacuum Chamber Foundation

As discussed in Section 4.1, the foundation of the thermal vacuum chamber was inspected during the building demolition activities and the presence of gaps, cracks or other features which could provide a pathway for constituents of concern to reach the subsurface environment were not identified. As a result, it was determined that sampling and/or further investigation of AOC 2 was not warranted.

AOC 3 – Former Leaching Pools

A total of 117 soil samples were collected from 40 soil probes advanced through the bottom of the former leaching pools located on the Plant 23 property and analyzed for VOCs, SVOCs, PCBs and priority pollutant metals. As discussed in Section 4.2, the "A", "B" and "C"

TABLE 5-1
NORTHROP GRUMMAN CORPORATION
BUILDING 23 - PHASE II SITE ASSESSMENT
SUMMARY OF SAMPLE RESULTS

AOC Number	Area of Concern	Soil Boring Identification	Soil Sample	Summary of Contaminant Concentrations Exceeding the NYSDEC TAGM RSCOs	Summary of Contaminant Concentrations Exceeding Site Specific Cleanup Criteria
1	Tank 23-01-1	AOC 1	10' - 12'	None	None
			12' - 14'	None	None
2	Thermal Vacuum Chamber Foundation	None	None	None	None
3	Former Leaching Pools	P-1	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-2	6' - 8'	None	None
			9' - 11'	None	None
			11' - 13'	None	None
		P-3	8' - 10'	None	None
			10' - 12'	Copper: 265 mg/kg; Mercury: 0.59 mg/kg; Zinc: 266 mg/kg	None
			12' - 14'	None	None
		P-4	4' - 6'	None	None
			9' - 11'	None	None
			11' - 13'	None	None
		P-5	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-6	4' - 6'	None	None
			10' -12'	Mercury: 0.23 mg/kg	None
			12' - 14'	None	None
		P-7	8' - 10'	None	None
			10' - 12'	Copper: 75.3 mg/kg; Zinc: 112 mg/kg	None
			12' - 14'	None	None
		P-8	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-9	4' - 6'	None	None
			10' - 12'	Benzo(a)anthracene: 960 ug/kg; Chrysene: 970 ug/kg; Benzo(a)pyrene: 930 ug/kg; Dibenzo(a,h)anthracene: 160 ug/kg	None
			12' - 14'	None	None
		P-10	4' - 6'	None	None
			10' - 12'	Chromium: 59.9 mg/kg; Copper: 1,590 mg/kg; Mercury: 6.9 mg/kg; Zinc: 334 mg/kg	None
			12' - 14'	None	None
		P-11	4' - 6'	Copper: 80.8 mg/kg; Mercury: 0.42 mg/kg; Zinc: 255 mg/kg	None

TABLE 5-1 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 - PHASE II SITE ASSESSMENT
SUMMARY OF SAMPLE RESULTS

AOC Number	Area of Concern	Soil Boring Identification	Soil Sample	Summary of Contaminant Concentrations Exceeding the NYSDEC TAGM RSCOs	Summary of Contaminant Concentrations Exceeding Site Specific Cleanup Criteria
3 (cont.)	Former Leaching Pools (cont.)	P-11 (cont)	10' - 12'	Benzo(a)pyrene: 62 ug/kg	None
			12' - 14'	None	None
		P-12	4' - 6'	None	None
			9' - 11'	None	None
			11' - 13'	None	None
		P-13	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-14	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-15	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-16	6' - 8'	None	None
			9' - 11'	None	None
			11' - 13'	None	None
		P-17	4' - 6'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-18	6' - 8'	None	None
			11' - 12'	PCBs: 16,200 ug/kg; Cadmium: 20.8 mg/kg; Chromium: 117 mg/kg; Copper: 4,700 mg/kg; Mercury: 10.1 mg/kg; Selenium: 4.6 mg/kg; Zinc: 869 mg/kg	PCBs: 16,200 ug/kg
			12' - 14'	None	None
		P-19	6' - 8'	Chromium: 52.1 mg/kg	None
			10' - 12'	Benzo(a)pyrene: 66 ug/kg; Mercury: 0.26 mg/kg; Zinc: 85 mg/kg	None
			12' - 14'	None	None
		P-20	2' - 4'	None	None
			11' - 13'	None	None
			13' - 15'	None	None
		P-21	6' - 8'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		P-22	4' - 6'	None	None
			10' - 12'	Zinc: 54.4 mg/kg	None
			12' - 14'	None	None

TABLE 5-1 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 - PHASE II SITE ASSESSMENT
SUMMARY OF SAMPLE RESULTS

AOC Number	Area of Concern	Soil Boring Identification	Soil Sample	Summary of Contaminant Concentrations Exceeding the NYSDEC TAGM RSCOs	Summary of Contaminant Concentrations Exceeding Site Specific Cleanup Criteria
3 (cont.)	Former Leaching Pools (cont.)	P-23	4' - 6'	None	None
			9' - 11'	None	None
			11' - 13'	None	None
		P-24	2' - 4'	Mercury: 7.2 mg/kg; Zinc: 61.4 mg/kg	None
			10' - 12'	Chromium: 83.4 mg/kg; Copper: 1,420 mg/kg; Zinc: 555 mg/kg	None
			12' - 14'	None	None
		P-25	4' - 6'	Zinc: 125 mg/kg	None
			10' - 12'	Benzo(a)pyrene: 86 ug/kg; Dibenzo(a,h)anthracene: 42 ug/kg; Zinc: 70 mg/kg	None
			12' - 14'	None	None
		P-26	4' - 6'	Zinc: 201 mg/kg	None
			10' - 12'	Benzo(a)pyrene: 78 ug/kg	None
			12' - 14'	None	None
		P-27	2' - 4'	None	None
			11' - 12'	2,4-Dichlorophenol: 670 ug/kg; Chrysene: 800 ug/kg; Cadmium: 37.4 mg/kg; Chromium: 83.7 mg/kg; Copper: 2,680 mg/kg; Mercury: 16.7 mg/kg; Nickel: 37.8 mg/kg; Selenium: 5.3 mg/kg; Zinc: 2,840 mg/kg	None
			12' - 14'	None	None
		P-28	2' - 4'	None	None
			8' - 9'	None	None
			9' - 11'	None	None
		P-29	4' - 6'	None	None
			9' - 11'	Copper: 113 mg/kg; Zinc: 90.3 mg/kg	None
			11' - 13'	None	None
		P-30	4' - 6'	None	None
			8' - 10'	None	None
			10' - 12'	None	None
		P-31	4' - 6'	None	None
			10' - 12'	Copper: 240 mg/kg; Mercury: 0.27 mg/kg; Zinc: 202 mg/kg	None
			12' - 14'	None	None
		P-32	2' - 4'	Benzo(a)pyrene: 70 ug/kg; Zinc: 74.8 mg/kg	None
			10' - 12'	None	None
			14' - 16'	None	None
		P-33	6' - 8'	None	None
			9' - 11'	Benzo(a)anthracene: 260 ug/kg; Benzo(a)pyrene: 140 ug/kg	None
			11' - 13'	None	None

TABLE 5-1 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 - PHASE II SITE ASSESSMENT
SUMMARY OF SAMPLE RESULTS

AOC Number	Area of Concern	Soil Boring Identification	Soil Sample	Summary of Contaminant Concentrations Exceeding the NYSDEC TAGM RSCOs	Summary of Contaminant Concentrations Exceeding Site Specific Cleanup Criteria
3 (cont.)	Former Leaching Pools (cont.)	P-34	11' - 12'	None	None
			12' - 14'	None	None
		E12B-51	0 - 2'	None	None
			14' - 16'	Copper: 132 mg/kg; Mercury: 0.32 mg/kg; Zinc: 50.7 mg/kg	None
			16' - 18'	None	None
		E12B-54	11.5' - 13.5'	Cadmium: 11.5 mg/kg; Copper: 1,270 mg/kg; Mercury: 4.4 mg/kg; Zinc: 654 mg/kg	None
			14' - 16'	None	None
		E13B-28	2' - 4'	None	None
			10' - 12'	None	None
			12' - 14'	None	None
		E13B-38	4' - 6'	None	None
			9' - 11'	Copper: 128 mg/kg; Mercury: 0.83 mg/kg; Zinc: 115 mg/kg	None
			12' - 14'	None	None
		E13B-39	2' - 4'	Arsenic: 13.9 mg/kg	None
			12' - 14'	None	None
			14' - 16'	None	None
		E13B-40	12' - 14'	Zinc: 75.8 mg/kg	None
			14' - 16'	None	None
4	"Xit-Rod" Grounding Pits	AOC 4-1	0' - 2'	None	None
			2' - 4'	None	None
		AOC 4-2	0' - 2'	Copper: 881 mg/kg; Zinc: 261 mg/kg	None
			2' - 4'	None	None
		AOC 4-3	0' - 2'	Chromium: 334 mg/kg; Copper: 241 mg/kg; Nickel: 173 mg/kg; Zinc: 125 mg/kg	None
			2' - 4'	Copper: 53.5 mg/kg; Nickel: 26.8 mg/kg; Zinc: 460 mg/kg	None
		AOC 4-4	0' - 2'	None	None
			2' - 4'	None	None
		AOC 4-5	0' - 2'	None	None
			2' - 4'	None	None
5	Drainage Features	AOC 5A	0' - 2'	Benzo(a)anthracene: 230 ug/kg; Chrysene: 410 ug/kg; Benzo(a)pyrene: 170 ug/kg	None
			2' - 4'	None	None
		AOC 5B	13' - 15'	None	None
			15' - 17'	None	None
6	Phase I Discrepancies	None	None	None	None

samples were analyzed immediately, while the "D" samples were placed on hold at the laboratory pending the results of the shallower samples. The laboratory results of the sample analyses are presented on Tables C-2, C-3, C-4 and C-5 provided in Appendix C.

As shown on Table 5-1, several constituents of concern were detected in the samples collected from the former leaching pools at concentrations exceeding the TAGM 4046 RSCOs. A total of 27 samples collected from 22 former leaching pools contained concentrations of constituents of concern exceeding the TAGM 4046 RSCOs. However, only one sample contained concentrations of constituents of concern exceeding site specific cleanup criteria. Sample P-18B (11'–12') contained PCBs at a concentration of 16,200 ug/kg, which exceeds the site specific cleanup criteria for PCBs for subsurface soil of 10,000 ug/kg.

It should be noted that since none of the "C" sample analytical results exceeded the TAGM 4046 RSCOs, none of the "D" samples were analyzed.

AOC 4 – "Xit-Rod" Grounding Pits

A total of 20 soil samples were collected from five soil probes advanced through the five "Xit-Rod" Grounding Pits. Soil samples were collected from the 0 to 2-foot, 2 to 4-foot, 4 to 6-foot and 6 to 8-foot depth intervals below the bottom of each pit. The two shallower samples collected from each pit were analyzed for VOCs, SVOCs, priority pollutant metals and select glycols, and the deeper samples were placed on hold at the laboratory pending the results of their respective shallower samples. The laboratory results of the sample analyses are presented on Tables C-2, C-3, C-5 and C-6 provided in Appendix C.

As shown on Table 5-1, a total of three soil samples collected from two separate "Xit-Rod" Grounding Pits contained concentrations of certain metals (namely chromium, copper, nickel and zinc) above the TAGM RSCOs. However, none of these samples contained any constituent of concern at concentrations exceeding the site-specific cleanup criteria. It should also be noted that the chromium TAGM RSCO exceedance was in the 0 to 2-foot depth interval

and that the chromium concentration in the 2 to 4-foot depth interval sample was below the TAGM RSCO. For these reasons, the deeper soil samples were not analyzed.

In addition, as stated previously in Section 4.1, upon mobilization to the site for the Phase II field activities, the sixth "Xit-Rod" Grounding Pit thought to be present in the Outer Chamber Room could not be located and was determined to not exist.

AOC 5 – Drainage Features

A total of eight soil samples were collected from two soil probes advanced through the bottom of two drainage features. Soil samples were collected from the 0 to 2-foot, 2 to 4-foot, 4 to 6-foot and 6 to 8-foot depth intervals below the bottom of each feature. The two shallower samples were analyzed for VOCs, SVOCs and priority pollutant metals, and the deeper samples were placed on hold at the laboratory pending the results of the shallower samples. The laboratory results of the sample analyses are presented on Tables C-2, C-3 and C-4 provided in Appendix C.

As shown on Table 5-1, all of the compound concentrations detected in the shallower samples collected from AOC 5A were below the TAGM RSCOs with the exception of benzo(a)anthracene, chrysene and benzo(a)pyrene in the 0 to 2-foot depth interval. However, none of the constituents of concern were detected at concentrations exceeding the TAGM RSCOs in the 2 to 4-foot depth interval sample. In addition, none of the constituent concentrations detected in either sample exceeded the site-specific cleanup criteria. As a result, the deeper soil samples were not analyzed.

As shown on the Table 5-1, all of the compound concentrations detected in the shallower samples collected from AOC 5B were below the TAGM RSCOs and the site-specific cleanup criteria. As a result, the deeper soil samples were not analyzed.

In addition, as stated previously in Section 4.1, one of the three original manholes specified for sampling in the Phase I Site Assessment could not be field located and another was

determined to be solid bottomed. In addition, AOC 5B was later determined to be a septic system leaching pool previously sampled during the Plant 5 Phase II Site Assessment. Also, AOC 5A is a storm water dry well that was added to the program at the request of NGC.

AOC 6 – Phase I Discrepancies

As discussed in Section 4.1, the floor drains reportedly present in the Mechanical Room, Ladies' Room, Men's Room and Lavatory within Building 23, as well as the UST reportedly present south of the Exterior Vaporizer and Storage Tank Area, were determined to not exist during the Phase II field activities. As a result, it was determined that further investigation of AOC 6 was not warranted.

5.2 Data Validation

Soil sampling activities were conducted on December 7, 2005 and April 17 through 26, 2006 in support of the Building 23 Phase II Site Assessment. The samples were analyzed for several parameters, including VOCs, SVOCs, priority pollutant metals, select glycols and PCBs, depending on sample location. The sample analyses were performed by Mitkem Corporation, a New York State Department of Health Environmental Laboratory Approval Program (ELAP) certified laboratory.

All Quality Control (QC) data (i.e., surrogates, spikes, blanks, calibrations, etc.) was reviewed along with 20% of the environmental sample data yielding a "20% validation." The validation process was performed in accordance with NYSDEC Quality Assurance/Quality Control (QA/QC) requirements. The findings of the validation process are described below by sampling round.

5.2.1 First Round Soil Sampling Program

Sixteen soil samples were collected on December 7, 2005 as part of the Building 23 Phase II Site Assessment. The two samples collected from AOC 1 were analyzed for

NYSDEC's STARS Memo #1 Table 2 compounds. The samples collected from AOC 4 and AOC 5 were analyzed for VOCs, SVOCs and priority pollutant metals. The samples from AOC 4 were also analyzed for glycols.

All sample analyses were performed within the method specified holding times.

All QC samples (tunes, blanks, calibrations, spikes, duplicates, etc.) were analyzed and met QC requirements.

Methylene chloride has been qualified as nondetect and flagged U* on the data summary tables in samples AOC 4-1 (2'-4'), AOC 4-2 (0-2'), AOC 4-2 (2'-4'), AOC 5A (0-2'), AOC 5A (2'-4') and AOC 5B (15'-17') due to laboratory contamination. That is, the method blank associated with the sample also contained methylene chloride and the sample concentrations were less than five times that of the method blank.

Naphthalene has been qualified as nondetect and flagged "U*" on the data summary tables in samples AOC 4-3 (0-2'), AOC 4-4 (0-2'), AOC 5B (13'-15') and AOC 5B (15'-17') due to laboratory contamination. That is, the method blank associated with the sample also contained naphthalene and the sample concentrations were less than that of the method blank.

No other problems were found with the sample results, and all results are deemed valid and usable for environmental assessment purposes as qualified above.

5.2.2 Second Round Soil Sampling Program

Soil samples were collected from AOC 3 on April 17, 2006 through April 26, 2006, as part of the second round of soil sampling conducted as part of the Building 23 Phase II Site Assessment. The samples were analyzed for VOCs, SVOCs, PCBs and priority pollutant metals.

All sample analyses were performed within the method specified holding times.

All QC samples (tunes, blanks, calibrations, spikes, duplicates, etc.) were analyzed and met QC requirements.

Methylene chloride, chloroform and naphthalene have been qualified as nondetect for several of the soil samples due to laboratory contamination. That is, the method blanks associated with the samples also contained the qualified compound and the sample concentrations were less than five times that of the respective method blank. The qualified results are flagged as "U*" on the data summary tables.

Several samples required reanalysis due to surrogate recoveries and/or internal standard area counts being outside QC limits. The reanalysis confirmed matrix interference and, therefore, the results from the initial analysis were utilized for environmental assessment purposes and have been included on the data summary tables.

No other problems were found with the sample results, and all results are deemed valid and usable for environmental assessment purposes as qualified above.

5.3 Historical Activities

The entire Grumman Bethpage facility was first listed on the New York State Registry of Inactive Hazardous Waste Disposal Sites (IHWS) in 1983. A Delisting Petition to modify the boundary lines of the Grumman site as identified in the Registry of Inactive Hazardous Waste Disposal Sites was prepared by D&B and submitted to the NYSDEC in February 1993. Additional information was supplied to the NYSDEC in two letter reports dated June 23, 1994 and January 24, 1995. The Delisting Petition for Plant 5, which includes the Building 23 property, was approved on February 24, 1995.

In an effort to terminate NGC's User Agreement for Plant 5 with the U.S. Navy, NGC conducted a Phase I Site Assessment and Phase II Subsurface Investigation at Plant 5, the results of which are presented in the reports entitled, "Phase I Site Assessment - Plant 5" (D&B, August 1998) and "Phase II Site Assessment - Plant 5," Volumes 1 and 2, (D&B, December 1998). The

AOCs for the exterior areas identified at Plant 5 that are within the boundaries of the Building 23 property include the following:

- AOC E12 - Former sanitary leaching pools west of Plant 5;
- AOC E13 - Unverified former sanitary leaching pools west of Plant 5;
- AOC E14 - Former sanitary wastewater disposal system settling tanks; and
- AOC E24 - Former oil and gravel surfaced parking area west of structural test hangers.

The analytical results of the soil samples collected from the AOCs identified at Plant 5 were initially screened against the TAGM RSCOs. However, after the AOCs were identified, additional considerations came to light, most importantly, that the U.S. Navy, NGC and Nassau County, made their intention clear to continue to maintain industrial zoning for the property. Therefore, NGC utilized comparison values that are based on site-specific considerations such as the intended future site use and the fate and transport of chemical constituents detected in the soil. The Remediation Plan for Plant 5, which includes the site-specific comparison values for constituents of concern in soil, was approved by the NYSDEC in a letter dated July 15, 1999 (see Appendix D). The NYSDEC approved site-specific comparison values were utilized to determine the scope of environmental remediation to be undertaken at the site (see Table 5-2). Since the site-specific comparison values are higher than the more conservative TAGM RSCOs, several locations on the Building 23 property investigated during the Plant 5 Phase II Site Assessment have soil concentrations of constituents of concern that exceed the TAGM RSCOs.

A total of 97 leaching pools are located on the Building 23 property that historically received wastewater discharge from Plant 5. D&B completed the investigation and/or remediation of 52 exterior leaching pools located on the Building 23 property in 2000 as part of the Plant 5 activities. D&B completed the investigation of the remaining 11 exterior leaching pools and the 34 leaching pools beneath Building 23 in 2006, as discussed in Sections 3.0 and 4.0 of this report, as part of the Building 23 Phase II Site Assessment.

Table 5-2

NORTHROP GRUMMAN CORPORATION
PLANT 5 SITE-SPECIFIC CLEANUP CRITERIA

Constituent of Concern	Comparison Value
SVOCs (ug/kg or ppb)	
Total CaPAHs	10,000
Total PAHs	100,000
Total SVOCs	500,000
Metals (mg/kg or ppm)	
Arsenic	20
Barium	5,500
Cadmium	78
Chromium (total)	390
Chromium (hexavalent)	390
Mercury	23
Lead	400
Selenium	390

As indicated above, 52 of the 97 leaching pools located on the Building 23 property were investigated during the Plant 5 Phase II Site Assessment during the investigation of Plant 5 AOCs E12 and E13. Soil sample results from 42 of the 52 leaching pools investigated during the Plant 5 Phase II were found to either be below the TAGM RSCOs, or above the TAGM RSCOs but below the site-specific cleanup criteria. As a result, these pools were not recommended for remediation. In addition, one location in the former wastewater disposal settling tank (AOC E14) and five locations in the former oil and gravel-surfaced parking area (AOC E24), all located on the Building 23 property, were sampled during the Plant 5 Phase II Site Assessment and found to either be below the TAGM RSCOs, or above the TAGM RSCOs but below the site-specific cleanup criteria. As a result, these AOCs were not recommended for remediation. A summary of these locations is provided on Table 5-3.

Based on the sampling results, 6 of the 52 leaching pools investigated during the Plant 5 Phase II Site Assessment were found to require remediation due to exceeding the site-specific cleanup criteria. The pools (leaching pools E12B30, E13B24, E13B31, E13B32, E13B34 and E13B42) were remediated between November 1999 and April 2000 by removing liquid and 4 to 5 feet of sediment, backfilling each pool with certified clean fill and restoring each with asphalt. The remedial activities were conducted by Integrated Technical Services, Inc. of Winslow, New Jersey, with D&B providing engineering oversight. The remedial activities are documented and summarized in the report entitled, "Corrective Action Program at the Plant 5 Facility - Project Completion Report" (D&B, August 2001). In general, endpoint samples were not collected from the bottom of each pool since in-situ soil samples were collected during the Phase II Site Assessment at appropriate depths that determined the vertical extent of impact. Remediation of the six former leaching pools was conducted as follows:

- E12B30 was significantly impacted by carcinogenic PAHs in the 13 to 15-foot interval, but the 17 to 19-foot interval did not exhibit any TAGM exceedances. Therefore, remediation was completed to a depth of 17.5 feet.
- E13B24 was impacted by RCRA metals in the 11 to 13-foot interval, but the 16 to 18-foot interval did not exhibit any TAGM exceedances. Therefore, remediation was completed to a depth of 16 feet.

TABLE 5-3
NORTHROP GRUMMAN CORPORATION
PLANT 5 AOCs LOCATED ON THE BUILDING 23 PROPERTY

AOC Number	Area of Concern	Soil Boring Identification	Depths of Soil Samples Collected
PLANT 5 PHASE II RESULTS BELOW TAGM			
E-12	Former Sanitary Leaching Pools West of Plant 5	E12B24	10'-12', 14'-16'
		E12B25	10'-12', 14'-16'
		E12B57	10'-12', 14'-16'
E-13	Unverified Former Sanitary Leaching Pools West of Plant 5	E13B08	10'-12', 14'-16'
		E13B17	10'-12', 14'-16'
		E13B18	12'-14', 16'-18'
E-14	Former Sanitary Wastewater Disposal System Settling Tanks	E14B01	13'-15', 15'-17'
E-24	Former Oil and Gravel Surfaced Parking Area West of Structural Test Hangars	E24B01	0-2', 2'-4'
		E24B02	0-2', 2'-4'
		E24B05	0-2', 2'-4'
		E24B06	0-2', 2'-4'
PLANT 5 PHASE II RESULTS ABOVE TAGM BUT BELOW SITE-SPECIFIC CRITERIA			
E-12	Former Sanitary Leaching Pools West of Plant 5	E12B23	8'-10', 12'-14'
		E12B26	10'-12', 14'-16'
		E12B27	10'-12', 14'-16'
		E12B28	12'-14', 16'-18'
		E12B29	13'-15', 15'-17', 17'-19'
		E12B50	11'-13', 15'-17'
		E12B52	12'-14', 16'-18'
		E12B53	10'-12', 14'-16'
		E12B55	11'-13', 15'-17'
		E12B56	10'-12', 14'-16'
E-13	Unverified Former Sanitary Leaching Pools West of Plant 5	E13B04	12'-14', 16'-18'
		E13B05	11'-13', 15'-17'
		E13B06	12'-14', 16'-18'
		E13B07	11'-13', 15'-17'
		E13B09	12'-14', 16'-18'
		E13B10	11'-13', 15'-17'
		E13B11	11'-13', 15'-17'
		E13B12	12'-14', 16'-18'
		E13B13	12'-14', 16'-18'
		E13B14	8'-10', 12'-14'
		E13B19	10'-12', 14'-16'
		E13B20	10'-12', 14'-16'
		E13B21	10'-12', 14'-16'
		E13B22	10'-12', 14'-16'
		E13B23	11'-13', 15'-17'
		E13B25	11'-13', 15'-17'
		E13B29	8'-10', 12'-14'
		E13B33	13'-15', 17'-19'
		E13B35	10'-12', 14'-16'
		E13B36	11'-13', 15'-17'
		E13B37	11'-13', 15'-17'
		E13B41	11'-13', 15'-17'
		E13B43	10'-12', 14'-16'
		E13B44	10'-12', 14'-16'
		E13B48	8'-10', 12'-14'
		E13B49	11'-13', 15'-17'
E-24	Former Oil and Gravel Surfaced Parking Area West of Structural Test Hangars	E24B03	0-2', 2'-4'

1965-15: Historic Samples

- E13B31 was impacted by RCRA metals in the 13 to 15-foot interval, but the 17 to 19-foot interval did not exhibit any TAGM exceedances. Therefore, remediation was completed to a depth of 17 feet.

- E13B32 was impacted by RCRA metals in the 13 to 15-foot interval, but the 17 to 19-foot interval did not exhibit any TAGM exceedances. Therefore, remediation was completed to a depth of 17.5 feet.

- E13B34 was impacted by RCRA metals in the 11 to 13-foot interval, but the 15 to 17-foot interval did not exhibit any TAGM exceedances. Therefore, remediation was completed to a depth of 15 feet.

- E13B42 was impacted by RCRA metals in the 10 to 12-foot interval, but the 14 to 16-foot interval did not exhibit any TAGM exceedances. Therefore, remediation was completed to a depth of 14 feet.

The remaining four leaching pools exhibiting constituent concentrations in excess of the site-specific cleanup criteria were remediated as part of the Underground Injection Control (UIC) Program for the Plant 5 ancillary structures. Based on the Plant 5 Phase II sampling results, leaching pools E13B1, E13B2, E13B3 and E13B26, located adjacent to the Sewage Pump Station (Building 05-08), were remediated between September 1999 and January 2000 by removing sediment, backfilling each with certified clean fill and capping each with concrete. The remedial activities were conducted by Action Remediation, Inc. of Wantagh, New York, with D&B providing engineering oversight. The remedial activities are documented and summarized in the report entitled, "Underground Injection Control Remediation at the Plant 5 Facility - Project Completion Report" (D&B, May 2002). Leaching pools E13B1, E13B2, E13B3 and E13B26 are referred to as UIC Nos. 205 through 208 in that document. The four leaching pools were excavated to 13 feet below grade with an endpoint soil sample collected from each pool in the presence of a Nassau County Department of Health (NCDOH) representative. The endpoint soil samples were analyzed for Target Compound List (TCL) VOCs, TCL SVOCs, RCRA metals and total petroleum hydrocarbons (TPH). Endpoint samples were compared to and found to be below the TAGM RSCOs for VOCs and SVOCs, the TAGM RSCOs and Eastern USA background levels for metals, and the NCDOH cleanup objective of 1,000 ppm for TPH. A "No Further Action" letter dated June 14, 2001 was issued by the USEPA for these leaching pools, as well as others beyond the Building 23 property boundary (see Appendix D).

Since AOCs E12, E13, E14 and E24 were previously investigated and/or remediated during the Plant 5 activities, they were not identified as AOCs during the Building 23 Phase I Site Assessment completed by D&B in June 2005.

Section 6

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the findings of the Phase II Site Assessment field investigation discussed in Section 5.0, conclusions and recommendations are presented in this section regarding the need for further investigation and/or remedial activities at Building 23.

As outlined in Section 5.3, the Building 23 property was previously investigated as part of the Plant 5 Phase I/II Site Assessments. NGC obtained approval from the NYSDEC to use site-specific cleanup criteria in order to determine the extent of remediation required at the Plant 5 site. However, the Building 23 property was not included in the remediation program for Plant 5, since NGC has, until recently, continued to operate the building. As a result, it is reasonable to utilize the site-specific cleanup criteria previously approved by the NYSDEC for the Plant 5 site to determine whether remediation is required at the Building 23 property. Table 6-1 provides a summary of the site-specific cleanup criteria utilized at the Building 23 property.

In order to utilize the Plant 5 site-specific cleanup criteria for Building 23, NGC will have to institute deed restrictions for the Building 23 property which are similar in nature to those approved by the NYSDEC and imposed on the Plant 5 property. Based on conversations with NGC, NGC is planning to institute similar deed restrictions on the Plant 23 property. As a result, the conclusions and recommendations presented in this section are based upon the premise that NGC will impose those similar deed restrictions on the Building 23 property and therefore, remediation is not warranted unless sample data indicates an exceedance of the site-specific cleanup criteria; i.e., TAGM RSCO exceedances alone will not be used as the basis for determining whether remediation is warranted.

It should be noted that the site-specific cleanup criteria previously approved by the NYSDEC for the Plant 5 site did not include cleanup criteria for PCBs. As a result, the TAGM 4046 RSCO for PCBs will be utilized at the Building 23 property.

Table 6-1

NORTHROP GRUMMAN CORPORATION
PROPOSED BUILDING 23
SITE-SPECIFIC CLEANUP CRITERIA

Constituent of Concern	Comparison Value
SVOCs (ug/kg or ppb)	
Total CaPAHs	10,000
Total PAHs	100,000
Total SVOCs	500,000
Metals (mg/kg or ppm)	
Arsenic	20
Barium	5,500
Cadmium	78
Chromium (total)	390
Chromium (hexavalent)	390
Mercury	23
Lead	400
Selenium	390
PCBs (ug/kg or ppb)[(1)]	
Surface Soil	1,000
Subsurface Soil	10,000

[(1)]Site-specific cleanup criteria for PBCs based on TAGM 4046 RSCOs.

In addition, it should be noted that AOC 1 was investigated due to potential contamination resulting from an underground fuel oil storage tank located at the facility. As a result, the soil samples collected from this area were analyzed for the VOCs and SVOCs listed in the NYSDEC's STARS Memo #1 Table 2. As a result, it is appropriate to utilize the NYSDEC TAGM 4046 RSCOs to determine whether remedial activities are necessary at AOC 1.

As discussed in Section 5.0, the Phase II field investigation at Building 23 was conducted at the following areas:

- AOC 1 - Tank 23-01-1
- AOC 2 - Thermal Vacuum Chamber Foundation
- AOC 3 - Former Leaching Pools
- AOC 4 - "Xit-Rod" Grounding Pits
- AOC 5 - Drainage Features
- AOC 6 - Phase I Discrepancies

Conclusions and recommendations regarding no further action, additional investigation and/or remedial activities at the AOCs listed above are presented below.

AOC 1 – Tank 23-01-1

As discussed in Section 5.0, none of the soil samples collected and analyzed from AOC 1 as part of the Phase II field investigation exhibited any constituents of concern in excess of the TAGM 4046 RSCOs. As a result, further investigation and/or remediation activities are not warranted with respect to AOC 1.

AOC 2 – Thermal Vacuum Chamber Foundation

As discussed in Section 5.0, since a pathway for contaminant migration to the subsurface was not present, further investigation and/or remediation activities are not warranted with respect to AOC 2.

AOC 3 – Former Leaching Pools

As discussed in Section 5.0, a soil sample collected from one of the former leaching pools contained a concentration of a constituent of concern that exceeded the site-specific cleanup criteria. Specifically, sample P-18B (11' to 12') contained PCBs at a concentration of 16,200 ug/kg, which exceeds the site-specific cleanup criterion for PCBs in subsurface soil of 10,000 ug/kg. Therefore, it is recommended that soil be excavated from the 10 to 12-foot depth interval below grade within former leaching pool P-18 for proper off-site transportation and disposal. Since the sample of the backfill material collected from P-18 did not contain any exceedances of the site-specific cleanup criteria, the backfill material can be excavated to a depth of 10 feet below grade, stockpiled on-site and reused to backfill the pool once the remediation activities are complete. Since the 12 to 14-foot depth interval soil sample did not contain any detectable PCBs, an endpoint sample is not necessary.

AOC 4 – "Xit-Rod" Grounding Pits

As discussed in Section 5.0, none of the soil samples collected and analyzed as part of the Phase II field investigation at AOC 4 exhibited any constituents of concern in excess of the site-specific cleanup criteria. As a result, further investigation and/or remediation activities are not warranted with respect to AOC 4.

AOC 5 – Drainage Features

As discussed in Section 5.0, none of the soil samples collected and analyzed from AOC 5 as part of the Phase II field investigation exhibited any constituents of concern in excess of the

site-specific cleanup criteria. In addition, although two of the three drainage features could not be located in the field and the third was solid bottomed, it is likely that since all of these features were associated with the storm water drainage system, all would contain a solid bottom. As a result, further investigation and/or remediation activities are not warranted with respect to AOC 5.

AOC 6 – Phase I Discrepancies

As discussed in Section 5.0, since the suspected floor drains and underground storage tank were determined to not exist, further investigation and/or remediation activities are not warranted with respect to AOC 6.

Appendix A

APPENDIX A

CHAIN-OF-CUSTODY FORMS

MITKEM CORPORATION

175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY: Dvirka + Bartilucci Engineers	PHONE: 516 364-9890	COMPANY: Dvirka + Bartilucci Engineers	PHONE: 516 364-9890	LAB PROJECT #:
NAME: Keith Robins	FAX: 516 364-9095	NAME: Keith Robins / Robbin Petrella	FAX: 516 364-9095	
ADDRESS: 330 Crossways Park Drive		ADDRESS: 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP: Woodbury NY 11797		CITY/ST/ZIP: Woodbury NY 11797		

CLIENT PROJECT NAME: Grumman Bld 23 | CLIENT PROJECT #: 1965-15 | CLIENT P.O.#: 1965

REQUESTED ANALYSES: (1) USEPA method 8260 SVOCs 8270 priority pollutant metals 6010/7471; (2) —; (3) STARS VOCs (8260) SVOCs 8270

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	USEPA method 8260 SVOCs 8270 priority pollutant metals 6010/7471		STARS VOCs (8260) SVOCs 8270	COMMENTS
AOC5A (0-2)	12/7/05 8:05 am		✓		✓			2	✓			
AOC5A (2-4)	12/7/05 8:07 am		✓		✓			2	✓			
AOC5A (4-6)	12/7/05 8:10 am		✓		✓			2	✓			Hold Dont run analysis
AOC5A (6-8)	12/7/05 8:15 am		✓		✓			2	✓			Hold Dont run analysis
AOC1 (10-12)	12/7/05 9:45 am		✓		✓			2			✓	
AOC1 (12-14)	12/7/05 9:47 am		✓		✓			2			✓	
AOC1 (12-14) MS	12/7/05 9:47 am		✓		✓			2			✓	
AOC1 (12-14) MSD	12/7/05 9:47 am		✓		✓			2			✓	
AOC1 (14-16)	12/7/05 9:50 am		✓		✓			2			✓	Hold Dont Run Analysis
AOC1 (16-18)	12/7/05 10:00 am		✓		✓			2			✓	Hold Dont Run Analysis
AOC5B (13-15)	12/7/05 9:10 am		✓		✓			2	✓			
AOC5B (15-17)	12/7/05 9:15 am		✓		✓			2	✓			

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	12/7/05 1:00 pm		/
		/		/
		/		/

ADDITIONAL REMARKS:

COOLER TEMP:

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

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email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY: Durkan Bartilucci Engineers	PHONE: 516 364-9890	COMPANY: Durkan Bartilucci Engineers	PHONE: 516 364-9890	LAB PROJECT #:
NAME: Keith Robins	FAX: 516 364-9045	NAME: Keith Robins / Robbin Petrella	FAX: 516 364-9045	
ADDRESS: 330 Crossways Park Drive		ADDRESS: 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP: Woodbury NY 11797		CITY/ST/ZIP: Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman Bld 23	1965-15	1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	USEPA method 8260 VOCs SVOCs (8270) priority pollutant metals (6010/7471)	USEPA method (8260) VOCs 8270 (SVOCs)	select SVOCs (8015)	priority pollutant metals (6010/7471)								COMMENTS
AOC5B(17-19)	12/7/05 925 am		✓		✓			2	✓											Hold Don't Run analysis
AOC5B(19-21)	12/7/05 930 am		✓		✓			2	✓											Hold Don't Run analysis
AOC4-1(0-2)	12/7/05 1115 am		✓		✓			3		✓	✓	✓								
AOC4-1(2-4)	12/7/05 1120 am		✓		✓			3		✓	✓	✓								
AOC4-1(4-6)	12/7/05 1125 am		✓		✓			3		✓	✓	✓								Hold Don't Run analysis
AOC4-1(6-8)	12/7/05 1130 am		✓		✓			3		✓	✓	✓								Hold Don't Run analysis
AOC4-1(0-2) MS/MSD	12/7/05 1115 am		✓		✓			3		✓	✓	✓								(Run MS + MSD)
AOC4-2(0-2)	12/7/05 1140 am		✓		✓			3		✓	✓	✓								
AOC4-2(2-4)	12/7/05 1145 am		✓		✓			3		✓	✓	✓								
AOC4-2(4-6)	12/7/05 1150 am		✓		✓			3		✓	✓	✓								Hold Don't Run Analysis
AOC4-2(6-8)	12/7/05 1200 pm		✓		✓			3		✓	✓	✓								Hold Don't Run Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Keith Robins	12/7/05 / 500 pm		/		
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email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO			INVOICE TO			
COMPANY	Dvirka & Bartilucci Engineers	PHONE 516 364-5850	COMPANY	Dvirka + Bartilucci Engineers	PHONE 516 364-5850	LAB PROJECT #:
NAME	Keith Robins	FAX 516 364-5045	NAME	Robin Retrella / K. Robins	FAX 516 364-5045	
ADDRESS	330 Crossways Park Drive		ADDRESS	330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP	Woodbury NY 11797		CITY/ST/ZIP	Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman Bldg 23	1965-15	1965

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	USEPA method 8260 VOCs (8270 SVOCs)	Select Glycols (8015)	Priority Pollutant metals (6010/7470)	COMMENTS
AOC4-3 (0-2)	12/7/05 1230 pm		✓	~~✓~~	✓			3	✓	✓	✓	
AOC4-3 (2-4)	12/7/05 1235 pm		✓	~~✓~~	✓			3	✓	✓	✓	
AOC4-3 (4-6)	12/7/05 1240 pm		✓		✓			3	✓	✓	✓	Hold Dont Run Analysis
AOC4-3 (6-8)	12/7/05 1245 pm		✓		✓			3	✓	✓	✓	Hold Dont Run Analysis
AOC4-4 (0-2)	12/7/05 110 pm		✓		✓			3	✓	✓	✓	
AOC4-4 (2-4)	12/7/05 115 pm		✓		✓			3	✓	✓	✓	
AOC4-4 (4-6)	12/7/05 120 pm		✓		✓			3	✓	✓	✓	Hold Dont Run Analysis
AOC4-4 (6-8)	12/7/05 125 pm		✓		✓			3	✓	✓	✓	Hold Dont Run Analysis
AOC4-5 (0-2)	12/7/05 130 pm		✓		✓			3	✓	✓	✓	
AOC4-5 (2-4)	12/7/05 135 pm		✓		✓			3	✓	✓	✓	
AOC4-5 (4-6)	12/7/05 140 pm		✓		✓			3	✓	✓	✓	Hold Dont Run Analysis
AOC4-5 (6-8)	12/7/05 145 pm		✓		✓			3	✓	✓	✓	Hold Dont Run Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Keith Robins	12/7/05 1500 pm		/		
		/		/		
		/		/		

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Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		BILL TO		
COMPANY Dvirka & Bartilucci	PHONE 516 364 9890	COMPANY Dvirka & Bartilucci	PHONE 516 364 9890	LAB PROJECT #:
NAME Keith Robinson	FAX 516 364 9045	NAME Robbie Petrella	FAX 516 364 9045	
ADDRESS 330 Crossways Park Drive		ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP Woodbury NY 11797		CITY/ST/ZIP Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman	1965-15	1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
E13B38(4-6)A	4/17/06 830		X		X			3	✓	✓	✓	✓	
E13B38(9-11)B	4/17/06 835		X		X			3	✓	✓	✓	✓	
E13B38(12-14)C	4/17/06 845		X		X			3	✓	✓	✓	✓	
E13B38(21-23)D	4/17/06 905		X		X			3	✓	✓	✓	✓	Hold Analysis
P-6 (4-6) A	4/17/06 935		X		X			3	✓	✓	✓	✓	
P-6 (10-12) B	4/17/06 945		X		X			3	✓	✓	✓	✓	
P-6 (12-14) C	4/17/06 950		X		X			3	✓	✓	✓	✓	RUN MS/MSD *
P-6 (22-24) D	4/17/06 1000		X		X			3	✓	✓	✓	✓	Hold Analysis
P-7 (8-10) A	4/17/06 1025		X		X			3	✓	✓	✓	✓	
P-7 (10-12) B	4/17/06 1030		X		X			3	✓	✓	✓	✓	
P-7 (12-14) C	4/17/06 1040		X		X			3	✓	✓	✓	✓	
P-7 (22-24) D	4/17/06 1055		X		X			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robinson	4/17/06 500pm		/
		/		/
		/		/

ADDITIONAL REMARKS:
Hold soil samples for
EBB38 (21-23)
P-6 (22-24)
P-7 (22-24)

*Run MS/MSD on sample P-6 (12-14)

COOLER TEMP:

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CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY Dvirka and Bartilucci	PHONE 516-364-9890	COMPANY Dvirka Bartilucci	PHONE 516 364-9890	LAB PROJECT #:
NAME Keith Robins	FAX 516 364-9045	NAME Robbin Petrella	FAX 516 364-9045	
ADDRESS 330 Crossways Park Drive		ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP Woodbury NY 11797		CITY/ST/ZIP Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:	REQUESTED ANALYSES
Grumman	1965-15	1965	

SAMPLE IDENTIFICATION 4/17/06	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
~~P-11 (4-6) A~~	~~4/17/06 1120~~												
P-11 (10-12) B	4/17/06 1130		✓		✓			3	✓	✓	✓	✓	
P-11 (12-14) C	4/17/06 1135		✓		✓			3	✓	✓	✓	✓	
P-11 (22-24) D	4/17/06 1150		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-10 (4-6) A	4/17/06 1255		✓		✓			3	✓	✓	✓	✓	~~Hold Analysis~~ KSR 4/17/06
P-10 (10-12) B	4/17/06 100		✓		✓			3	✓	✓	✓	✓	
P-10 (12-14) C	4/17/06 110		✓		✓			3	✓	✓	✓	✓	
P-10 (22-24) D	4/17/06 130		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-8 (4-6) A	4/17/06 140		✓		✓			3	✓	✓	✓	✓	
P-8 (10-12) B	4/17/06 142		✓		✓			3	✓	✓	✓	✓	
P-8 (12-14) C	4/17/06 145		✓		✓			3	✓	✓	✓	✓	
P-8 (22-24) D	4/17/06 200		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-11 (4-6) A	4/17/06 1120am		✓		✓			3	✓	✓	✓	✓	

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Keith Robins	4/17/06 500 pm		/	Hold Analysis on samples P-11 (22-24) P-10 (22-24) P-8 (22-24)	
		/		/		
		/		/		

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CHAIN-OF-CUSTODY RECORD

COMPANY Dvirka [illegible]	PHONE [illegible]	COMPANY Dvirka [illegible]	PHONE [illegible]	LAB PROJECT #:	
NAME [illegible]	FAX [illegible]	NAME [illegible]	FAX [illegible]		
ADDRESS 330 Crossways Park [illegible]		ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 [illegible]	
CITY/ST/ZIP Woodbury NY [illegible]		CITY/ST/ZIP Woodbury NY [illegible]			
CLIENT PROJECT NAME: Grumman	CLIENT PROJECT #: 1965 [illegible]	CLIENT P.O.#: 1965	REQUESTED ANALYSES		

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
P-5 (4-6) A	4/17/06 205		✓		✓			3	✓	✓	✓	✓	
P-5 (10-12) B	4/17/06 235		✓		✓			3	✓	✓	✓	✓	
P-5 (12-14) C	4/17/06 240		✓		✓			3	✓	✓	✓	✓	RUN MS/MSD *
P-5 (22-24) D	4/17/06 335		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-3 (8-10) A	4/17/06 350		✓		✓			3	✓	✓	✓	✓	
P-3 (10-12) B	4/17/06 355		✓		✓			3	✓	✓	✓	✓	
P-3 (12-14) C	4/17/06 358		✓		✓			3	✓	✓	✓	✓	
P-3 (22-24) D	4/17/06 405		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Keith Robins	4/17/06 5:00 pm		/	Hold analysis for soil samples P-5 (22-24), P-3 (22-24); * RUN MS/MSD on sample P-5 (12-14) C	
		/		/		
		/		/		

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CHAIN-OF-CUSTODY RECORD

REPORT TO			INVOICE TO		
COMPANY Dvirka & Bartilucci	PHONE 516 364 9893		COMPANY Dvirka & Bartilucci	PHONE 516 367-9893	LAB PROJECT #:
NAME Keith Robins	FAX 516 364 9849		NAME Robin Petrella	FAX 516 364 9849	
ADDRESS 330 Crossways Park Drive			ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP Woodbury NY 11797			CITY/ST/ZIP Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman	1965.15	1965

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
P-4 (4-6) A	4/18/06 815		✓		✓			3	✓	✓	✓	✓	
P-4 (9-11) B	4/18/06 825		✓		✓			3	✓	✓	✓	✓	
P-4 (11-13) C	4/18/06 835		✓		✓			3	✓	✓	✓	✓	Run MS/MSD*
P-4 (21-23) D	4/18/06 850		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-9 (4-6) A	4/18/06 915		✓		✓			3	✓	✓	✓	✓	
P-9 (10-12) B	4/18/06 920		✓		✓			3	✓	✓	✓	✓	
P-9 (12-14) C	4/18/06 922		✓		✓			3	✓	✓	✓	✓	
P-9 (22-24) D	4/18/06 1015		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-14 (4-6) A	4/18/06 1040		✓		✓			3	✓	✓	✓	✓	
P-14 (10-12) B	4/18/06 1045		✓		✓			3	✓	✓	✓	✓	
P-14 (12-14) C	4/18/06 1055		✓		✓			3	✓	✓	✓	✓	
P-14 (20-22) D	4/18/06 1150		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/18/06 500pm		/
		/		/
		/		/

ADDITIONAL REMARKS:
Sample analysis on Hold for
P-4 (21-23) D
P-9 (22-24) B
P-14 (20-22) B

COOLER TEMP:

* For Sample P-4 (11-13) C Run MS/MSD

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CHAIN-OF-CUSTODY RECORD

COMPANY: Duncan Baillard	PHONE: 516 364 5890	COMPANY: Duncan Baillard	PHONE: 516 364 5890
NAME: Keith Robins	FAX: 516 364 5093	NAME: Robbin Petrella	FAX: 364 5093
ADDRESS: 330 Crossways Park Drive		ADDRESS: 330 Crossways Park Drive	
CITY/ST/ZIP: Woodbury NY 11797		CITY/ST/ZIP: Woodbury NY 11797	

LAB PROJECT #:

TURNAROUND TIME: 28 Days

CLIENT PROJECT NAME: Grumman

CLIENT PROJECT #: 1965-15

CLIENT P.O.#: 1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOC (8260)	SVOC (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
P-13 (4-6) A	4/18/06 1200		✓		✓			3	✓	✓	✓	✓	
P-13 (10-12) B	4/18/06 1250		✓		✓			3	✓	✓	✓	✓	
P-13 (12-14) C	4/18/06 1255		✓		✓			3	✓	✓	✓	✓	
P-13 (22-24) D	4/18/06 [illegible]		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-12 (4-6) A	4/18/06 125		✓		✓			3	✓	✓	✓	✓	
P-12 (9-11) B	4/18/06 130		✓		✓			3	✓	✓	✓	✓	
P-12 (11-13) C	4/18/06 135		✓		✓			3	✓	✓	✓	✓	
P-12 (21-23) D	4/18/06 145		✓		✓			3	✓	✓	✓	✓	Hold analysis
P-15 (4-6) A	4/18/06 220		✓		✓			3	✓	✓	✓	✓	
P-15 (10-12) B	4/18/06 2[illegible]		✓		✓			3	✓	✓	✓	✓	
P-15 (12-14) C	4/18/06 250		✓		✓			3	✓	✓	✓	✓	
P-15 (22-24) D	4/18/06 330		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/18/06 3:00 pm		/
		/		/
		/		/

ADDITIONAL REMARKS:
put samples on hold
P-13 (22-24) D
P-12 (21-23) D
P-15 (22-24) D

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CHAIN-OF-CUSTODY RECORD

COMPANY Dvirka & Bartilucci	PHONE 516 364 9890	COMPANY Dvirka & Bartilucci	PHONE 516 364 9890	LAB PROJECT #:	
NAME Keith Robins	FAX 516 364 9045	NAME Robbin Petrella	FAX 516 364 9045		
ADDRESS 330 Crossways Park Drive		ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 Days	
CITY/ST/ZIP Woodbury NY 11797		CITY/ST/ZIP Woodbury NY 11797			
CLIENT PROJECT NAME: Grumman	CLIENT PROJECT #: 1965-15	CLIENT P.O.#: 1565			

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7470)									COMMENTS
P-2 (6-8) A	4/19/06 826		✓		✓			3	✓	✓	✓	✓									
P-2 (9-11) B	4/19/06 835		✓		✓			3	✓	✓	✓	✓									
P-2 (11-13) C	4/19/06 840		✓		✓			3	✓	✓	✓	✓									
P-2 (21-23) D	4/19/06 900		✓		✓			3	✓	✓	✓	✓									Hold Analysis
P-23 (4-6) A	4/19/06 915		✓		✓			3	✓	✓	✓	✓									
P-23 (9-11) B	4/19/06 920		✓		✓			3	✓	✓	✓	✓									
P-23 (11-13) C	4/19/06 940		✓		✓			3	✓	✓	✓	✓									
P-23 (21-23) D	4/19/06 1010		✓		✓			3	✓	✓	✓	✓									Hold Analysis
P-24 (2-4) A	4/19/06 1025		✓		✓			3	✓	✓	✓	✓									
P-24 (10-12) B	4/19/06 1040		✓		✓			3	✓	✓	✓	✓									
P-24 (12-14) C	4/19/06 1045		✓		✓			3	✓	✓	✓	✓									
P-24 (22-24) D	4/19/06 1110		✓		✓			3	✓	✓	✓	✓									Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Keith Robins	4/19/06 / 5:00 pm		/	For samples Hold Analysis P-2 (21-23) D P-23 (21-23) D P-24 (22-24) D	
		/		/		
		/		/		

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CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY Dvirka & Bartilucci	PHONE 364-9890	COMPANY Dvirka and Bartilucci	PHONE (516) 364-9890	LAB PROJECT #:
NAME Keith Robins	FAX 364-9045	NAME Rollin Patella	FAX 516 364-9045	
ADDRESS 330 Crossways Parkway		ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP Woodbury NY 11797		CITY/ST/ZIP Woodbury NY 11797		

CLIENT PROJECT NAME: GRUMMAN
CLIENT PROJECT #: 1445-15
CLIENT P.O.#: 1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	Pb/metals (6010/7471)	COMMENTS
P-16(6-8) A	4/19/01 1135		✓		✓			3	✓	✓	✓	✓	
P-16(9-11) B	4/19/01 1145		✓		✓			3	✓	✓	✓	✓	
P-16(11-13) C	4/19/01 1150		✓		✓			3	✓	✓	✓	✓	
P-16(22-24) D	4/19/01 1230		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-17(4-6) A	4/19/01 130		✓		✓			3	✓	✓	✓	✓	
P-17(10-12) B	4/19/01 135		✓		✓			3	✓	✓	✓	✓	
P-17(12-14) C	4/19/01 140		✓		✓			3	✓	✓	✓	✓	
P-17(22-24) D	4/19/01 225		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-33(6-8) A	4/19/01 320		✓		✓			3	✓	✓	✓	✓	
P-33(9-11) B	4/19/01 325		✓		✓			3	✓	✓	✓	✓	
P-33(11-13) C	4/19/01 330		✓		✓			3	✓	✓	✓	✓	
P-33(21-23) D	4/19/01 345		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/19/01 500 pm		/
		/		/
		/		/

ADDITIONAL REMARKS: Please hold P-16 22-24 D, P-17 22-24 D, P-33 (21-23) D

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CHAIN-OF-CUSTODY RECORD

COMPANY	Dvirka + Bartilucci	PHONE	516 364-9890	COMPANY	Dvirka + Bartilucci	PHONE 516 364-9890
NAME	Keith Robins	FAX	516 364-9045	NAME	Robin Petrella	FAX 516 364-9045
ADDRESS	330 Crossways Park Drive			ADDRESS	330 Crossways Park Drive	
CITY/ST/ZIP	Woodbury NY 11797			CITY/ST/ZIP	Woodbury NY 11797	

LAB PROJECT #:

TURNAROUND TIME: 28 Days

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman	1965-11	1965

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES: VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP Metals (6010/7471B)	COMMENTS
P-27 (2-4) A	4/12/06 1755		✓		✓			3	✓	✓	✓	✓	
P-27 (11-12) B	4/12/06 801		✓		✓			3	✓	✓	✓	✓	
P-27 (12-14) C	4/12/06 810		✓		✓			3	✓	✓	✓	✓	
P-27 (22-24) D	4/12/06 850		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-25 (4-6) A	4/12/06 910		✓		✓			3	✓	✓	✓	✓	
P-25 (10-12) B	4/12/06 915		✓		✓			3	✓	✓	✓	✓	
P-25 (12-14) C	4/12/06 920		✓		✓			3	✓	✓	✓	✓	
P-25 (22-24) D	4/12/06 1000		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-26 (4-6) A	4/12/06 1010		✓		✓			3	✓	✓	✓	✓	
P-26 (10-12) B	4/12/06 1020		✓		✓			3	✓	✓	✓	✓	
P-26 (12-14) C	4/12/06 1025		✓		✓			3	✓	✓	✓	✓	Run MS/MSD*
P-26 (22-24) D	4/12/06 1100		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/12/06 1530		/
		/		/
		/		/

ADDITIONAL REMARKS:
For Samples please Hold Analysis
P-27 (22-24) D
P-25 (22-24) D
P-26 (22-24) D

COOLER TEMP:

* For Sample P-26 (12-14) C Run MS/MSD

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CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY: Dunkan Baillie	PHONE: 516 361-9370	COMPANY: Dunkan Baillie	PHONE: 516 361-9890	LAB PROJECT #:
NAME: Keith Robins	FAX: 516 361-9003	NAME: Roberta Bilello	FAX: 516 361-9005	
ADDRESS: 330 Crossways Park Drive		ADDRESS: 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP: Woodbury NY 11797		CITY/ST/ZIP: Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
GRUMMAN	1965-15	1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8080)	[illegible]	COMMENTS
P-29(4-6)A	4/20/06 1110		✓		✓			3	✓	✓	✓	✓	
P-29(9-11)B	4/20/06 1115		✓		✓			3	✓	✓	✓	✓	
P-29(11-13)C	4/20/06 1140		✓		✓			3	✓	✓	✓	✓	
P-29(22-24)D	4/20/06 1210		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-28(2-4)A	4/20/06 115		✓		✓			3	✓	✓	✓	✓	
P-28(8-9)B	4/20/06 125		✓		✓			3	✓	✓	✓	✓	
P-28(9-11)C	4/20/06 128		✓		✓			3	✓	✓	✓	✓	
P-28(20-22)D	4/20/06 200		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-30(4-6)A	4/20/06 220		✓		✓			3	✓	✓	✓	✓	
P-30(8-10)B	4/20/06 230		✓		✓			3	✓	✓	✓	✓	
P-30(10-12)C	4/20/06 235		✓		✓			3	✓	✓	✓	✓	
P-30(20-22)D	4/20/06 300		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/20/06 3 pm		/
		/		/
		/		/

ADDITIONAL REMARKS: Hold sample Analysis on
P-29 (22-24) D
P-28 (20-22) D
P-30 (20-22) D

COOLER TEMP:

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NGINS000119496

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CHAIN-OF-CUSTODY RECORD

COMPANY	Dvirka + Bartilucci	PHONE		COMPANY	Dvirka + Bartilucci	PHONE	516 364 7373	LAB PROJECT #:	
NAME	Keith Robins	FAX		NAME	Robin Patella	FAX	516 364 7371		
ADDRESS	330 Crossways Park Drive			ADDRESS	330 Crossways Park Drive			TURNAROUND TIME:	28 Days
CITY/ST/ZIP	Woodbury NY 11797			CITY/ST/ZIP	Woodbury NY 11797				

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Corman	1965-15	1965

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES: VOCs (8260)	SVOCs (8270)	PCBs (8280)	PP metals (6010/7470)	COMMENTS
P-31 (4-6) A	4/2/06 315		✓		✓			3	✓	✓	✓	✓	
P-31 (10-12) B	4/2/06 320		✓		✓			3	✓	✓	✓	✓	
P-31 (12-14) C	4/2/06 325		✓		✓			3	✓	✓	✓	✓	
P-31 (22-24) D	4/2/06 340		✓		✓			3	✓	✓	✓	✓	Hold Analysis
	/												
	/												
	/												
	/												
	/												
	/												
	/												
	/												

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Keith Robins	4/2/06 500 pm		/	Hold sample P31 (22-24) D for analysis	
		/		/		
		/		/		

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CHAIN-OF-CUSTODY RECORD

REPORT TO		BILL TO		
COMPANY Dvirka + Bartilucci	PHONE 516 364-9890	COMPANY Dvirka + Bartilucci	PHONE 516 364-9890	LAB PROJECT #:
NAME Keith Robins	FAX 516 364-5095	NAME Robbin Petrella	FAX 516 364-5095	
ADDRESS 330 Crossways Park Drive		ADDRESS 330 Crossways Park Drive		TURNAROUND TIME: 28 Days
CITY/ST/ZIP Woodbury NY 11797		CITY/ST/ZIP Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman	1965-15	1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
P-20 (2-4) A	4/21/06 755		✓		✓			3	✓	✓	✓	✓	
P-20 (11-13) B	4/21/06 810		✓		✓			3	✓	✓	✓	✓	
P-20 (13-15) C	4/21/06 815		✓		✓			3	✓	✓	✓	✓	
P-20 (22-24) D	4/21/06 850		✓		✓			3	✓	✓	✓	✓	HOLD Analysis
P-32 (2-4) A	4/21/06 900		✓		✓			3	✓	✓	✓	✓	
P-32 (10-12) B	4/21/06 910		✓		✓			3	✓	✓	✓	✓	
P-32 (14-16) C	4/21/06 930		✓		✓			3	✓	✓	✓	✓	
P-32 (22-24) D	4/21/06 955		✓		✓			3	✓	✓	✓	✓	HOLD Analysis
P-21 (6-8) A	4/21/06 1034		✓		✓			3	✓	✓	✓	✓	
P-21 (10-12) B	4/21/06 1040		✓		✓			3	✓	✓	✓	✓	
P-21 (12-14) C	4/21/06 1045		✓		✓			3	✓	✓	✓	✓	
P-21 (22-24) D	4/21/06 1130		✓		✓			3	✓	✓	✓	✓	HOLD Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/21/06 5:00pm		/
		/		/
		/		/

ADDITIONAL REMARKS: Please Hold analysis for samples P-20 (22-24) D, P-32 (22-24) D, P-21 (22-24) D

COOLER TEMP:

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CHAIN-OF-CUSTODY RECORD

COMPANY	Dvirka & Bartilucci	PHONE	516 364-9890	LAB PROJECT #:	
NAME	KEITH ROBINS	FAX	516 364-9045		
ADDRESS	330 Crossways Park Drive			TURNAROUND TIME:	25 Days
CITY/ST/ZIP	Woodbury NY 11797				

COMPANY	Dvirka & Bartilucci	PHONE	516 364-9890
NAME	Robins Reporting	FAX	516 364 9045
ADDRESS	330 Crossways Park Drive		
CITY/ST/ZIP	Woodbury NY 11797		

CLIENT PROJECT NAME:	CLIENT PROJECT #:	CLIENT P.O.#:
Grumman	1965-15	1965

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)	COMMENTS
P-19 (6-8) A	4/21/06 1152		✓		✓			3	✓	✓	✓	✓	
P-19 (10-12) B	4/21/06 1200		✓		✓			3	✓	✓	✓	✓	
P-19 (12-14) C	4/21/06 1205		✓		✓			3	✓	✓	✓	✓	
P-19 (22-24) D	4/21/06 1215		✓		✓			3	✓	✓	✓	✓	Hold Analys. Run ms/msd*
P-22 (4-6) A	4/21/06 1105		✓		✓			3	✓	✓	✓	✓	
P-22 (10-12) B	4/21/06 1110		✓		✓			3	✓	✓	✓	✓	
P-22 (12-14) C	4/21/06 1115		✓		✓			3	✓	✓	✓	✓	ID# → P22 (12-14) C
P-22 (22-24) D	4/21/06 1125		✓		✓			3	✓	✓	✓	✓	Hold Analysis
P-1 (4-6) A	4/21/06 1152		✓		✓			3	✓	✓	✓	✓	
P-1 (10-12) B	4/21/06 1155		✓		✓			3	✓	✓	✓	✓	
P-1 (12-14) C	4/21/06 1200		✓		✓			3	✓	✓	✓	✓	
P-1 (22-24) D	4/21/06 1210		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/21/06 1500 hrs		/
		/		/
		/		/

ADDITIONAL REMARKS:
Please Hold Analysis on Samples
P-19 (22-24) D
P-22 (22-24) D
P (22-24) D
Run ms/msd on P-22 (4-6) A

COOLER TEMP: —

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CHAIN-OF-CUSTODY RECORD

COMPANY: Dvirka & Bartilucci	PHONE: 516 364 9890	COMPANY: Dvirka & Bartilucci	PHONE: 516 364-9890
NAME: KEITH ROBINS	FAX: 516 364-9045	NAME: KEITH ROBINS	FAX: 516 364-9045
ADDRESS: 330 Crossways Park Drive		ADDRESS: 330 Crossways Park Drive	
CITY/ST/ZIP: Woodbury NY 11797		CITY/ST/ZIP:	

LAB PROJECT #:

TURNAROUND TIME: 28 Days

CLIENT PROJECT NAME: GRUMMAN | CLIENT PROJECT #: 1965-15 | CLIENT P.O.#: 1965

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PP metals (6010/7471)								COMMENTS
P-18 (6-8) A	4/21/06 250		✓		✓			3	✓	✓	✓	✓								
P-18 (11-12) B	4/21/06 252		✓		✓			3	✓	✓	✓	✓								
P-18 (12-14) C	4/21/06 255		✓		✓			3	✓	✓	✓	✓								
P-18 (22-24) D	4/21/06 305		✓		✓			3	✓	✓	✓	✓								Hold Analysis
	/																			
	/																			
	/																			
	/																			
	/																			
	/																			
	/																			
	/																			

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/21/06 3:00 pm		/
		/		/
		/		/

ADDITIONAL REMARKS: Please Hold Analysis for sample P-18 (22-24) D

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CHAIN-OF-CUSTODY RECORD

COMPANY: Dvirka Bartilucci	PHONE: 516 364-9890	COMPANY: Dvirka + Bartilucci	PHONE: 516 364-9890
NAME: Keith Robins	FAX: 516 364-9045	NAME: Robbin Petrella	FAX: 516 364-9045
ADDRESS: 330 Crossways Park Drive		ADDRESS: 330 Crossways Park Drive	LAB PROJECT #:
CITY/ST/ZIP: Woodbury NY 11797		CITY/ST/ZIP: Woodbury NY 11797	TURNAROUND TIME: 28 Days
CLIENT PROJECT NAME: Grumman	CLIENT PROJECT #: 1965-15	CLIENT P.O.#: 1965	

REQUESTED ANALYSES

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOCs (8260)	SVOCs (8270)	PCBs (8082)	PPmetals (6010/7471)	COMMENTS
E12B51(0-2)A	4/24/06 825		✓		✓			3	✓	✓	✓	✓	
E12B51(14-16)B	4/24/06 900		✓		✓			3	✓	✓	✓	✓	
E12B51(16-18)C	4/24/06 902		✓		✓			3	✓	✓	✓	✓	
E12B51(22-24)D	4/24/06 915		✓		✓			3	✓	✓	✓	✓	Hold Analysis
~~E13B40( )A~~	~~4/24/06~~		~~✓~~		~~✓~~			~~3~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	
E13B40(12-14)B	4/24/06 1015		✓		✓			3	✓	✓	✓	✓	
E13B40(14-16)C	4/24/06 1018		✓		✓			3	✓	✓	✓	✓	Run MS/MSD*
E13B40(22-24)D	4/24/06 1045		✓		✓			3	✓	✓	✓	✓	Hold Analysis
E13B39(2-4)A	4/24/06 1115		✓		✓			3	✓	✓	✓	✓	
E13B39(12-14)B	4/24/06 1135		✓		✓			3	✓	✓	✓	✓	
E13B39(14-16)C	4/24/06 1140		✓		✓			3	✓	✓	✓	✓	
E13B39(22-24)D	4/24/06 1150		✓		✓			3	✓	✓	✓	✓	Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Robins	4/24/06 5pm		/
		/		/
		/		/

ADDITIONAL REMARKS: Please Hold Analysis for samples E12B51(22-24)D, E13B40(22-24)D, E13B39(22-24)D

COOLER TEMP:

* Run MSD/MSD on sample E13B40 (14-16)C

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CHAIN-OF-CUSTODY RECORD

COMPANY	PHONE	COMPANY	PHONE	LAB PROJECT #:
NAME	FAX	NAME	FAX	
ADDRESS		ADDRESS		TURNAROUND TIME: 28
CITY/ST/ZIP		CITY/ST/ZIP		

CLIENT PROJECT NAME: Grumman | CLIENT PROJECT #: 1965-15 | CLIENT P.O.#: 1965

REQUESTED ANALYSES: VOCs (8260) | SVOCs (8270) | PCBs (8082) | Metals (6010/7470)

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	COMMENTS
E12B54 (11½-12½) B	4/24/06 1240		✓		✓			3	
E12B54 (14-16) C	4/24/06 1245		✓		✓			3	
E12B54 (22-24) D	4/24/06 100 pm		✓		✓			3	Hold Analysis
P-34 ( ) A	/ /							3	
P-34 (11-12) B	4/24/06 150		✓		✓			3	
P-34 (12-14) C	4/24/06 155		✓		✓			3	
P-34 (22-24) D	4/24/06 220		✓		✓			3	Hold Analysis
E13B28 (2-4) A	4/24/06 240		✓		✓			3	
E13B28 (10-12) B	4/24/06 255		✓		✓			3	
E13B28 (12-14) C	4/24/06 300		✓		✓			3	
E13B28 (22-24) D	4/24/06 310		✓		✓			3	
	/ /								Hold Analysis

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
	Keith Lofgren	4/27/06 500		/
		/		/
		/		/

ADDITIONAL REMARKS: Hold Analysis for Samples: E13B28 (22-24) D, E12B54 (22-24) D, P-34 (22-24) D

COOLER TEMP:

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Appendix B

APPENDIX B

BORING LOGS

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15 **Project Name:** Phase II Site Assessment Building 23		**Boring No.:** AOC 1 **Sheet** 1 **of** 1 **By:** KR
Drilling Contractor: Clear Water **Driller:** Bruce **Drill Rig:** Geoprobe **Date Started:** 12/7/05	**Geologist:** Keith Robins **Drilling Method:** Geoprobe **Drive Hammer Weight:** NA **Date Completed:** 12/7/05	**Boring Completion Depth:** 18 FT **Ground Surface Elevation:** NA **Boring Diameter:** 1 inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0- -1	1	GP	—	72"	—	0.0	—	(0-6') Dark Brown Sand and Gravel, stones, trace Concrete, loose, soft, very moist. FILL MATERIAL	
-2- -3-									
-4- -5-									
-6- -7-	2	GP	—	48"	—	0.0	—	(6'-10') Dark Brown Sand, some gravel, concrete pieces, loose, soft trace brown silt, compacted at tip of sampler. FILL MATERIAL	
-8- -9- -10-									

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES:
Boring constructed in middle area of excavated UST.

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15
Project Name: Phase II Site Assessment Building 23

Boring No.: AOC 1 (continued)
Sheet 2 **of** 2.
By: KR

Drilling Contractor: Clearwater
Driller: Bruce
Drill Rig: Geoprobe
Date Started: 12/7/05

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Weight: NA
Date Completed: 12/7/05

Boring Completion Depth: 18 FT
Ground Surface Elevation: NA
Boring Diameter: 1-inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
10-11	3	GP	–	24"	–	0.0	–	(10'-12') Tan-Light Brown medium to coarse Quartz Sand, trace to little fine gravel, well sorted, damp NATIVE MATERIAL	
12-13	4	GP	–	24"	–	0.0	–	(12'-14') Tan-Light Brown medium to coarse Quartz Sand, trace to little fine gravel, well sorted, damp	
14-15	5	GP	–	24"	–	0.0	–	(14'-16') Tan – Light Brown medium to coarse quartz Sand, trace to little Gravel, well sorted, damp.	
16-17	6	GP	–	24"	–	0.0	–	(16'-18') Tan to Light Brown medium to coarse quartz Sand, trace to little gravel well sorted, damp	
18-19-20								END of Boring at 18 FT	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES:
Collected ms/msd at (12-14')

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15
Project Name: Phase II Site Assessment Building 23

Boring No.: AOC5A
Sheet 1 **of** 1 .
By: KR

Drilling Contractor: Clear Water
Driller: Bruce
Drill Rig: Geoprobe
Date Started: 12/7/05

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Weight: NA
Date Completed: 12/7/05

Boring Completion Depth: 8 FT
Ground Surface Elevation: NA
Boring Diameter: 1 inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0-								(0-2") Black Silty Sand, trace organics, twigs and leaves	
-1	1	GP	—	24"	—	0.0	—	(2"-24") Brown coarse to medium Sand, some fine gravel, dry	
-2-								(2'-4') Brown - Light Tan medium coarse Sand, trace fine gravel, dry	
-3-	2	GP	—	24"	—	0.0	—		
-4-								(4'-6') Brown - Light Tan medium to coarse Sand, some subangular gravel, dry	
-5-	3	GP	—	24"	—	0.0	—		
-6-								(6'-8') Brown - Light Tan fine to coarse quartz Sand, some subangular loose gravel, dry	
-7-	4	GP	—	24"	—	0.0	—	End of Boring at 8 FT	
-8-									
-9-									
-10-									

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES:
Soil samples collected inside drain

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15
Project Name: phase II Site Assessment Building 23

Boring No.: AOC5B
Sheet 1 of 1.
By: KR

Drilling Contractor: Clear Water
Driller: Bruce
Drill Rig: Geoprobe
Date Started: 12/2/05

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Weight: NA
Date Completed: 12/7/05

Boring Completion Depth: 21 feet
Ground Surface Elevation: NA
Boring Diameter: 1 inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
0-2	1	GP	—	48"	—	0.0	—	(0-4') Tan-White-Gray fine to medium Sand, trace fine gravel, well sorted. Fill material	
4-6-8	2	GP	—	NA	—	—	—	(4'-13') Soil sampler push through soil, trace grayish tan sand, soft, with Course gravel at 13 FT	
8-10-12								Fill MATERIAL or Possible void (BOTTOM OF leaching Pool) (=13')	
12-14-16	3	GP	—	24"	—	0.0	—	(13'-15') Brown - Orange Course to medium Sand, fine gravel, damp. NATIVE MATERIAL	
16-18	4	GP	—	24"	—	0.0	—	(15'-17') Tan medium to coarse quartz Sand, trace fine gravel moist.	
	5	GP	—	24"	—	0.0	—	(17'-19') Tan medium to coarse Sand, trace fine gravel, well sorted damp	
20-21	6	GP	—	24"	—	0.0	—	(19'-21') Tan medium-Coarse quartz Sand, trace fine gravel, well sorted, damp.	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES:
Boring constructed inside existing leaching pool. End of Boring at 21 FT

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15
Project Name: Phase II Site Assessment Building 23

Boring No.: AOC4-1
Sheet 1 of 1
By: K.R

Drilling Contractor: Clearwater
Driller: Bruce
Drill Rig: Geoprobe Sampler
Date Started: 12/7/05

Geologist: Keith Robins
Drilling Method: Portable hand drill
Drive Hammer Weight: NA
Date Completed: 12/7/05

Boring Completion Depth: 8 Feet
Ground Surface Elevation: NA
Boring Diameter: 1 inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0- -1	1	GP	-	24"	-	0.0	-	(0-2') White - Gray Clayey Silt, trace sand, fine gravel soft, damp	
-2- -3	2	GP	-	24"	-	0.0	-	(2'-4') Dark Brown coarse to medium Sand, fine gravel, damp	
-4- -5	3	GP	-	24"	-	0.0	-	(4'-6') Tan - Light Brown fine to medium quartz Sand, well sorted, damp	
-6- -7	4	GP	-	24"	-	0.0	-	(6'-8') Brown Silty Sand, some fine gravel, moist to damp	
-8- -9- -10-								END of Boring at 8 FT	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES: collected inside drain "Grounding Rts" collected ms/msd at (0-2')

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15	**Boring No.:** AOC4-2	
Project Name: Phase II Site Assessment Building 23	**Sheet** 1 **of** 1.	
	By: KR	
Drilling Contractor: Clear Water	**Geologist:** Keith Robins	**Boring Completion Depth:** 8 FT
Driller: Bruce	**Drilling Method:** Portable hand drill	**Ground Surface Elevation:** NA
Drill Rig: Geoprobe Sampler	**Drive Hammer Weight:** NA	**Boring Diameter:** 1 inch
Date Started: 12/7/05	**Date Completed:** 12/7/05	

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0- -1	1	GP	–	24"	–	0.0	–	(0-2') Brown to Dark Brown Clayey Sand, trace fine gravel, damp	
-2- -3-	2	GP	–	24"	–	0.0	–	(2'-4') Brown Silt, some fine to medium sand, trace fine gravel, damp, compacted	
-4- -5-	3	GP	–	24"	–	0.0	–	(4-6') Gray-Brown Clay, some silt, trace fine gravel, stiff, damp	
-6- -7-	4	GP	–	24"	–	0.0	–	(6'-7') Gray-Brown Clay (7'-8') Brown-Tan course to medium Sand, trace gravel loose, dry.	
-8- -9- -10-								END of Boring at 8 FT	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES: Collected inside drain "Grounding Pit"

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15
Project Name: Phase II Site Assessment Building 23

Boring No.: ADC4-3
Sheet 1 **of** 1.
By: KR

Drilling Contractor: Clear Water
Driller: Bruce
Drill Rig: Geoprobe sampler
Date Started: 12/7/05

Geologist: Keith Robins
Drilling Method: Portable Hand Drill
Drive Hammer Weight: NA
Date Completed: 12/7/05

Boring Completion Depth: 8 FT
Ground Surface Elevation: NA
Boring Diameter: 1 inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0- -1	1	GP	–	24"	–	0.0	–	(0-2') Brown - Dark Brown Silty Sand, some gravel, damp	
-2- -3	2	GP	–	24"	–	0.0	–	(2-4') Brown - Dark Brown medium - coarse Sand, trace silt, fine gravel, damp.	
-4- -5	3	GP	–	24"	–	0.0	–	(4'-6') Brown medium to coarse Sand, some silt, trace fine gravel, damp	
-6- -7	4	GP	–	24"	–	0.0	–	(6'-8') Gray - Brown Silt, Some fine to medium Sand, trace fine gravel, damp.	
-8- -9- -10-								END OF BORING AT 8FT	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES: Collected inside drain "Grounding Pit"

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15	**Boring No.:** AOC4-4	
Project Name: Phase II Site Assessment Building 23	**Sheet** 1 **of** 1.	**By:** KR
Drilling Contractor: Clearwater	**Geologist:** Keith Robins	**Boring Completion Depth:** 8 FT
Driller: Bruce	**Drilling Method:** Portable Hand Drill	**Ground Surface Elevation:** NA
Drill Rig: Geoprobe Sampler	**Drive Hammer Weight:** NA	**Boring Diameter:** 1-inch
Date Started: 12/7/05	**Date Completed:** 12/7/05	

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0- -1	1	GP	—	24"	—	0.0	—	(0-2') Brown-Gray Silt AND SAND, trace medium gravel, damp	
-2- -3-	2	GP	—	24"	—	0.0	—	(2'-4') Brown-Dark Brown Silt and medium Sand, trace fine gravel, damp	
-4- -5-	3	GP	—	24"	—	0.0	—	(4'-6') Gray-Brown Silt and clay, trace fine gravel	
-6- -7-	4	GP	—	24"	—	0.0	—	(6'-8') Brown-Tan course to medium Sand, some angular gravel, damp	
-8- -9- -10-								End of Boring at 8 FT	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES: Collected inside drum "Grounding Pit"

D&B_BLOG

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

Project No.: 1965-15
Project Name: Phase II Site Assessment Building 23

Boring No.: ADC4-5
Sheet 1 **of** 1
By: ICR

Drilling Contractor: Clearwater
Driller: Bruce
Drill Rig: Geoprobe Sampler
Date Started: 12/7/01

Geologist: Keith Robins
Drilling Method: Portable Hand Drill
Drive Hammer Weight:
Date Completed: 12/7/01

Boring Completion Depth: 8 FT
Ground Surface Elevation: NA
Boring Diameter: 1 inch

Depth (ft.)	Soil Sample No.	Type	Blows Per 6"	Rec	Headspace Analysis FID ppm	PID ppm	CH4 ppm	Sample Description	USCS
-0- -1	1	GP	—	24"	—	0.0	—	(0-2') Brown - Dark Brown Silt, some medium sand, trace clay, trace fine gravel, damp	
-2- -3-	2	GP	—	24"	—	0.0	—	(2'-4') Brown - Gray Silty Clay, soft, damp to moist	
-4- -5-	3	GP	—	24"	—	0.0	—	(4'-6') Brown - Gray Silty Clay, soft, trace fine sand, damp to moist	
-6- -7-	4	GP	—	24"		0.0	—	(6'-7.5') Brown - Gray Silty Clay, soft (7.5-8') Orange - Brown fine to medium Sand	
-8- -9- -10-								END OF BORING AT 8 FT	

Sample Types:
SS = Split spoon
GP=Geoprobe accetate liner

NOTES: collected inside drain "Grounding Pit"

D&B_BLOG

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-1
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	12"	—	0.0	0-4' Dark Brown coarse to fine Sand, some gravel, stones, loose, poorly sorted, Backfill material
-2-						
-3-						
-4-	2	4-8	12"	—	0.0	4'-8' Dark Brown coarse to fine Sand, Some gravel, stones, soft, loose, Backfill material
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8-12' Dark Brown Sand and gravel, trace slag, Fill material Backfill material
-9-						
-10						

Remarks: Bottom of pool approximately at 12 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-1
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE
Drill Rig: Geoprobe
Sample Spoon I.D.: —
Date Started: 4/21/06

Geologist: KEITH ROBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						
12	4	12-16	36"	—	0.0	12'-16' Brown course to medium Sand, some fine to coarse gravel, poorly sorted, damp, native material
13						
14						
15						
16	5	16-20	36"	—	0.0	16'-20' Brown Coarse SAND AND fine to coarse GRAVEL, poorly sorted, moist to damp, loose, native material
17						
18						
19						
20	6	20-24	36"	—	0.0	20'-24' Brown-Tan course to medium Sand, some gravel, poorly sorted, damp-dry, native material
24						

Remarks: NATIVE material excavated at 12'

END OF BORING at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 03-Phase II

Well/Boring No.: P-2
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 23 Ft
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown fine to medium Sand, trace fine gravel, damp, Backfill Material
-2-						
-3-						
-4-						
-5-	2	4-8	24"	—	0.0	4'-8' Brown-Black medium Sand, trace gravel, some broken asphalt, moist, Backfill MATERIAL
-6-						
-7-						
-8-						
-9-	3	8-12	36"	—	0.0	8'-11' Dark Brown medium to coarse Sand, trace fine gravel, rock fragments, moist, Back Fill MATERIAL
-10						11'-12' Orange-Brown coarse to medium SAND, SOME GRAVEL NATIVE MATERIAL

Remarks:
NATIVE MATERIAL at 11'
Bottom of pool at 11'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - phase II

Well/Boring No.: P-2
Sheet 2 of 2
By: ESR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: clear water
Driller: Bruce Geoprobe
Drill Rig: Geoprobe
Sample Spoon I.D.: —
Date Started: 4/19/06
Geologist: KEITH ROBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 4/19/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) PID	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Tan-Light Brown fine to medium quartz Sand, well sorted, little fine gravel, damp (NATIVE MATERIAL)
3						
4						
5	5	16-20	24"	—	0.0	16'-20' Brown-Tan coarse to medium Sand, some fine to coarse gravel, loose, poorly sorted damp, (NATIVE MATERIAL)
6						
7						
8						
9						
20	6	20-23	36"	—	0.0	20'-23' Light Tan coarse to medium Sand AND fine to medium GRAVEL, loose, poorly sorted, damp (NATIVE MATERIAL)
23						

Remarks:
NATIVE MATERIAL at 11'FT
END OF Boring at 23 Feet

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-3
Sheet 1 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	~~0~~	0.0	0-4' Dark Brown medium to coarse Sand, some fine to coarse gravel, trace dark brown silt, poorly sorted, damp BACK FILL MATERIAL
-2-						
-3-						
-4-	2	4-8	2"	—	0.0	4'-8' BackFill / Low recovery SAND / gravel / / paper Loose
-5-						
-6-						
-7-						
-8-	3	8-12	10"	—	0.0	8'-12' Dark Brown coarse to medium Sand, fine to coarse gravel, trace silt, damp to moist trace Black-Brown silt lense trace brick and trace asphalt
-9-						
-10						Bottom of pool at 12 FT

Remarks:

Bottom of pool At 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-3
Sheet 1 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	24"	—	0.0	12'-16' Tan-Light Brown coarse to medium Sand, some fine to medium quartz gravel, well sorted, damp (NATIVE MATERIAL)
3						
4						
5						
6	5	16-20	46"	—	0.0	16'-20' Light Tan-white medium to Coarse Sand AND fine to medium gravel, poorly sorted, loose, damp to dry, NATIVE MATERIAL
7						
8						
9						
10	6	20-24	40"	—	0.0	20'-24' Light Tan-White coarse SAND and fine to medium gravel, poorly sorted, loose, dry-damp NATIVE MATERIAL
24						

Remarks:
NATIVE MATERIAL AT 12'
END OF BORING @ 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-4
Sheet 1 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: _____
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown coarse to medium Sand, some fine to medium gravel, subrounded-subangular rock fragments, poorly sorted dry - Backfill material
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown fine to coarse Sand, little to some fine to medium subangular broken gravel, trace dark silt, poorly sorted, damp to dry, Backfill material
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-11' Dark Brown fine to coarse Sand little gravel; Backfill material
-9-						
-10						11'-12' Brown-Light Orange medium to coarse Sand, fine gravel - Native MATERIAL
						Bottom of pool at 11 FT

Remarks:
Bottom of pool at 11 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-4
Sheet 1 of 2
By: _____ Date: _____
Chk'd: _____ Date: _____

Drilling Contractor: Clear water
Driller: Bruce
Drill Rig: Geoprobe
Sample Spoon I.D.: —
Date Started: 4/18/06

Geologist: Keith Robins
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 4/18/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Tan-Light Brown coarse to fine Sand, some subrounded gravel, poorly sorted, Native MATERIAL
3						
4						
5						
6	5	16-20	24"	—	0.0	16'-20' Light Tan medium Sand, little fine gravel, well sorted, dry, NATIVE MATERIAL
7						
8						
9						
10	6	20-23	24"	—	0.0	20'-23' Light Tan coarse Sand and fine to coarse gravel, poorly sorted, loose, damp NATIVE MATERIAL
24						

Remarks:
NATIVE MATERIAL at 11 FT
End of boring at 23 FT

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN I Building 23-Phase II

Well/Boring No.: P-5
Sheet 1 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	42"	—	0.0	0-4' Dark Brown medium to coarse Sand, little gravel, trace asphalt, trace dark Brown silt, poorly sorted Backfill material.
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown medium to coarse Sand, trace gray clay, poorly sorted, moist to damp, Backfill material
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-12' Dark Brown medium to coarse Sand, little gravel, soft, poorly sorted 2" lense of Black-Brown Clayey silt and Black SAND At 12 FT
-9-						
-10						

Remarks:
Bottom of pool at 12 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-5
Sheet 1 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Brown to Light Tan Coarse to medium Sand, some gravel, damp, NATIVE MATERIAL
3						
4						
5						
6	5	16-20	36"	—	0.0	16'-20' Light Tan fine to medium quartz Sand, trace to some fine gravel, well sorted, damp (native material)
7						
8						
9						
10	6	20-24	36"	—	0.0	20'-24' Light Tan medium to coarse Sand, some gravel, poorly sorted, NATIVE MATERIAL
24						

Remarks: NATIVE MATERIAL at 12 FT

END OF BORING at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-6
Sheet 1 of 2
By: KSR Date: 6/26/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Dennis Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: _____ Drive Hammer Wt.: —
Date Started: 4/12/06 Date Completed: 4/17/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Brown - Dark Brown coarse to medium Sand, some fine to medium subrounded gravel, damp.
-2-						
-3-						
-4-	2	4-8	27"	—	0.0	4'-8' Brown - Dark Brown coarse to medium Sand, some subrounded gravel, trace dark Silt, poorly sorted. (appears to be fill).
-5-						
-6-						
-7-						
-8-	3	8-12	36"	—	0.0	8'-12' Dark Brown - Brown coarse to medium Sand, some fine to coarse gravel. Bottom 6" of sample consisted of: Dark Brown Silt, moist little gravel - Fill material.
-9-						
-10						

Remarks:
Bottom of pool at approximately (11.5')

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-6
Sheet 1 of 2
By: KSR Date: 6/26/00
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Dennis Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
10						
11						
12	4	12-16	40"	—	0.0	12'-16' Brown - Light Orange coarse to medium Sand, some fine to medium subrnd. gravel, poorly sorted.
13						
14						
15						
16	5	16-20	24"	—	0.0	16'-20' Tan - Light Brown medium to coarse Sand, little fine to medium gravel, damp, well sorted.
17						
18						
19						
20	6	20-24	40"	—	0.0	20'-24' Tan-Light Brown coarse to medium Sand, some fine to medium gravel, well sorted, damp.

Remarks:
NATIVE material encountered at 12 FT.
END OF BORING at 24 FT.

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-7
Sheet 1 of 2
By: KSR Date: 6/26/06
Chk'd: _____ Date: _____

Drilling Contractor: clear Water
Driller: Dennis Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: GEOPROBE
Sample Spoon I.D.: — Drive Hammer Wt.: _____
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown coarse to medium Sand, stones, gravel, trace plastic, concrete, trace clay, Fill
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Brown clayey Silt, trace fine to medium Sand, fine gravel, very moist, soft, Fill
-5-						
-6-						
-7-						
-8-	3	8-12	36"	—	0.0	8'-12' Dark Brown - Light Gray coarse to medium Sand, little fine to medium gravel, very moist (Fill) At 11.5' to 12' Black clay seam, wet
-9-						
-10						

Remarks:
Bottom of pool at approximately 11.5'

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-7
Sheet 1 of 2
By: KSR Date: 6/26/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Dennis Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
10-						
11-						
12-	4	12-16	36"	—	0.0	12'-16' Tan-Light Brown Coarse to medium Sand AND fine to medium gravel, poorly sorted, damp - (native material)
13-						
14-						
15-						
16-	5	16-20	36"	—	0.0	16'-20' Light Tan - Brown medium to coarse Sand, little fine gravel, trace iron banning, horizontal, well sorted.
17-						
18-						
19-						
20	6	20-24	36"	—	0.0	20'-24' Tan - Light Brown coarse to medium Sand, fine to medium gravel, poorly sorted.

Remarks:
Native material encountered at 12'
Bottom of Boring at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-8
Sheet 1 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clearwater
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: _____
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24 Ft
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Brown-Orange fine to medium Sand, trace silt, some gravel, crushed stone, poorly sorted, trace silt, dry, Backfill Material
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown fine to medium Sand some silt, trace - little gravel trace asphalt, loose, poorly sorted Backfill material
-5-						
-6-						
-7-						
-8-	3	8-12	36"	—	0.0	8'-12' Dark Brown - Light Gray fine to coarse Sand, some fine to medium gravel, trace silt, poorly sorted, at bottom 1-inch dark Brown - Black silty CLAY lense
-9-						
-10						Bottom of pool at 12'

Remarks:
Bottom of pool At 12 Ft below grade

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-8
Sheet 2 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						12'-16' Brown - Light Orange coarse to medium Sand, some fine to coarse gravel, subrounded, poorly sorted, NATIVE MATERIAL
12	4	12-16	40"	—	0.0	
13						
14						
15						
16	5	16-20	24"	—	0.0	16'-20' Light Tan medium quartz Sand, little fine gravel, well sorted, damp, NATIVE MATERIAL
17						
18						
19						
20	6	20-24	40"	—	0.0	20'-24' Light Tan-White - Brown medium to fine Sand, some to little fine to medium gravel, Crushed white gravel, well sorted Damp, NATIVE MATERIAL
24						

Remarks:
NATIVE MATERIAL encountered at 12'
END OF BORING at 24 FT

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-9
Sheet 1 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	24"	—	0.0	0-4' Dark Brown medium to coarse Sand Some - little fragmented gravel, trace slag, asphalt, dark brown silt, Backfill material
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown medium to coarse Sand, little gravel, poorly sorted, Backfill material
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-12' Dark Brown medium to coarse Sand and subangular gravel, fragmented asphalt pieces, poorly sorted. Appears to be bottom of pool, Back Fill MATERIAL
-9-						
-10						

Remarks:
Appears to be bottom of pool at 12 feet below grade.

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-9
Sheet 1 of 2
By: ICSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						12'-16' Brown - Light Tan Coarse Sand and coarse gravel, poorly sorted, loose, Appears to be NATIVE MATERIAL
12	4	12-16	24"	—	0.0	
13						
14						
15						16'-18' Light Tan medium to coarse Sand, little white gravel, well sorted, damp - dry, NATIVE MATERIAL
16	5	16-18	18"	—	0.0	
17						18'-20' Tan - Brown - Orange coarse to fine Sand, some white - yellow gravel poorly sorted, dry, NATIVE material
18	6	18-20	18"	—	0.0	
19						20'-22' Light Tan coarse to medium Sand, some fine gravel, poorly sorted, dry, NATIVE material
20	7	20-22	18"	—	0.0	
24	8	22-24	18"	—	0.0	22'-24' Tan - Light Brown c-m Sand, SOME fine GRAVEL, NATIVE

Remarks:
NATIVE MATERIAL appeared ≈ 12'

END OF Boring at 24 Feet.

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-10
Sheet 1 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	40"	—	0.0	0-4' Dark Brown c-m Sand and fm sub-rounded crushed stone, gravel, trace compacted silt, poorly sorted Backfill material
-2-						
-3-						
-4-	2	4-8	36"	—	0.0	4'-8' Dark Brown to Brown f-c Sand, some subrounded gravel, trace silt, Compacted, trace small asphalt pieces (Backfill material)
-5-						
-6-						
-7-						
-8-						
-9-	3	8-12	24"	—	0.0	8'-12' Dark Brown Sand, some 1" gravel, poorly sorted, trace asphalt, trace Concrete fragments, 2" Black - Dark Brown silt, trace organics
-10						Bottom of pool at 12'

Remarks:
Bottom of pool at 12'

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-10
Sheet 2 of 2
By: KSR Date: 4/17/06
Chk'd: _____ Date: _____

Drilling Contractor: ClearWater
Driller: BNC
Drill Rig: Geoprobe
Sample Spoon I.D.: _____
Date Started: 4/17/06

Geologist: KEITH ROBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: _____
Date Completed: 4/17/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						
12	4	12-16	36"	—	0.0	12'-16' Light Tan-Gray fine to medium Sand and crushed quartz gravel, poorly sorted, trace iron staining (NATIVE MATERIAL)
13						
14						
15						
16	5	16-20	36"	—	0.0	16'-20' Light Tan medium quartz Sand, Some fine white gravel, well graded, damp, native material
17						
18						
19						
20	6	20-24	36"	—	0.0	20'-24' Tan-Light Brown medium to coarse quartz Sand, some fine to medium gravel, crushed, dry poorly sorted (NATIVE MATERIAL)
24						

Remarks:
NATIVE MATERIAL at 12' below grade,
END OF BORING at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-11
Sheet 1 of 2
By: KSR Date: 6/26/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Dennis Geologist: KEITH ROBBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/12/06 Date Completed: 4/12/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown coarse to medium Sand, some gravel, trace asphalt pieces, poorly sorted, damp Fill material.
-2-						
-3-						
-4-						
-5-	2	4-8	36"	—	0.0	4'-8' Grayish-Light Brown fine to coarse Sand, some crushed stone, hard concrete, trace dark brown silty clay, poorly sorted, Fill material.
-6-						
-7-						
-8-						
-9-	3	8-12	24"	—	0.0	8'-12' Grayish-Brown coarse to medium Sand and crushed Concrete fragments, mixed with Brown-Orange Coarse Sand at 12'- Appears to be native at 12'.
-10						

Remarks:
Bottom of pool at 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-11
Sheet 2 of 2
By: KSR Date: 6/26/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Dennis Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 24'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	40"	—	0.0	12'-16' Tan - light Brown fine to medium Sand, some orange horizontal banding, fine subrounded gravel, well sorted, damp.
3						
4						
5						
6	5	16-20	40"	—	0.0	16'-20' Tan - Light Brown Coarse to medium Sand, well sorted, little fine gravel, damp.
7						
8						
9						20'-21' Brown - Orange fine to medium Sand, some gravel.
20	6	20-24	40"	—	0.0	21'-23' Dark Brown - Gray coarse to medium Sand, Some fine gravel.
22						23'-24' Light Tan - White Coarse Sand and fine gravel.

Remarks:

END OF BORING at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - phase II

Well/Boring No.: P-12
Sheet 1 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	24"	—	0.0	0-4' Dark Brown-Tan coarse to medium Sand, some fine to medium gravel, trace silt, poorly sorted, damp to dry, Backfill material
-2-						
-3-						
-4-	2	4-8	36"	—	0.0	4'-8' Dark Brown medium to coarse Sand, little to trace fine to medium gravel, trace silty clay, poorly sorted, damp (Backfill material)
-5-						
-6-						
-7-						
-8-	3	8-12	36"	—	0.0	8'-11' Dark Brown medium Sand, some gray-brown clayey silt, trace fine gravel Backfill MATERIAL
-9-						
-10						11'-12' TAN-Brown C-m SAND (Change in color) - Appears to be NATIVE

Remarks:

Bottom of pool approximately 11 Ft.

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-phase II

Well/Boring No.: P-12
Sheet 2 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: clear water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						
12	4	12-16	24"	—	0.0	12'-16' Tan - Brown coarse to medium Sand, some gravel, poorly sorted, loose, dry, appears to be Native MATERIAL
13						
14						
15	5	16-20	36"	—	0.0	16'-20' Brown - Light Orange coarse Sand AND fine to medium subrounded GRAVEL, Loose, poorly sorted, damp, NATIVE MATERIAL
16						
17						
18						
19	6	20-23	36"	—	0.0	20'-23' Light Tan coarse to medium quartz Sand and fine Gravel, poorly sorted, dry, NATIVE MATERIAL
20						
23						

Remarks:
Appears to be Native MATERIAL at 11 FT
END OF Boring at 23 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-13
Sheet 1 of 2
By: KSA Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: _____ Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 24FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-4' Dark Brown medium Sand, some gravel, trace asphalt, trace red brick, gray-red clay and silt, damp, Backfill MATERIAL
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown fine to medium Sand, little fine gravel, trace gray clay, trace dark brown silt, poorly sorted, Appears to be Backfill MATERIAL
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-12' Dark Brown - Brown coarse to medium Sand, some fine subrounded gravel, dark brown-red clayey silt, soft, moist, Bottom of pool possibly?
-9-						
-10						

Remarks:

Possibly bottom of pool at 12 FT?

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-13
Sheet 2 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Brown - Light Tan fine to coarse Sand, some fine to medium gravel, poorly sorted, Appear to be NATIVE MATERIAL
3						
4						
5						
6	5	16-20	40"	—	0.0	16'-20' Tan - Light Brown medium to coarse Sand and fine to medium subrounded gravel, poorly sorted, dry
7						
8						
9						
10	6	20-24	36"	—	0.0	20'-24' Tan coarse to medium SAND and white subrounded quartz GRAVEL, poorly sorted, loose, dry
24						

Remarks:
NATIVE MATERIAL appears to be at 12 FT
END OF Boring at 24FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 – Phase II

Well/Boring No.: P-14
Sheet 1 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-4' Dark Brown to Brown c-f Sand, some gravel, trace asphalt, trace Brown silt, poorly sorted, Backfill MATERIAL
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' SAME AS ABOVE 6'-8' TAN coarse to medium SAND and GRAVEL
-5-						
-6-						
-7-						
-8-	3	8-12	48"	—	0.0	8'-12' Brown-Light Orange coarse to medium SAND and Coarse GRAVEL, Loose, rock fragments, trace iron staining, silt, poorly Sorted (unable to determine if this is bottom of pool?)
-9-						
-10						

Remarks:

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-14
Sheet 1 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: ClearWater
Driller: BRUCE Geologist: KEITH Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: ~ Drive Hammer Wt.: ~
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2-inch
Ground Surface El.: ~

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						12'-14' TAN - fine to medium Sand, some fine to medium gravel, poorly sorted, loose, appears to be native material
12	4	12-14	12"	—	0.0	
13						14'-16' Tan fine to medium Sand, some fine gravel, dry
14	5	14-16	12"	—	0.0	
15						16'-18' Tan medium to coarse Sand, little fine gravel, well sorted, dry
16	6	16-18	18"	—	0.0	
17	7	18-20	18"	—	0.0	18'-20' TAN - Light Brown coarse to fine Sand, little fine gravel, well sorted, dry
18						
19						20'-22' TAN coarse to fine SAND, trace fine gravel, dry
20	8	20-22	18"	—	0.0	
21						
22						

Remarks:

END of Boring at 22 feet

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-15
Sheet 1 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: Keith Robins
Drill Rig: GEOPROBE Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-2' Dark Brown medium to coarse Sand, trace gray-brown silt, some fine brick and asphalt, gravel, poorly sorted
-2-						
-3-						2-4' Tan medium to coarse Sand, some fine to medium gravel, dry
-4-						
-5-	2	4-8	36"	—	0.0	4-7.5' Light Tan coarse to medium Sand and fine to medium gravel, loose, poorly sorted
-6-						
-7-						7.5-8' Light orange fine Sand, well sorted, dry
-8-						
-9-	3	8-12	36"	—	0.0	8'-12' Orange-Light Tan coarse to medium Sand and fine to medium GRAVEL, poorly sorted loose
-10						

Remarks:
CAN not determine if bottom of pool is at 12 feet?

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-15
Sheet 2 of 2
By: KSR Date: 4/18/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/18/06 Date Completed: 4/18/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) PID	SAMPLE DESCRIPTION
0						
1						
2	4	12-14	18"	—	0.0	12'-14' Tan-Light Orange medium to coarse Sand, little to some fine gravel, dry - appears to be native MATERIAL
3						
4	5	14-16	—	—	—	14'-16' NO RECOVERY
5						
6	6	16-18	24"	—	0.0	16'-18' Tan medium to fine Sand, trace fine gravel, well sorted, dry
7						
8	7	18-20	24"	—	0.0	18'-20' Tan medium quartz Sand, trace - little subangular gravel, dry
9						
20	8	20-22	16"	—	0.0	20'-22' Tan medium to coarse Sand, little fine gravel, dry
22						

Remarks:

END OF Boring at 22 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-16
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE
Drill Rig: Geoprobe
Sample Spoon I.D.: _____
Date Started: 4/19/06

Geologist: KEITH ROBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: _____
Date Completed: 4/19/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-4' Brown - Tan coarse to medium Sand, some gravel, trace asphalt broken pieces, loose, poorly sorted Backfill material
-2-						
-3-						
-4-						
-5-	2	4-8	24"	—	0.0	4'-8' Dark Brown medium to coarse Sand, some fine to medium subrounded gravel, trace dark brown silt, poorly sorted Backfill material
-6-						
-7-						
-8-						
-9-	3	8-12	24"	—	0.0	8'-11' Dark Brown coarse to medium Sand and fine GRAVEL, poorly sorted, - Backfill material
-10						11'-12' Brown - Light Orange fine to coarse Sand, some fine gravel

Remarks:
Bottom of pool appears to be at 11 feet
NATIVE MATERIAL at approximately 12 FT

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-16
Sheet 2 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clearwater
Driller: BRUCE Geologist: KEITH ROBBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						12'-14' Tan coarse Sand, some fine to coarse gravel, loose, poorly sorted, dry, Appears to be NATIVE MATERIAL
12	4	12-14	6"	—	0.0	
13						
14	5	14-16	15"	—	0.0	14'-16' Tan-Light Brown fine to coarse Sand, little white fine gravel, dry, NATIVE MATERIAL
15						
16	6	16-18	24"	—	0.0	16'-18' Tan coarse to fine quartz Sand, well sorted, little fine gravel, damp, NATIVE MATERIAL
17						
18	7	18-20	24"	—	0.0	18'-20' Brown-Tan fine to coarse Sand, some f-m gravel, well sorted (NATIVE)
19	8	20-22	20"	—	0.0	20'-22' Light Brown-Tan coarse to medium Sand, some f-c gravel poorly sorted, dry-damp-NATIVE
20						
21	9	22-24	24"	—	0.0	22'-24' Tan m-C Sand, some fine gravel, dry to damp, native

Remarks:

END OF Boring at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 – Phase II

Well/Boring No.: P-17
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clearwater
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown-Brown c-f Sand, trace Gray-Brown Silt, stones, broken concrete fragments, red brick, asphalt, plastic, poorly sorted, Backfill MATERIAL
-2-						
-3-						
-4-						
-5-	2	4-8	48"	—	0.0	4'-8' Dark Brown Gray medium to fine Sand, some gravel, trace concrete and slag fragments, some dark Brown clayey Silt, poorly sorted, Backfill MATERIAL
-6-						
-7-						
-8-						
-9-	3	8-12	~~24~~ 28"	—	0.0	8'-12' Brown-Orange f-m-c SAND, some f gravel, poorly sorted, damp to dry, Appears to be NATIVE MATERIAL (12)
-10						

Remarks:
Appears to be native MATERIAL at 12 FT

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - phase II

Well/Boring No.: P-17
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: ClearWater
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: _____ Drive Hammer Wt.: _____
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Tan - Light Brown medium to coarse Sand and white GRAVEL poorly sorted, Appears to be NATIVE MATERIAL
3						
4						
5						16'-20' Tan medium to coarse Sand, trace fine gravel, dry, well sorted, dry
6	5	16-20	24"	—	0.0	
7						
8						
9						20'-22' Tan - Light Brown coarse to medium Sand, some fine to coarse gravel, dry
10	6	20-22	22"	—	0.0	
24	7	22-24	24"	—	0.0	22'-24' SAME AS ABOVE

Remarks:

END OF Boring at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1963-15
Project Name: GRUMMAN Building 23- Phase II

Well/Boring No.: P-18
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEARWATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-					0.0	0-4' Dark Brown coarse to medium Sand, some gravel, trace silt, poorly sorted, loose, Backfill material
-2-	1	0-4	36"	—		
-3-						
-4-					0.0	4-8' Dark Brown fine to medium Sand, little fine gravel, soft, poorly sorted, loose, Backfill material
-5-	2	4-8	12"	—		
-6-						
-7-						
-8-						
-9-	3	8-12	36"	—	0.0	8-12' Dark Brown Sand and gravel, trace clay material, soft
-10						at 11.5'-12' Black to Dark Brown Silt loose with trace organics, Bottom of pool

Remarks: Bottom of pool at 12.0'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-phase II

Well/Boring No.: P-18
Sheet 2 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: _____ Drive Hammer Wt.: _____
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 4/24/06
Borehole Diameter: Rinch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Tan-Light Brown coarse to fine Sand, some gravel, poorly sorted, native material
3						
4						
5						
6	5	16-20	36"	—	0.0	16'-20' Tan Coarse to fine Sand, little fine to medium gravel, poorly sorted, dry to damp, native material
7						
8						
9						
20	6	20-24	36"	—	0.0	20'-24' Tan-Light Brown coarse to fine Sand, poorly sorted, some white gravel, dry-damp, native material
24						

Remarks: NATIVE material at 12'
END OF Boring at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-phase II

Well/Boring No.: P-19
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 Ft
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown - Tan coarse to fine Sand, AND coarse Gravel, poorly sorted trace broken asphalt, trace small clay pieces. Backfill MATERIAL
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown coarse to medium Sand, some fine gravel, trace gray clay, poorly sorted, soft, trace dark brown silt, Backfill material.
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-12' Dark Brown - Brown Silty Sand, trace fine gravel, moist - damp, soft dark-Brown silty lense at 12' Backfill material
-9-						
-10						

Remarks: Appears to be bottom of pool at 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-19
Sheet 1 of 2
By: ICSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) PID	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	24"	—	0.0	12'-16' Brown - Light Orange coarse to medium Sand, some subangular gravel, dry, native material
3						
4						
5						
6	5	16-20	24"	—	0.0	16'-20' Tan coarse SAND AND fine to coarse GRAVEL, poorly sorted, loose - dry
7						
8						
9						
10	6	20-24	24"	—	0.0	20-24' Brown - Light Orange coarse to fine Sand, little fine to medium gravel, well sorted, damp to moist, native
24						

Remarks: NATIVE material encountered at 12'

End of Boring at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-20
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEARWATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	40"	—	0.0	0 - 3.5' Dark Brown medium to coarse Sand, trace asphalt, trace
-2-						3.5' - 4' Concrete, trace clay, gravel
-3-						Brown coarse to medium
-4-						Sand and gravel, loose, poorly
-5-	2	4-8	24"	—	0.0	Sorted (BACKFILL MATERIAL)
-6-						4-8' Orange-Brown coarse to medium
-7-						Sand, some fine to medium
-8-						gravel, poorly sorted, loose
-9-	3	8-12	36"	—	0.0	8-12' Brown - Light Orange
-10						Coarse to medium Sand, little to some subrounded gravel, poorly sorted, damp

Remarks: No strong evidence of sampled inside leaching Pool

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-20
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: GEOPROBE
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-Inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Light Brown-Light Orange Coarse to medium Sand, little subrounded white-Brown Gravel, poorly sorted, damp
3						
4						
5	5	16-18	14"	—	0.0	16'-18' Brown coarse to medium Sand, some gravel, loose, poorly sorted
6						
7						18'-20' Light Tan Fine to coarse Sand, trace-little fine gravel, damp (NATIVE MATERIAL)
8	6	18-20	24"	—	0.0	
9						20'-22' Tan-Brown coarse to fine Sand, some white gravel, poorly sorted, damp NATIVE MATERIAL
10	7	20-22	24"	—	0.0	
24						22'-24' Tan-Light Brown medium to fine Sand, tr-Lt f-m white gravel

Remarks: No strong evidence if sampled inside leaching pool
END OF BORING at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-21
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' Dark Brown - Brown course to medium Sand, some gravel, loose, broken, black asphalt, poorly sorted, loose, Backfill material
-2-						
-3-						
-4-	2	4-8	12"	—	0.0	4'-8' Dark Brown course to medium Sand, some gravel, stones, very soft, loose - Backfill material
-5-						
-6-						
-7-						
-8-	3	8-12	6"	—	0.0	8'-12' Dark Brown - Brown course to medium Sand, some fine to coarse gravel, very soft, loose, appears to be backfill material
-9-						
-10						

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-phase II

Well/Boring No.: P-21
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: clear water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: _____ Drive Hammer Wt.: _____
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11	4	12-14	16"	—	0.0	(12-14') Brown - Light Tan coarse to medium Sand, some fine to coarse gravel, poorly sorted dry to damp.
12						
13						
14	5	14-16	20"	—	0.0	14-16' Tan - Light Brown coarse to fine Sand, some white - Tan gravel, poorly sorted, dry.
15						
16						
17	6	16-18	12"	—	0.0	16-18' Tan fine to medium Sand, trace fine gravel, dry
18						
19	7	18-20	24"	—	0.0	18-20' Tan coarse to medium Sand, some fine to coarse white gravel, poorly sorted, dry
20	8	20-22	20"		0.0	20-22' Tan coarse to medium SAND,
24	9	22-24	20"		0.0	22-24' some f-c gravel, poorly sorted SAME AS ABOVE, Dry-DAMP

Remarks:

END OF BORING AT 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-22
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH RUBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	24"	—	0.0	0-4' Dark Brown coarse to medium Sand, some coarse gravel, crushed Stone, trace asphalt, loose, dry, Backfill material
-2-						
-3-						
-4-						
-5-	2	4-8	24"	—	0.0	4'-8' Dark Brown coarse to medium Sand, Some gravel, loose, soft, poorly sorted, trace grayish silty sand; Backfill material
-6-						
-7-						
-8-	3	8-12	36"	—	0.0	8-12' Dark Brown-Gray coarse to medium Sand, some fine to coarse Sand, trace asphalt pieces, poorly sorted, loose, Backfill material
-9-						
-10						

Remarks: Bottom of pool around 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-22
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robbins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Tan - Light Brown coarse to fine Sand, trace fine gravel, well sorted, damp, Native material
3						
4						
5						
6	5	16-20	36"	—	0.0	16'-20' Light Tan coarse to medium Sand, And fine to medium GRAVEL, poorly sorted, loose, damp, native material.
7						
8						
9						
10	6	20-24	24"	—	0.0	20'-24' Tan - Light Brown coarse to medium Sand, some fine to coarse gravel, poorly sorted, loose, moist to damp
24						

Remarks: NATIVE MATERIAL encountered at 12'
END OF BORING at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-23
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: ClearWATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-						0-4' Dark Brown-Tan coarse to fine Sand, poorly sorted, some fine gravel, trace crushed asphalt, crushed slag material, trace to little brown Silt, damp (Backfill MATERIAL)
-2-	1	0-4	48"	—	0.0	
-3-						
-4-						
-5-						4'-8' Brown-Tan coarse Sand and GRAVEL, trace dark brown Silt, moist to dry, poorly sorted, Backfill MATERIAL
-6-	2	4-8	36"	—	0.0	
-7-						
-8-						
-9-						8'-11' Gray-Light Black medium to coarse Sand, crushed fine to medium gravel, trace slag Backfill material
-10	3	8-12	48"	—	0.0	11'-12' Brown-Orange fine to medium Sand, some fine gravel, NATIVE

Remarks:
Bottom of pool at 11 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-23
Sheet 1 of 2
By: FSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: _____ Drive Hammer Wt.: _____
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-14	18"	—	0.0	12'-14' Light Tan medium quartz Sand, trace fine gravel, well sorted, damp, NATIVE MATERIAL
3						
4						
5	5	14-16	20"	—	0.0	14'-16' Light Tan - Light Orange medium to fine quartz Sand, little fine gravel, well sorted, damp (NATIVE MATERIAL)
6						
7	6	16-18	18"	—	0.0	16'-18' Tan fine to medium quartz Sand, trace fine white gravel, well sorted, damp, NATIVE MATERIAL
8						
9	7	18-20	18"	—	0.0	18'-20' Light Tan - Light Orange medium to coarse SAND, little fine gravel, well sorted, damp, NATIVE
20	8	20-23	18"	—	0.0	20'-23' SAME AS ABOVE MATERIAL
23						

Remarks:

END OF Boring at 23 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - phase II

Well/Boring No.: P-24
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	46"	—	0.0	0-4' Dark Brown medium to fine Sand, little to medium gravel, trace black crushed slag and black Sand, gray asphalt, Backfill material
-2-						
-3-						
-4-						
-5-	2	4-8	40"	—	0.0	4'-5' Dark Brown medium to coarse Sand and stones
-6-						5'-8' Crushed concrete, trace gravel trace lumber, red bricks sub angular stones, Fill material
-7-						
-8-						
-9-	3	8-12	36"	—	0.0	8'-12' Dark Brown - Gray - Black medium to coarse Sand and medium to coarse gravel, crushed concrete, stones, rock fragments, Brown - Red silt, very dry
-10						

Remarks:
Possibly bottom of pool at 12'

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-24
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE
Geologist: KEITH RUBINS
Drill Rig: Geoprobe
Drilling Method: Geoprobe
Sample Spoon I.D.: —
Drive Hammer Wt.: —
Date Started: 4/19/06
Date Completed: 4/19/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
12	4	12-16	36"	—	0.0	12'-16' Orange-Tan coarse to fine quartz Sand, little-some fine to medium subrounded gravel, poorly sorted, dry, NATIVE MATERIAL
13						
14						
15	5	16-20	24"	—	0.0	16'-20' Tan coarse to medium Sand, some fine to medium gravel, dry, loose, NATIVE MATERIAL
16						
17						
18						
19	6	20-22	24"	—	0.0	20'-22' Light Tan-White fine to medium Sand, trace fine gravel, well sorted, dry, NATIVE MATERIAL
20						
24	7	22-24	24"	—	0.0	22'-24' SAME as ABOVE

Remarks:
NATIVE MATERIAL at 12 FT
END OF Boring at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-25
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-2' Dark Brown - Light Black coarse to medium Sand, moist, poorly sorted gravel, (Fill MATERIAL) Trace slag material
-2-						
-3-						2'-4' Brown coarse to medium Sand and crushed CONCRETE, dry, Fill
-4-						
-5-	2	4-8	36"	—	0.0	4'-8' Dark Brown - Grayish Sand, some crushed concrete, gravel, poorly sorted, loose (BACKFILL MATERIAL)
-6-						
-7-						
-8-	3	8'-12	36"		0.0	8'-11' Gray - Brown medium Sand, some gravel, loose, soft, Fill
-9-						
-10						9'-11' Dark Brown medium to coarse Sand, little fine gravel, trace silt
						11'-12' Brown - Gray Sand and Concrete

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 Phase II

Well/Boring No.: P-25
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						12'-16' Tan coarse to medium Sand, some gravel, loose, poorly sorted, damp to dry - (Native material)
12	4	12-16	36"	—	0.0	
13						
14						
15						16'-20' Tan coarse to medium Sand, some gravel, loose, poorly sorted, damp to dry (NATIVE MATERIAL)
16	5	16-20	24"	—	0.0	
17						
18						20'-22' Tan-Light Orange coarse to Medium Sand, some fine gravel, poorly sorted, damp to dry (NATIVE)
19						
20	6	20-22	18"	—	0.0	
24	7	22-24	20"	—	0.0	22'-24' Tan-Light Brown-Light Orange C-M Sand, some gravel, poorly SORTED, damp (NATIVE MATERIAL)

Remarks:

END OF Boring at 24 Ft

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-26
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH Ribbins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-						
-2-	1	0-4	48"	—	0.0	0-4' Dark Brown - Brown Coarse to medium Sand, some Coarse to medium gravel, trace SLAG material, poorly Sorted, BACKFILL MATERIAL
-3-						
-4-						
-5-	2	4-8	24"	—	0.0	4'-8' Dark Brown coarse to medium Sand, some fine gravel, loose, soft, Backfill MATERIAL
-6-						
-7-						
-8-	3	8-12	14"	—	0.0	8'-12' SAME AS ABOVE AT TIP of sample: Orange Coarse SAND and GRAVEL
-9-						
-10						

Remarks:

Bottom of pool, possibly at 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 03 - Phase II

Well/Boring No.: P-26
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1	4	12-16	36"	—	0.0	12'-16' Tan - Light Brown coarse to fine Sand, some subrounded gravel, poorly sorted, damp, NATIVE MATERIAL
2						
3						
4						16'-18' Tan coarse to medium Sand little fine gravel, damp to dry, native MATERIAL
5	5	16-18	12"	—	0.0	
6						18'-20' Tan coarse to medium Sand, Some - little fine gravel, dry, loose, (Native MATERIAL)
7					0.0	
8	6	18-20	24"	—		
9	7	20-22	20"	—	0.0	20'-22' Light Brown - Tan coarse to fine Sand, poorly sorted, little to some gravel, dry to damp
20	8	22-24	20"	—	0.0	22-24' SAME AS ABOVE (NATIVE MATERIAL)
24						

Remarks:

END OF BORING at 24'

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-27
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-						
-2-	1	0-4	36"	—	0.0	0-4' Dark Brown C-m Sand, little f-m gravel, trace dark Brown silt, trace concrete and stones, poorly sorted, damp / Backfill MATERIAL
-3-						
-4-						
-5-	2	4-8	3"	—	0.0	4'-8' GRAVEL - Backfill MATERIAL
-6-						
-7-						
-8-	3	8-12	48"	—	0.0	8'-11' GRAVEL AND STONES
-9-						11'-11.5' Backfill MATERIAL
-10						11.5'-12' Dark Brown Compacted silt with trace organic matter
						Brown - Orange coarse to medium Sand, some gravel, NATIVE MATERIAL

Remarks:
Bottom of pool at 11.5 FT
NATIVE MATERIAL at 11.5 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 28 - phase II

Well/Boring No.: P-27
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: ~ Drive Hammer Wt.: ~
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: ~

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-14	18"	—	0.0	12'-14' Tan - Light Brown m-c Sand, some f-c gravel, well sorted damp, appears to be native material
3						
4	5	14-16	20"	—	0.0	14'-16' Tan - Light Orange m-f Sand, trace fine gravel, well sorted, dry - damp (Native material)
5						
6	6	16-18	24"	—	0.0	16'-18' Brown - LT orange m-f Sand, trace C Sand, tr fine gravel, well sorted, dry-damp. (Native material)
7				—		18'-20'
8	7	18-20	24"		0.0	20'-22' SAME AS Above
9	8	20-22	24"	—	0.0	
10						22'-24' SAME AS Above
24	9	22-24	24"	—	0.0	

Remarks:

END OF Boring at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-28
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: _____
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2-Inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-4' Dark Brown Coarse to medium Sand, some gravel, crushed concrete, trace silt, trace asphalt pieces, poorly sorted, BACKFILL MATERIAL
-2-						
-3-						
-4-	2	4-8	46"	—	0.0	(4'-8') Brown-Orange coarse to fine Sand, well sorted, little fine gravel
-5-						
-6-						
-7-						
-8-	3	8-12	48	—	0.0	8'-9' Brown-Black Sand, trace coal, slag material -fill
-9-						9'-12' Orange-Brown medium Sand, some gravel, well graded (NATIVE MATERIAL)
-10						

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - Phase II

Well/Boring No.: P-28
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
1-0-						
1-1-						
1-2-	4	12-16	24"	—	0.0	12'-16' Light Brown - Orange coarse to medium SAND and fine to medium GRAVEL, poorly sorted (NATIVE MATERIAL)
1-3-						
1-4-						
1-5-						16'-20' Tan fine to coarse SAND, little to some fine - medium gravel, poorly sorted, damp, moist, NATIVE MATERIAL
1-6-	5	16-20	24"	—	0.0	
1-7-						
1-8-						
1-9-						20'-22' Tan fine to medium Sand, little fine gravel, well sorted, damp NATIVE MATERIAL
20	6	20-22	24"	—	0.0	
22						

Remarks:

END OF BORING at 22 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building #3-Phase II

Well/Boring No.: P-29
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: _____
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	24"	—	0.0	0-4' Dark Brown - Orange coarse to medium Sand, gravel, silt, poorly sorted, (Backfill)
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Dark Brown - Brown-Orange Coarse to medium Sand, Some gravel, poorly sorted wet - moist ≈ 8'
-5-						
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-11' Dark Brown coarse to medium Sand, stones, gravel, trace concrete pieces, loose, poorly sorted (FILL MATERIAL)
-9-						
-10						11'-12' Orange Course Sand NATIVE MATERIAL

Remarks: Bottom of pool at 11'
NATIVE MATERIAL Encountered at 11'

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN BUILDING 23 - PHASE II

Well/Boring No.: P-29
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						
12	4	12-14	20"	—	0.0	12'-14' Orange-Brown coarse to medium Sand, little fine gravel, moist to damp, NATIVE MATERIAL
13						
14	5	14-16	20"	—	0.0	14'-16' Tan-Light Brown fine to coarse Sand, some-little gravel, NATIVE material
15						
16	6	16-18	20"	—	0.0	16'-18' Tan fine Sand, trace coarse Sand, fine gravel, well sorted, damp, Native material
17						
18	7	18-20	24"	—	0.0	18'-20' Tan-Light Brown coarse to medium Sand, some fine to medium gravel, poorly sorted, damp
19						
20	8	20-22	6"	—	0.0	20'-22' Tan medium Sand, well graded damp, NATIVE
24	9	22-24	6"	—	0.0	22'-24' Tan coarse to medium SAND, fine gravel, dry, NATIVE

Remarks:

END OF Boring at 24 FT

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - PHASE II

Well/Boring No.: P-30
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: ~ Drive Hammer Wt.: ~
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2-inch
Ground Surface El.: ~

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-						0-2' Dark Brown compacted Silt, trace SAND, trace slag, gravel, moist
-2-	1	0-4	48"	—	0.0	2'-4' Tan Coarse to medium Sand, Some fine to coarse gravel, loose, dry, poorly sorted
-3-						
-4-						
-5-	2	4-8	36"	—	0.0	4'-8' Orange-Gray Silty Sand, some fine subrounded gravel, compact, very moist to damp FILL MATERIAL
-6-						
-7-						
-8-	3	8-10	12"	—	0.0	8'-10' Gray silty CLAY, trace fine gravel, compacted, moist - FILL MATERIAL
-9-						
-10	4	10-12	20"	—	0.0	10'-12' Orange-Brown coarse to medium Sand, well sorted. damp - NATIVE

Remarks: Bottom of pool appeared to be 10'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - PHASE II

Well/Boring No.: P-30
Sheet 2 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 22 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1	5	12-14	12"	—	0.0	12'-14' Brown-Orange coarse to medium Sand, little fine gravel, well sorted, very moist (NATIVE MATERIAL)
2						
3						
4	6	14-16	20"	—	0.0	14'-16' Tan - Light Brown medium to fine Sand, little fine gravel, poorly sorted, damp (NATIVE MATERIAL)
5						
6	7	16-18	~~12~~ 18"	—	0.0	16'-18' Tan - Light Brown m-f Sand, little - trace f-m gravel very damp (NATIVE MATERIAL)
7						
8						
9	8	18-20	20"	—	0.0	18'-20' Tan coarse to medium Sand Some fine subrounded gravel, poorly sorted, damp
20	9	20-22	20"	—	0.0	20'-22' Tan coarse to medium Sand, little to some f-c gravel, damp (NATIVE)
22						

Remarks:

END OF BORING at 22 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-31
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	40"	—	0.0	0-4' Dark Brown medium to coarse Sand, trace silt, some fine to coarse gravel, poorly sorted, loose, (BACKFILL MATERIAL)
-2-						
-3-						
-4-						
-5-	2	4-8	24"	—	0.0	4'-8' Dark Brown - Light Gray medium to coarse Sand, soft, some fine to coarse gravel, loose, poorly sorted, trace gray silt - damp to dry
-6-						
-7-						
-8-	3	8-12	36"	—	0.0	8-12' Dark Brown coarse to medium Sand, some gravel, trace concrete, (2") Black-Brown compacted silt layer - very DENSE - Hard material
-9-						
-10						

Remarks: Appears to be bottom of pool at 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: P-31
Sheet 1 of 2
By: KSR Date: 4/20/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear water
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/20/06 Date Completed: 4/20/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Light Tan fine to medium Sand, well sorted, trace fine to coarse gravel, crushed rock, little Brown silt, dry to moist (NATIVE MATERIAL)
3						
4						
5						
6	5	16-20	36"	—	0.0	16'-20' Tan - Light Brown medium to coarse Sand, little fine to medium subrounded gravel, poorly sorted, damp to dry (NATIVE MATERIAL)
7						
8						
9						
10	6	20-24	24"	—	0.0	20'-24' Tan course to medium Sand, some to little gravel, poorly sorted, damp, NATIVE MATERIAL
24						

Remarks: NATIVE material encountered at 12 FT
END OF BORING AT 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23 - phase II

Well/Boring No.: P-32
Sheet 1 of 2
By: KSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH RUBINO
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	48"	—	0.0	0-4' Dark Brown coarse to medium Sand, some fine to coarse gravel, trace dark Brown silt, trace asphalt small pieces, damp Back Fill MATERIAL
-2-						
-3-						
-4-	2	4-8	24"	—	0.0	4'-8' Brown - Light Orange coarse to medium Sand, some fine to medium gravel, well sorted, loose
-5-						
-6-						
-7-						
-8-	3	8-12	30"	—	0.0	8'-9' Brown coarse Sand and fine gravel
-9-						9-10' Dark Brown c-m Sand, little fine gravel, soft
-10						10'-12' Brown coarse to medium Sand, trace GRAY CLAY, SOME gravel, moist

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-PHASE II

Well/Boring No.: P-32
Sheet 1 of 2
By: ICSR Date: 4/21/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/21/06 Date Completed: 4/21/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0	4	12-14	0"	—	—	12'-14' NO RECOVERY/soft ground
1						
2						
3						
4	5	14-16	20"	—	0.0	14'-16' Light Tan coarse to medium Sand, some fine to medium gravel, poorly sorted, loose, dry, Appears to be native
5						
6	6	16-18	24"	—	0.0	16'-18' Brown coarse Sand and fine gravel, dry
7						17'-18' Tan-Light Orange f-m Sand, well sorted, dry
8	7	18-20	24"	—	0.0	18'-20' Tan fine to medium Sand, little fine gravel, well sorted, damp (NATIVE MATERIAL)
9						
10	8	20-22	24"	—	0.0	20'-22' Light Tan-Light Brown c-f Sand, poorly sorted, some gravel dry to damp
24	9	22-24	24"	—	0.0	22'-24' Tan-Brown f-m Sand, tr gravel, well sorted (NATIVE)

Remarks:

END OF BORING AT 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-33
Sheet 1 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEARWATER
Driller: BRUCE
Drill Rig: Geoprobe
Sample Spoon I.D.: —
Date Started: 4/19/06
Geologist: KEITH RUBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: —
Date Completed: 4/19/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-4' 0-6" Black sand, crushed asphalt 6"-30" Dark Brown c-m Sand f-m gravel, tr silt, 30"-36" Tan f-m Sand, gravel, dry
-2-						
-3-						
-4-						
-5-	2	4-8	12"	—	0.0	4'-8' Dark Brown to Brown c-m Sand, little - some gravel, poorly sorted, dry to damp Very soft, Fill material
-6-						
-7-						
-8-	3	8-12	24"	—	0.0	8'-11' Dark Brown medium to coarse Sand, little fine gravel, soft, poorly sorted, appears to be Backfill
-9-						
-10						11'-12' Orange coarse to medium Sand, little fine gravel, wellsorted (NATIVE)

Remarks:
BOTTOM OF POOL ≈ 11'
APPEARS TO BE NATIVE AT 11'-12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-33
Sheet 2 of 2
By: KSR Date: 4/19/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/19/06 Date Completed: 4/19/06

Borehole Completion Depth: 23 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) PID	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Light Brown - Light Orange coarse to fine Sand, some fine to coarse gravel, poorly sorted, dry, (appears to be native MATERIAL)
3						
4						
5						
6	5	16-20	24"	—	0.0	16'-20' Tan - Light Brown fine to coarse Sand, some subrounded quartz gravel, poorly sorted, damp, (appears to be native MATERIAL
7						
8						
9						
10	6	20-23	36"	—	0.0	20'-23' Tan - Light Brown medium to coarse SAND and fine to medium GRAVEL, poorly sorted NATIVE MATERIAL
23						

Remarks:

END OF Boring at 23 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: P-34
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce
Drill Rig: Geoprobe
Sample Spoon I.D.: _____
Date Started: 4/24/06

Geologist: KEITH ROBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: _____
Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-						
-2-	1	0-4	—	—	—	0-4' Concrete, brittle, soft possible cover or foundation
-3-						
-4-						
-5-						
-6-	2	4-8	6"	—	0.0	4'-8' Gravel, stones, loose, Backfill material
-7-						
-8-						
-9-						8'-11' GRAVEL AND STONES
-10	3	8-12	36"	—	0.0	11'-12' Dark Brown coarse to medium Sand, little gravel BACKFILL

Remarks:
Bottom of pool at 12'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: P-34
Sheet 2 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH RUBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24FT
Borehole Diameter: 2inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-14	12"	—	0.0	12'-14' Brown coarse to medium Sand and gravel, native material
3						
4	5	14-16	12"	—	0.0	14'-16' Tan medium to fine Sand, trace fine gravel, native material
5						
6	6	16-18	12"	—	0.0	16'-18' Tan medium to fine Sand, trace-little gravel, damp
7						
8	7	18-20	20"	—	0.0	18'-20' Tan medium to coarse Sand, trace fine gravel, damp
9						
10	8	20-22	20"	—	0.0	20'-22' Brown coarse to medium Sand, some fine gravel, loose, damp
24	9	22-24	20"	—	0.0	22'-24' Brown coarse to medium Sand, SOME fine gravel, damp

Remarks: NATIVE materials encountered ground 12 FT

END OF BORING at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 28-Phase II

Well/Boring No.: E13B28
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clearwater
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	36"	—	0.0	0-6" Asphalt and stones 6"-36" Dark Brown - Black C-m Sand, some silt, gravel
-2-						
-3-						3'-4' Tan - Brown coarse Sand, some gravel, loose, damp
-4-						
-5-	2	4-8	36"	—	0.0	4'-8' Brown - Tan coarse Sand, some gravel, poorly sorted
-6-						
-7-						
-8-						
-9-	3	8-12	36"	—	0.0	8'-12' Brown - Tan coarse to fine SAND, little fine gravel, well sorted, moist
-10						

Remarks:

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 28 - phase II

Well/Boring No.: E13B28
Sheet 1 of 1
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Brown-Orange course to medium Sand, some gravel, poorly sorted, loose, native material
3						
4						
5						
6	5	16-20	36"	—	0.0	16'-20' Tan coarse Sand, some gravel, loose, damp, native material
7						
8						
9	6	20-24	36"	—	0.0	20'-24' Tan coarse Sand, some gravel, loose, damp native material
20						
24						

Remarks:

END OF BORING at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23 - phase II

Well/Boring No.: EB38
Sheet 1 of 2
By: KSR Date: 4/26/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Dennis Geologist: Keith Robins
Drill Rig: Geo probe Drilling Method: Geo probe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/17/06 Date Completed: 4/17/06

Borehole Completion Depth: 23'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-		—	—	—	—	0-4' Void, settlement, no sample collected
-1-						
-2-						
-3-						
-4-						
-5-	1	4-8	36"	—	0.0	4'-8' Brown fine to medium Sand, little subrounded gravel, soft loose, dry, fill material
-6-						
-7-						
-8-						
-9-	2	8-12	36"	—	0.0	8'-11' Brown fine to medium Sand, gravel, crushed asphalt, stones loose, poorly sorted trace clayey silt
-10						11'-12' Tan - light brown coarse to medium Sand, AND fine to medium gravel

Remarks: Appears to be native material at 11 Feet

Water Level Measurement
_____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN
Building 23 - Phase II

Well/Boring No.: E13B38
Sheet 1 of 2
By: KSR Date: 6/26/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Dennis Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/12/06 Date Completed: 4/12/06

Borehole Completion Depth: 23'
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2						12'-16' Light Tan-White-Orange Coarse to medium Sand and subrounded gravel, loose, poorly sorted, iron banning, damp.
3	3	12-16	36"	—	0.0	
4						
5						16'-20' Light Tan coarse to medium Sand, Some fine to medium gravel, subrounded, damp.
6	4	16-20	36"	—	0.0	
7						
8						
9						20'-21' Brown coarse Sand AND gravel, damp
20	5	20-23	36"	—	0.0	21'-23' Light Tan-fine Sand, well sorted, damp.

Remarks:
END OF BORING at 23 FT.

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-phase II

Well/Boring No.: E13 B39
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: Bruce Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-						
-2-						
-3-	1	0-4	36"	—	0.0	0-4' Dark Brown - Black coarse to medium Sand, some gravel, trace asphalt, Fill material
-4-						
-5-						
-6-						
-7-	2	4-8	24"	—	0.0	4'-8' Tan - Brown coarse to medium Sand, some fine gravel, moist
-8-						
-9-						
-10	3	8-12	12"	—	0.0	8'-12' Brown - Orange coarse Sand, some fine to coarse gravel, loose, poorly sorted, damp
12						

Remarks: This pool had cement beneath cover, unable to drill through it. Drilled off (5') off center, along side pool

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: GRUMMAN Building 23-Phase II

Well/Boring No.: EB B39
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear WATER
Driller: BRUCE Geologist: KEITH ROBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24FT
Borehole Diameter: 2-inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						
1						
2	4	12-16	36"	—	0.0	12'-16' Brown-Tan coarse to fine Sand, Some fine to coarse gravel, poorly sorted, damp to moist Native material
3						
4						
5						16'-20' Tan coarse to medium Sand, some
6	5	16-20	40"	—	0.0	fine-coarse gravel, poorly sorted, loose, damp, native material
7						
8						
9						
10	6	20-24	36"	—	0.0	20'-24' SAME AS ABOVE
24						

Remarks: Native material around 12FT
END OF BORING at 24FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15.
Project Name: GRUMMAN Building 23 - Phase II

Well/Boring No.: EI3B40
Sheet 1 of 1
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: CLEAR WATER
Driller: BRUCE Geologist: KEITH ROBBINS
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						0-12' VOID, NO SAMPLES collected
1						
2	1	12-18	24"	—	0.0	12-14' Brown - Tan coarse - medium Sand, some gravel, damp, Native material.
3						
4						14-16' Tan fine to medium Sand, trace gravel, well sorted, native material, damp
5						
6						
7	2	16-20	40"	—	0.0	16-20' Tan coarse to medium Sand, some gravel, poorly sorted, loose native material.
8						
9						
20	3	20-24	36"	—	0.0	20-24' Tan - Light Brown Coarse to medium Sand, poorly sorted, some gravel, loose, damp. NATIVE MATERIAL
21						

Remarks:
Bottom of pool starts at 12 FT
End of Boreng at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: E12 B51
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce Geologist: Keith Rubins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24 Ft
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
-0-						
-1-	1	0-4	46"	—	0.0	0-4' Concrete, crushed, dry Fill / or Foundation
-2-						
-3-						
-4-						
-5-	2	4-8	—	—	—	4-8' Concrete, crushed, dry, loose coarse gravel at 8FT
-6-						
-7-						
-8-						
-9-	3	8-12	12"	—	0.0	8-12' Concrete, crushed and coarse gravel, loose, Fill
-10						

Remarks:

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 965-15
Project Name: Grumman Building 23 - phase II

Well/Boring No.: E12B51
Sheet 1 of 2
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clearwater
Driller: Bruce Geoprobe Geologist: Keith Robins
Drill Rig: Geoprobe Drilling Method: Geoprobe
Sample Spoon I.D.: — Drive Hammer Wt.: —
Date Started: 4/24/06 Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2 inch
Ground Surface El.: —

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
10						
11						
12	4	12-14	—	—	—	12'-14' No Recovery
13						
14	5	14-16	12"	—	0.0	14'-16' 0-3" Black clayey silt, soft, 3"-12" Brown-Orange Sand, and fine gravel (Appears native)
15						
16	6	16-18	20"	—	0.0	16'-18' Brown-Light Orange medium to fine Sand, trace fine gravel, well sorted, damp - native material
17						
18						
19	7	18-20	20"	—	0.0	18'-20' Tan medium to coarse Sand, some fine gravel, well sorted, damp, native material
20		20-22	20"	—	0.0	20'-22' SAME AS ABOVE
24		22-24	20"	—	0.0	22'-24' Brown-Orange Coarse-medium Sand, some gravel

Remarks: Native material encountered at approximately 14 FT. END OF Boring at 24'

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

BORING LOG

DVIRKA AND BARTILUCCI

Project No.: 1965-15
Project Name: Grumman Building 23-Phase II

Well/Boring No.: E12B54
Sheet 1 of 1
By: KSR Date: 4/24/06
Chk'd: _____ Date: _____

Drilling Contractor: Clear Water
Driller: Bruce
Drill Rig: Geoprobe
Sample Spoon I.D.: _____
Date Started: 4/26/06

Geologist: KEITH ROBINS
Drilling Method: Geoprobe
Drive Hammer Wt.: _____
Date Completed: 4/24/06

Borehole Completion Depth: 24 FT
Borehole Diameter: 2-inch
Ground Surface El.: _____

DEPTH (FT.)	SAMPLE NO.	SAMPLING INTERVAL	RECOVERY/ RQD	BLOWS/6"	HEADSPACE (PPM) (PID)	SAMPLE DESCRIPTION
0						(0 - 11½') VOID, No samples collected
11						
12	1	11.5-15.5	48"	—	0.0	11.5'-12.5' Dark Brown silty CLAY 12.5'-15.5' Brown-Orange coarse to medium Sand, some gravel, loose, moist - native material
15	2	15.5-19.5	46"	—	0.0	15.5'-19.5' Tan-Brown coarse Sand, some coarse to medium gravel, poorly sorted, moist, native material
19	3	19.5-24	40"	—	0.0	19.5'-24' Tan-Light Brown coarse to medium Sand, some fine to coarse gravel, loose, poorly sorted native material
24						

Remarks: Bottom of pool at 11½ FT

END OF BORING at 24 FT

Water Level Measurement _____ Date _____
_____ Date _____
_____ Date _____
_____ Date _____

BL

Appendix C

APPENDIX C

TABULATED ANALYTICAL RESULTS

TABLE C-1
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
STARS VOLATILE and SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 1				
SAMPLE IDENTIFICATION	AOC 1	AOC 1	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	10'-12'	12'-14'			
DATE OF COLLECTION	12/07/2005	12/07/2005			
DILUTION FACTOR	1	1			
PERCENT SOLIDS	96	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Volatile Organic Compounds					
Methyl tert-Butyl Ether	U	U	5	----	120
Benzene	U	U	5	----	60
Toluene	U	U	5	----	1,500
Ethylbenzene	U	U	5	----	5,500
m,p-Xylene	U	U	5	----	1,200 *
o-Xylene	U	U	5	----	1,200 *
Xylene (total)	U	U	5	----	1,200
Isopropylbenzene	U	U	5	----	2,300
n-Propylbenzene	U	U	5	----	3,700
1,3,5-Trimethylbenzene	U	U	5	----	3,300
1,2,4-Trimethylbenzene	U	U	5	----	10,000
sec-Butylbenzene	U	U	5	----	10,000
4-Isopropyltoluene	U	U	5	----	10,000
n-Butylbenzene	U	U	5	----	10,000
Naphthalene	U	U	5	----	13,000
Semivolatile Organic Compounds					
Naphthalene	U	U	340	----	13,000
Acenaphthene	U	U	340	----	50,000
Fluorene	U	U	340	----	50,000
Phenanthrene	U	U	340	----	50,000
Anthracene	U	U	340	----	50,000
Fluoranthene	U	U	340	----	50,000
Pyrene	U	U	340	----	50,000
Benzo(a)anthracene	U	U	340	----	224 OR MDL
Chrysene	U	U	340	----	400
Benzo(b)fluoranthene	U	U	340	----	220 OR MDL
Benzo(k)fluoranthene	U	U	340	----	220 OR MDL
Benzo(a)pyrene	U	U	340	----	61 OR MDL
Indeno(1,2,3-cd)anthracene	U	U	340	----	3,200
Dibenzo(a,h)anthracene	U	U	340	----	14.3 OR MDL
Benzo(g,h,i)perylene	U	U	340	----	50,000

Qualifiers:
U: Constituent analyzed for but not detected.

Notes:
---- : Not established.
* : Value is for total xylenes.
[ ] : Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-1A	P-1B	P-1C	P-2A	P-2B	P-2C	P-3A	P-3B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	(8-10)	(10-12)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	91	96	81	81	98	94	95			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	1 J	2 J	1 J	1 J	2 J	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U*	U*	U*	1 J	1 J	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-1A	P-1B	P-1C	P-2A	P-2B	P-2C	P-3A	P-3B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	(8-10)	(10-12)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	91	96	81	81	98	94	95			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U	U	U*	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	0	1	2	1	2	3		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-3C	P-4A	P-4B	P-4C	P-5A	P-5B	P-5C	P-6A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	95	87	98	93	93	99	93			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	1 J	2 J	U	U	U	U	1 J	U	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	2 J	2 J	2 J	U*	U	1 J	1 J	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-3C	P-4A	P-4B	P-4C	P-5A	P-5B	P-5C	P-6A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	95	87	98	93	93	99	93			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U*	U	U	U	U*	U*	U	U*	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	3	4	2	0	0	1	2	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-6B	P-6C	P-7A	P-7B	P-7C	P-8A	P-8B	P-8C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(8-10)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)			
DATE OF COLLECTION	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	98	81	84	96	92	95	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	47	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U	U	U	U	U	2 J	U	U	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	24	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U*	U*	U	U*	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-6B	P-6C	P-7A	P-7B	P-7C	P-8A	P-8B	P-8C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(8-10)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)			
DATE OF COLLECTION	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	98	81	84	96	92	95	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U*	U*	U*	U*	U*	U*	U*	U*	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	0	71	0	2	0	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3								CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE IDENTIFICATION	P-9A	P-9B	P-9C	P-10A	P-10B	P-10C	P-11A	P-11B			
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2016	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	87	98	97	94	88	97	92	80			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	10	U	U	U	U	9	7	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U	2 J	1 J	U	3 J	U	U	U	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	3 J	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	2 J	U*	2 J	U*	U	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	1 J	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-9A	P-9B	P-9C	P-10A	P-10E	P-10C	P-11A	P-11B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2016	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	87	98	97	94	88	97	92	80			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	1 J	U	U	8	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	2 J	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	15	U	U	18	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	1 J	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U*	U*	U*	U*	U*	U	U*	5	----	13,000
1,2,3-Trichlorobenzene	U	2 J	U	U	U	U	U	U	5	----	----
Total VOCs	2	34	3	0	29	0	12	7		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-11C	P-12A	P-12B	P-12C	P-13A	P-13B	P-13C	P-14A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	93	97	89	95	93	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U	1 J	1 J	1 J	U	U	U	2 J	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U*	U*	U*	2 J	2 J	U*	2 J	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-11C	P-12A	P-12B	P-12C	P-13A	P-13B	P-13C	P-14A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	93	97	89	95	93	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U*	U	U	U	U	U	U*	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	1	1	1	2	2	0	4		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-14B	P-14C	P-15A	P-15B	P-15C	P-16A	P-16B	P-16C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	91	98	98	97	98	96	96	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	1 J	1 J	1 J	1 J	1 J	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	2 J	2 J	U*	U*	U*	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-14B	P-14C	P-15A	P-15B	P-15C	P-16A	P-16B	P-16C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	91	98	98	97	98	96	96	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	3	3	1	1	1	0	0	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-17A	P-17B	P-17C	P-18A	P-18B	P-18C	P-19A	P-19B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(11-12)	(12-14)	(6-8)	(10-12)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	88	98	98	93	58	96	88	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	8 J	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U	U*	U*	56 B	U*	U*	19 B*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	U	U*	U*	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	13	U	U	1 J	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3								CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE IDENTIFICATION	P-17A	P-17B	P-17C	P-18A	P-18B	P-18C	P-19A	P-19B			
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(11-12)	(12-14)	(6-8)	(10-12)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	88	98	98	93	58	96	88	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	25	U	U	3 J	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	100	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	16	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	11	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	0	0	213	0	0	39		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-19C	P-20A	P-20B	P-20C	P-21A	P-21B	P-21C	P-22A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(11-13)	(13-15)	(6-8)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0				
PERCENT SOLIDS	95	81	84	84	97	97	98				
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	U*	U*	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U*	U*	U*	U*	U*	U*	U*	U*	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-19C	P-20A	P-20B	P-20C	P-21A	P-21B	P-21C	P-22A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(11-13)	(13-15)	(6-8)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	95	81	84	84	97	97	98	94			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	0	0	0	0	0	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-22B	P-22C	P-23A	P-23B	P-23C	P-24A	P-24B	P-24C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(9-11)	(11-13)	(2-4)	(10-12)	(12-14)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	97	85	93	84	92	86	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	7	3 J	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	1 J	2 J	2 J	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U*	U*	U*	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-22B	P-22C	P-23A	P-23B	P-23C	P-24A	P-24B	P-24C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(9-11)	(11-13)	(2-4)	(10-12)	(12-14)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	97	85	93	84	92	86	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	J	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	J	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	J	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	J	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	3 J	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U*	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	1	9	5	0	3	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-25A	P-25B	P-25C	P-26A	P-26B	P-26C	P-27A	P-27B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(2-4)	(11-12)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	91	97	95	97	98	93	86			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	2 J	U	U	u	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	9	U	U	u	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	U*	U*	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	1 J	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-25A	P-25B	P-25C	P-26A	P-26B	P-26C	P-27A	P-27B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(2-4)	(11-12)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	91	97	95	97	98	93	86			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	7	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	2 J	U	U	U	U	U	17	5	----	----
Naphthalene	U	U	U	U	U	1 J	1 J	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	11	2	0	0	0	2	1	24		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-27C	P-28A	P-28B	P-28C	P-29A	P-29B	P-29C	P-30A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(8-9)	(9-11)	(4-6)	(9-11)	(11-13)	(4-6)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	82	94	94	95	96	80	92			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	2 J	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	U*	U*	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-27C	P-28A	P-28B	P-28C	P-29A	P-29B	P-29C	P-30A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(8-9)	(9-11)	(4-6)	(9-11)	(11-13)	(4-6)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	82	94	94	95	96	80	92			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	1 J	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	1	0	2	0	0	0	0	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-30B	P-30C	P-31A	P-31B	P-31C	P-32A	P-32B	P-32C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(8-10)	(10-12)	(4-6)	(10-12)	(12-14)	(2-4)	(10-12)	(14-16)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	95	97	94	97	86	87	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	U*	U*	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U*	U	U*	U*	U*	U*	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-30B	P-30C	P-31A	P-31B	P-31C	P-32A	P-32B	P-32C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(8-10)	(10-12)	(4-6)	(10-12)	(12-14)	(2-4)	(10-12)	(14-16)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	95	97	94	97	86	87	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	1 J	U	U	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	1	0	0	0	0	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-33A	P-33B	P-33C	P-34B	P-34C	E12B-51A	E12B-51B	E12B-51C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(6-8)	(9-11)	(11-13)	(11-12)	(12-14)	(0-2)	(14-16)	(16-18)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	97	95	98	97	96	98	96			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	42	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	U*	U*	U*	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	1 J	U	U	2 J	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-33A	P-33B	P-33C	P-34B	P-34C	E12B-51A	E12B-51B	E12B-51C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(6-8)	(9-11)	(11-13)	(11-12)	(12-14)	(0-2)	(14-16)	(16-18)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	97	95	98	97	96	98	96			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	2 J	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	3 J	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	12	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U	1 J	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	0	0	0	1	0	0	62	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
□ : Value exceeds Site Specific Cleanup Criteria.
▒ : Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	E12B-54B	E12B-54C	E13B-28A	E13B-28B	E13B-28C	E13B-38A	E13B-38B	E13B-38C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(11.5-13.5)	(14-16)	(2-4)	(10-12)	(12-14)	(4-6)	(9-11)	(12-14)			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	71	96	92	97	97	87	86	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	U	U	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U	U*	U	U	U	2 J	2 J	U	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	E12B-54B	E12B-54C	E13B-28A	E13B-28B	E13B-28C	E13B-38A	E13B-38B	E13B-38C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(11.5-13.5)	(14-16)	(2-4)	(10-12)	(12-14)	(4-6)	(9-11)	(12-14)			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	71	96	92	97	97	87	86	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	5 J	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	U	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	6 J	U	U	U	U	U*	U*	U*	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	11	0	0	0	0	2	2	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3					AOC 4					
SAMPLE IDENTIFICATION	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C	AOC 4-1	AOC 4-1	AOC 4-2	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	12/07/2005	12/07/2005	12/07/2005			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1	1	1			
PERCENT SOLIDS	87	96	96	96	96	93	95	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	U	U	U	U	U	5 J	8	8	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	U*	U*	U*	U*	U	U*	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	2 J	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	2 J	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3					AOC 4					
SAMPLE IDENTIFICATION	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C	AOC 4-1	AOC 4-1	AOC 4-2	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	12/07/2005	12/07/2005	12/07/2005			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1	1	1			
PERCENT SOLIDS	87	96	96	96	96	93	95	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	4 J	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	U	U	U	U	2 J	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	U	U	U	U	2 J	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U	U	U	U	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	8	0	0	0	0	7	8	8		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 4							AOC 5			
SAMPLE IDENTIFICATION	AOC 4-2	AOC 4-3	AOC 4-3	AOC 4-4	AOC 4-4	AOC 4-5	AOC 4-5	AOC 5A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005			
DILUTION FACTOR	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	84	93	93	71	89	87	76	90			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U	U	U	U	U	U	5	----	----
Chloromethane	U	U	U	U	U	U	U	U	5	----	----
Vinyl Chloride	U	U	U	U	U	U	U	U	5	----	200
Bromomethane	U	U	U	U	U	U	U	U	5	----	----
Chloroethane	U	U	U	U	U	U	U	U	5	----	1,900
Trichlorofluoromethane	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethene	U	U	U	U	U	U	U	U	5	----	400
Acetone	4 J	U	U	9	6	8	9	U	5	----	200
Iodomethane	U	U	U	U	U	U	U	U	5	----	----
Carbon Disulfide	U	U	U	U	U	U	U	U	5	----	2,700
Methylene Chloride	U*	1 J	U	2 J	U	1 J	U	U*	5	----	100
trans-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	300
Methyl tert-Butyl Ether	U	U	U	U	U	U	U	U	5	----	----
1,1-Dichloroethane	U	U	U	U	U	U	U	U	5	----	200
Vinyl Acetate	U	U	U	U	U	U	U	U	5	----	----
2-Butanone	U	U	U	U	U	U	U	U	5	----	300
cis-1,2-Dichloroethene	U	U	U	U	U	U	U	U	5	----	----
2,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Bromochloromethane	U	U	U	U	U	U	U	U	5	----	----
Chloroform	U	U	U	U	U	U	U	U	5	----	300
1,1,1-Trichloroethane	U	U	U	U	U	U	U	U	5	----	800
1,1-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
Carbon Tetrachloride	U	U	U	U	U	U	U	U	5	----	600
1,2-Dichloroethane	U	U	U	U	U	U	U	U	5	----	100
Benzene	U	U	U	U	U	U	U	U	5	----	60
Trichloroethene	U	U	U	U	U	U	U	U	5	----	700
1,2-Dichloropropane	U	U	U	U	U	U	U	U	5	----	----
Dibromomethane	U	U	U	U	U	U	U	U	5	----	----
Bromodichloromethane	U	U	U	U	U	U	U	U	5	----	----
cis-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
4-Methyl-2-pentanone	U	U	U	U	U	U	U	U	5	----	1,000
Toluene	U	U	U	U	U	U	U	U	5	----	1,500
trans-1,3-Dichloropropene	U	U	U	U	U	U	U	U	5	----	----
1,1,2-Trichloroethane	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichloropropane	U	U	U	U	U	U	U	U	5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 4							AOC 5			
SAMPLE IDENTIFICATION	AOC 4-2	AOC 4-3	AOC 4-3	AOC 4-4	AOC 4-4	AOC 4-5	AOC 4-5	AOC 5A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005			
DILUTION FACTOR	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	84	93	93	71	89	87	76	90			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U	U	U	U	U	U	5	----	1,400
2-Hexanone	U	U	U	U	U	U	U	U	5	----	----
Dibromochloromethane	U	U	U	U	U	U	U	U	5	----	----
1,2-Dibromoethane	U	U	U	U	U	U	U	U	5	----	----
Chlorobenzene	U	U	U	U	U	U	U	U	5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	
Ethylbenzene	U	U	U	U	U	U	U	U	5	----	5,500
m,p-Xylene	U	1 J	U	2 J	2 J	1 J	U	U	5	----	1,200 *
o-Xylene	U	U	U	U	U	U	U	U	5	----	1,200 *
Xylene (total)	U	1 J	U	2 J	2 J	1 J	U	U	5	----	1,200
Styrene	U	U	U	U	U	U	U	U	5	----	----
Bromoform	U	U	U	U	U	U	U	U	5	----	----
Isopropylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	U	U	5	----	600
Bromobenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,3-Trichloropropane	U	U	U	U	U	U	U	U	5	----	----
n-Propylbenzene	U	U	U	U	U	U	U	U	5	----	----
2-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Chlorotoluene	U	U	U	U	U	U	U	U	5	----	----
tert-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	5	----	----
sec-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
4-Isopropyltoluene	U	U	U	U	U	U	U	U	5	----	----
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	8,500
n-Butylbenzene	U	U	U	U	U	U	U	U	5	----	----
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U	U	U	U	U	U	5	----	----
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	3,400
Hexachlorobutadiene	U	U	U	U	U	U	U	U	5	----	----
Naphthalene	U	U*	U	U*	U	U	U	U	5	----	13,000
1,2,3-Trichlorobenzene	U	U	U	U	U	U	U	U	5	----	----
Total VOCs	4	2	0	13	8	10	9	0		----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 5										
SAMPLE IDENTIFICATION	AOC 5A	AOC 5B	AOC 5B						CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	13'-15'	15'-17'								
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005								
DILUTION FACTOR	1.0	1.0	1.0								
PERCENT SOLIDS	95	94	98								
UNITS	(ug/kg)	(ug/kg)	(ug/kg)						(ug/kg)	(ug/kg)	(ug/kg)
Dichlorodifluoromethane	U	U	U						5	----	----
Chloromethane	U	U	U						5	----	----
Vinyl Chloride	U	U	U						5	----	200
Bromomethane	U	U	U						5	----	----
Chloroethane	U	U	U						5	----	1,900
Trichlorofluoromethane	U	U	U						5	----	----
1,1-Dichloroethene	U	U	U						5	----	400
Acetone	5 J	U	5 J						5	----	200
Iodomethane	U	U	U						5	----	----
Carbon Disulfide	U	U	U						5	----	2,700
Methylene Chloride	U*	U	U*						5	----	100
trans-1,2-Dichloroethene	U	U	U						5	----	300
Methyl tert-Butyl Ether	U	U	U						5	----	----
1,1-Dichloroethane	U	U	U						5	----	200
Vinyl Acetate	U	U	U						5	----	----
2-Butanone	U	U	U						5	----	300
cis-1,2-Dichloroethene	U	U	U						5	----	----
2,2-Dichloropropane	U	U	U						5	----	----
Bromochloromethane	U	U	U						5	----	----
Chloroform	U	U	U						5	----	300
1,1,1-Trichloroethane	U	U	U						5	----	800
1,1-Dichloropropene	U	U	U						5	----	----
Carbon Tetrachloride	U	U	U						5	----	600
1,2-Dichloroethane	U	U	U						5	----	100
Benzene	U	U	U						5	----	60
Trichloroethene	U	U	U						5	----	700
1,2-Dichloropropane	U	U	U						5	----	----
Dibromomethane	U	U	U						5	----	----
Bromodichloromethane	U	U	U						5	----	----
cis-1,3-Dichloropropene	U	U	U						5	----	----
4-Methyl-2-pentanone	U	U	U						5	----	1,000
Toluene	U	U	U						5	----	1,500
trans-1,3-Dichloropropene	U	U	U						5	----	----
1,1,2-Trichloroethane	U	U	U						5	----	----
1,3-Dichloropropane	U	U	U						5	----	300

TABLE C-2 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
VOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 5										
SAMPLE IDENTIFICATION	AOC 5A	AOC 5B	AOC 5B						CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	13'-15'	15'-17'								
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005								
DILUTION FACTOR	1.0	1.0	1.0								
PERCENT SOLIDS	95	94	98								
UNITS	(ug/kg)	(ug/kg)	(ug/kg)						(ug/kg)	(ug/kg)	(ug/kg)
Tetrachloroethene	U	U	U						5	----	1,400
2-Hexanone	U	U	U						5	----	----
Dibromochloromethane	U	U	U						5	----	----
1,2-Dibromoethane	U	U	U						5	----	----
Chlorobenzene	U	U	U						5	----	1,700
1,1,1,2-Tetrachloroethane	U	U	U						5	----	
Ethylbenzene	U	U	U						5	----	5,500
m,p-Xylene	U	2 J	U						5	----	1,200 *
o-Xylene	U	U	U						5	----	1,200 *
Xylene (total)	U	2 J	U						5	----	1,200
Styrene	U	U	U						5	----	----
Bromoform	U	U	U						5	----	----
Isopropylbenzene	U	U	U						5	----	----
1,1,2,2-Tetrachloroethane	U	U	U						5	----	600
Bromobenzene	U	U	U						5	----	----
1,2,3-Trichloropropane	U	U	U						5	----	----
n-Propylbenzene	U	U	U						5	----	----
2-Chlorotoluene	U	U	U						5	----	----
1,3,5-Trimethylbenzene	U	U	U						5	----	----
4-Chlorotoluene	U	U	U						5	----	----
tert-Butylbenzene	U	U	U						5	----	----
1,2,4-Trimethylbenzene	U	U	U						5	----	----
sec-Butylbenzene	U	U	U						5	----	----
4-Isopropyltoluene	U	U	U						5	----	----
1,3-Dichlorobenzene	U	U	U						5	----	1,600
1,4-Dichlorobenzene	U	U	U						5	----	8,500
n-Butylbenzene	U	U	U						5	----	----
1,2-Dichlorobenzene	U	U	U						5	----	7,900
1,2-Dibromo-3-chloropropane	U	U	U						5	----	----
1,2,4-Trichlorobenzene	U	U	U						5	----	3,400
Hexachlorobutadiene	U	U	U						5	----	----
Naphthalene	U	U*	U*						5	----	13,000
1,2,3-Trichlorobenzene	U	U	U						5	----	----
Total VOCs	5	2	5							----	10,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
U*: Result qualified as non-detect based on validation criteria.

Notes:
---- : Not established.
* : Value is for total xylenes.
: Value exceeds Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-1A	P-1B	P-1C	P-2A	P-2B	P-2C	P-3A	P-3B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	(8-10)	(10-12)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	91	96	81	81	98	94	95			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	350	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	350	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	350	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	350	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	350	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	350	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	350	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	350	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	350	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	350	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	350	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	350	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	350	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	350	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	350	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	350	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	350	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	350	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	350	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	350	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	350	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	350	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	350	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	350	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	350	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	720	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	350	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	720	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	350	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	350	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	350	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	720	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	350	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	720	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	720	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	350	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	350	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-1A	P-1B	P-1C	P-2A	P-2B	P-2C	P-3A	P-3B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	(8-10)	(10-12)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/17'2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	91	96	81	81	98	94	95			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	350	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	350	----	----
Fluorene	U	U	U	U	U	U	U	U	350	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	720	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	720	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	350	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	350	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	350	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	720	----	1,000 or MDL
Phenanthrene	42 J	42 J	U	U	U	U	U	U	350	----	50,000
Anthracene	U	U	U	U	U	U	U	U	350	----	50,000
Carbazole	U	U	U	U	U	U	U	U	350	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	350	----	8,100
Fluoranthene	49 J	52 J	U	U	U	U	U	U	350	----	50,000
Pyrene	100 J	100 J	U	U	U	U	U	U	350	----	50,000
Butylbenzylphthalate	740	U	U	U	U	U	210 J	97 J	350	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	350	----	----
Benzo(a)anthracene	U	40 J	U	U	U	U	U	U	350	----	224 or MDL
Chrysene	U	70 J	U	U	U	U	U	38 J	350	----	400
bis(2-Ethylhexyl)phthalate	190 J	69 J	36 J	300 J	150 J	83 J	470	470	350	----	50,000
Di-n-octylphthalate	100 J	U	U	U	U	U	U	U	350	----	50,000
Benzo(b)fluoranthene	U	62 J	U	U	U	U	U	U	350	----	1,100
Benzo(k)fluoranthene	U	39 J	U	U	U	U	U	U	350	----	1,100
Benzo(a)pyrene	U	53 J	U	U	U	U	U	U	350	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	350	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	350	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	45 J	350	----	50,000
Total PAHs	191	458	0	0	0	0	0	83		100,000	100,000
Total CaPAHs	0	264	0	0	0	0	0	38		10,000	10,000
Total SVOCs	1,221	527	36	300	150	83	680	650		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-3C	P-4A	P-4B	P-4C	P-5A	P-5B	P-5C	P-6A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	95	87	98	93	93	99	93			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-3C	P-4A	P-4B	P-4C	P-5A	P-5B	P-5C	P-6A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	95	87	98	93	93	99	93			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	57 J	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	61 J	U	U	U	U	U	U	330	----	50,000
Pyrene	U	64 J	U	U	U	U	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	U	71 J	U	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	U	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	530	100 J	120 J	180 J	350 J	120 J	73 J	71 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	182	0	0	0	0	0	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	0	0	0		10,000	10,000
Total SVOCs	530	282	120	180	350	191	73	71		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-6B	P-6C	P-7A	P-7B	P-7C	P-8A	P-8B	P-8C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(8-10)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)			
DATE OF COLLECTION	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	98	91	84	96	92	95	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-6B	P-6C	P-7A	P-7B	P-7C	P-8A	P-8B	P-8C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(8-10)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)			
DATE OF COLLECTION	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	98	91	84	96	92	95	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	U	U	U	43 J	42 J	U	330	----	50,000
Pyrene	U	U	U	U	U	36 J	52 J	U	330	----	50,000
Butylbenzylphthalate	U	U	41 J	U	U	U	100 J	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	49 J	36 J	U	330	----	400
bis(2-Ethylhexyl)phthalate	98 J	45 J	89 J	80 J	65 J	82 J	240 J	58 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	44 J	38 J	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	0	0	0	0	172	168	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	93	74	0		10,000	10,000
Total SVOCs	98	45	130	80	65	254	508	58		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-9A	P-9B	P-9C	P-10A	P-10B	P-10C	P-11A	P-11B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2016	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	87	98	97	94	88	97	92	80			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	43 J	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	120 J	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	71 J	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-9A	P-9B	P-9C	P-10A	P-10B	P-10C	P-11A	P-11B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2016	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	87	98	97	94	88	97	92	80			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	100 J	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	41 J	1,200	U	U	58 J	U	U	140 J	330	----	50,000
Anthracene	U	320 J	U	U	U	U	U	42 J	330	----	50,000
Carbazole	U	210 J	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	62 J	U	U	U	330	----	8,100
Fluoranthene	81 J	2,000	40 J	U	80 J	U	U	150 J	330	----	50,000
Pyrene	76 J	2,100	37 J	U	80 J	U	U	150 J	330	----	50,000
Butylbenzylphthalate	U	56 J	U	U	360 J	U	92 J	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	40 J	960	U	U	55 J	U	U	78 J	330	----	224 or MDL
Chrysene	U	970	U	U	110 J	U	U	81 J	330	----	400
bis(2-Ethylhexyl)phthalate	95 J	360	130 J	68 J	1,000	69 J	200 J	150 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	1,100	U	U	150 J	U	U	85 J	330	----	1,100
Benzo(k)fluoranthene	U	560	U	U	55 J	U	U	37 J	330	----	1,100
Benzo(a)pyrene	U	930	U	U	51 J	U	U	62 J	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	510	U	U	52 J	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	150 J	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	580	U	U	70 J	U	U	U	330	----	50,000
Total PAHs	238	11,610	77	0	761	0	0	825		100,000	100,000
Total CaPAHs	40	5,190	0	0	473	0	0	343		10,000	10,000
Total SVOCs	333	12,307	207	68	2,226	69	292	975		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-11C	P-12A	P-12B	P-12C	P-13A	P-13B	P-13C	P-14A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	93	97	89	95	93	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-11C	P-12A	P-12B	P-12C	P-13A	P-13B	P-13C	P-14A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	93	97	89	95	93	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	U	U	U	U	U	U	330	----	50,000
Pyrene	U	U	U	U	43 J	U	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	U	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	160 J	88 J	120 J	100 J	140 J	130 J	79 J	81 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	0	0	0	43	0	0	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	0	0	0		10,000	10,000
Total SVOCs	160	88	120	100	183	130	79	81		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-14B	P-14C	P-15A	P-15B	P-15C	P-16A	P-16B	P-16C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	91	98	98	97	98	96	96	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	36 J	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-14B	P-14C	P-15A	P-15B	P-15C	P-16A	P-16B	P-16C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	91	98	98	97	98	96	96	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	U	U	U	U	U	U	330	----	50,000
Pyrene	U	U	U	U	U	U	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	U	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	99 J	52 J	69 J	86 J	97 J	240 J	160 J	260 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	0	0	0	0	0	0	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	0	0	0		10,000	10,000
Total SVOCs	99	52	69	86	97	276	160	260		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specif c Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-17A	P-17B	P-17C	P-18A	P-18B	P-18C	P-19A	P-19B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(11-12)	(12-14)	(6-8)	(10-12)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	10.0	1.0	1.0	1.0			
PERCENT SOLIDS	88	98	98	93	58	96	88	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-17A	P-17B	P-17C	P-18A	P-18B	P-18C	P-19A	P-19B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(11-12)	(12-14)	(6-8)	(10-12)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	10.0	1.0	1.0	1.0			
PERCENT SOLIDS	88	98	98	93	58	96	88	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	U	U	U	U	48 J	95 J	330	----	50,000
Pyrene	U	U	U	51 J	U	U	42 J	92 J	330	----	50,000
Butylbenzylphthalate	78 J	U	U	U	2,800 J	U	U	95 J	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	84 J	330	----	224 or MDL
Chrysene	U	U	U	47 J	U	U	U	69 J	330	----	400
bis(2-Ethylhexyl)phthalate	230 J	69 J	100 J	350 J	7,800	160 J	50 J	240 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	43 J	U	U	U	100 J	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	66 J	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	42 J	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	43 J	U	U	U	47 J	330	----	50,000
Total PAHs	0	0	0	184	0	0	50	595		100,000	100,000
Total CaPAHs	0	0	0	90	0	0	0	361		10,000	10,000
Total SVOCs	308	69	100	534	10,600	160	140	930		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specif c Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-19C	P-20A	P-20B	P-20C	P-21A	P-21B	P-21C	P-22A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(11-13)	(13-15)	(6-8)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0			
PERCENT SOLIDS	95	81	84	84	97	97	98	94			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-19C	P-20A	P-20B	P-20C	P-21A	P-21B	P-21C	P-22A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(11-13)	(13-15)	(6-8)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	5.0	1.0	1.0	1.0			
PERCENT SOLIDS	95	81	84	84	97	97	98	94			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	U	U	U	U	U	U	330	----	50,000
Pyrene	U	U	U	U	U	U	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	U	43 J	U	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	U	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	44 J	92 J	86 J	80 J	U	120 J	73 J	59 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	0	0	0	0	0	0	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	0	0	0		10,000	10,000
Total SVOCs	44	92	86	80	0	163	73	59		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-22B	P-22C	P-23A	P-23B	P-23C	P-24A	P-24B	P-24C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(9-11)	(11-13)	(2-4)	(10-12)	(12-14)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	97	85	93	84	92	86	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-22B	P-22C	P-23A	P-23B	P-23C	P-24A	P-24B	P-24C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(9-11)	(11-13)	(2-4)	(10-12)	(12-14)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	97	85	93	84	92	86	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	50 J	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	50 J	40 J	U	330	----	8,100
Fluoranthene	U	U	U	U	U	U	90 J	U	330	----	50,000
Pyrene	U	U	U	U	U	U	80 J	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	U	140 J	130 J	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	50 J	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	U	76 J	U	330	----	400
bis(2-Ethylhexyl)phthalate	210 J	77 J	190 J	180 J	240 J	880	450	13,000 D	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	90 J	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	29 J	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	46 J	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	50 J	U	330	----	50,000
Total PAHs	0	0	0	0	0	C	561	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	C	291	0		10,000	10,000
Total SVOCs	210	77	190	180	240	1,07C	1,181	13,000		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
D: Analyzed at a diluition factor of 4.

Notes:
---- : Not established.
MDL : Method Detection Limit.
□ : Value exceeds the Site Specific Cleanup Criteria
▒ : Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-25A	P-25B	P-25C	P-26A	P-26B	P-26C	P-27A	P-27B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(2-4)	(11-12)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	91	97	95	97	98	93	86			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	420 J	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	120 J	U	U	U	U	U	670 J	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	400	U	U	U	U	U	1,600 J	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-25A	P-25B	P-25C	P-26A	P-26B	P-26C	P-27A	P-27B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(2-4)	(11-12)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	91	97	95	97	98	93	86			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	110 J	U	U	130 J	U	44 J	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	140 J	U	45 J	U	U	U	870 J	330	----	8,100
Fluoranthene	U	240 J	U	44 J	200 J	U	58 J	520 J	330	----	50,000
Pyrene	U	160 J	U	38 J	160 J	U	43 J	470 J	330	----	50,000
Butylbenzylphthalate	140 J	210 J	U	16,000 D*	39 J	U	140 J	5,300	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	100 J	U	38 J	84 J	U	37 J	U	330	----	224 or MDL
Chrysene	U	170 J	U	42 J	110 J	U	44 J	800 J	330	----	400
bis(2-Ethylhexyl)phthalate	240 J	810	36 J	100 J	58 J	42 J	130 J	18,000	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	220 J	U	46 J	110 J	U	40 J	840 J	330	----	1,100
Benzo(k)fluoranthene	U	95 J	U	U	44 J	U	U	U	330	----	1,100
Benzo(a)pyrene	U	66 J	U	U	76 J	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	110 J	U	U	49 J	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	42 J	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	110 J	U	U	63 J	U	U	U	330	----	50,000
Total PAHs	0	1,443	0	208	1,028	0	266	2,630		100,000	100,000
Total CaPAHs	0	823	0	126	475	0	121	1,640		10,000	10,000
Total SVOCs	380	3,123	36	16,353	1,125	42	536	29,490		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.
D*: Sample analyzed at a dilution factor of 5.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-27C	P-28A	P-28B	P-28C	P-29A	P-29B	P-29C	P-30A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(8-9)	(9-11)	(4-6)	(9-11)	(11-13)	(4-6)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	92	94	84	95	96	80	92			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	36 J	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-27C	P-28A	P-28B	P-28C	P-29A	P-29B	P-29C	P-30A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(12-14)	(2-4)	(8-9)	(9-11)	(4-6)	(9-11)	(11-13)	(4-6)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	92	94	84	95	96	80	92			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	37 J	U	U	U	U	U	330	----	50,000
Pyrene	U	U	42 J	U	U	U	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	52 J	U	U	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	U	330	----	224 or MDL
Chrysene	U	U	U	U	U	U	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	150 J	U	340 J	42 J	180 J	61 J	140 J	57 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	0	79	0	0	0	0	0		100,000	100,000
Total CaPAHs	0	0	0	0	0	0	0	0		10,000	10,000
Total SVOCs	186	0	419	42	232	61	140	57		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-30B	P-30C	P-31A	P-31B	P-31C	P-32A	P-32B	P-32C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(8-10)	(10-12)	(4-6)	(10-12)	(12-14)	(2-4)	(10-12)	(14-16)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	97	94	97	86	87	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-30B	P-30C	P-31A	P-31B	P-31C	P-32A	P-32B	P-32C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(8-10)	(10-12)	(4-6)	(10-12)	(12-14)	(2-4)	(10-12)	(14-16)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	97	94	97	86	87	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	80 J	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	U	U	37 J	47 J	160 J	U	U	330	----	50,000
Pyrene	U	U	U	51 J	U	150 J	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	97 J	U	U	U	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	U	U	U	88 J	U	U	330	----	224 or MDL
Chrysene	U	U	U	47 J	U	140 J	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	54 J	44 J	44 J	330 J	U	65 J	70 J	33 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	U	43 J	U	130 J	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	32 J	U	57 J	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	70 J	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	0	0	0	210	47	875	0	0		100,000	100,000
Total CaPAHs	0	0	0	122	0	485	0	0		10,000	10,000
Total SVOCs	54	44	44	637	47	940	70	33		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-33A	P-33B	P-33C	P-34B	P-34C	E12B-51A	E12B-51B	E12B-51C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(6-8)	(9-11)	(11-13)	(11-12)	(12-14)	(0-2)	(14-16)	(16-18)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	97	95	98	97	96	98	96			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	48 J	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-33A	P-33B	P-33C	P-34B	P-34C	E12B-51A	E12B-51B	E12B-51C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(6-8)	(9-11)	(11-13)	(11-12)	(12-14)	(0-2)	(14-16)	(16-18)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	97	95	98	97	96	98	96			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	71 J	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	540	U	97 J	U	35 J	U	U	330	----	50,000
Anthracene	U	130 J	U	U	U	U	U	U	330	----	50,000
Carbazole	U	97 J	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	330	----	8,100
Fluoranthene	U	480	U	120 J	U	40 J	U	U	330	----	50,000
Pyrene	U	360	U	100 J	U	42 J	U	U	330	----	50,000
Butylbenzylphthalate	U	U	U	U	U	U	130 J	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	260 J	U	59 J	U	U	U	U	330	----	224 or MDL
Chrysene	U	290 J	U	56 J	U	44 J	U	U	330	----	400
bis(2-Ethylhexyl)phthalate	110 J	250 J	190 J	130 J	76 J	72 J	370	93 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	210 J	U	63 J	U	36 J	U	U	330	----	1,100
Benzo(k)fluoranthene	U	93 J	U	22 J	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	140 J	U	47 J	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	69 J	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	87 J	U	39 J	U	U	U	U	330	----	50,000
Total PAHs	0	2,778	0	603	0	197	0	0		100,000	100,000
Total CaPAHs	0	1,062	0	247	0	80	0	0		10,000	10,000
Total SVOCs	110	3,125	190	733	76	269	500	93		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specif c Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	E12B-54B	E12B-54C	E13B-28A	E13B-28B	E13B-28C	E13B-38A	E13B-38B	E13B-38C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(11.5-13.5)	(14-16)	(2-4)	(10-12)	(12-14)	(4-6)	(9-11)	(12-14)			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	71	96	92	97	97	87	86	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	370 J	U	U	U	U	U	110 J	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	E12B-54B	E12B-54C	E13B-28A	E13B-28B	E13B-28C	E13B-38A	E13E-38B	E13B-38C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	(11.5-13.5)	(14-16)	(2-4)	(10-12)	(12-14)	(4-6)	(9-11)	(12-14)			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	71	96	92	97	97	87	86	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	U	U	49 J	U	U	U	U	U	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	74 J	U	330	----	8,100
Fluoranthene	U	U	60 J	U	U	55 J	43 J	U	330	----	50,000
Pyrene	U	U	55 J	U	U	55 J	43 J	U	330	----	50,000
Butylbenzylphthalate	360 J	U	U	U	U	99 J	160 J	U	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	U	U	36 J	U	U	42 J	U	U	330	----	224 or MDL
Chrysene	U	U	56 J	U	U	53 J	53 J	U	330	----	400
bis(2-Ethylhexyl)phthalate	740 J	76 J	80 J	110 J	170 J	150 J	340 J	200 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	U	U	53 J	U	U	58 J	59 J	U	330	----	1,100
Benzo(k)fluoranthene	U	U	16 J	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	30 J	U	U	47 J	39 J	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	46 J	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	37 J	U	U	47 J	73 J	U	330	----	50,000
Total PAHs	0	0	392	0	0	357	377	0		100,000	100,000
Total CaPAHs	0	0	191	0	0	200	202	0		10,000	10,000
Total SVOCs	1,470	76	472	110	170	606	1,061	200		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3					AOC 4			CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE IDENTIFICATION	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C	AOC 4-1	AOC 4-1	AOC 4-2			
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	12/07/2005	12/07/2005	12/07/2005			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1	1	1			
PERCENT SOLIDS	87	96	96	96	96	93	95	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	330	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	330	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	330	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	330	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	330	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	330	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	330	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	330	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	330	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	330	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	330	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	330	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	330	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	330	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	330	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	330	----	240 or MDL
2-Methylnapthalene	66 J	U	U	U	U	U	U	U	330	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	330	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	330	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	660	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	330	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	660	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	330	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	330	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	660	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	330	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	660	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	660	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	330	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 3					AOC 4			CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE IDENTIFICATION	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C	AOC 4-1	AOC 4-1	AOC 4-2			
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	12/07/2005	12/07/2005	12/07/2005			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1	1	1			
PERCENT SOLIDS	87	96	96	96	96	93	95	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	330	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Fluorene	U	U	U	U	U	U	U	U	330	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	660	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	660	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	330	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	330	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	330	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	660	----	1,000 or MDL
Phenanthrene	79 J	U	U	U	U	U	U	72 J	330	----	50,000
Anthracene	U	U	U	U	U	U	U	U	330	----	50,000
Carbazole	U	U	U	U	U	U	U	U	330	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	74 J	330	----	8,100
Fluoranthene	50 J	U	U	U	U	U	U	81 J	330	----	50,000
Pyrene	59 J	U	U	U	U	U	U	90 J	330	----	50,000
Butylbenzylphthalate	U	U	U	53 J	U	U	U	180 J	330	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	330	----	----
Benzo(a)anthracene	38 J	U	U	U	U	U	U	51 J	330	----	224 or MDL
Chrysene	98 J	U	U	U	U	U	U	48 J	330	----	400
bis(2-Ethylhexyl)phthalate	110 J	130 J	77 J	170 J	99 J	180 J	160 J	240 J	330	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	330	----	50,000
Benzo(b)fluoranthene	52 J	U	U	U	U	U	U	U	330	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	U	330	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	U	330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	U	330	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	330	----	14 or MDL
Benzo(g,h,i)perylene	44 J	U	U	U	U	U	U	U	330	----	50,000
Total PAHs	420	0	0	0	0	0	0	342		100,000	100,000
Total CaPAHs	188	0	0	0	0	0	0	99		10,000	10,000
Total SVOCs	596	130	77	223	99	180	160	836		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 4							AOC 5			
SAMPLE IDENTIFICATION	AOC 4-2	AOC 4-3	AOC 4-3	AOC 4-4	AOC 4-4	AOC 4-5	AOC 4-5	AOC 5A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/7/2005	12/7/2005	12/7/2005			
DILUTION FACTOR	1	1.0	1.0	1.0	1.0	1.0	1.0	2.0			
PERCENT SOLIDS	84	93	93	71	89	87	76	90			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U	U	U	U	U	U	350	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U	U	U	U	U	U	350	----	----
2-Chlorophenol	U	U	U	U	U	U	U	U	350	----	800
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	350	----	1,600
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	350	----	8,500
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	350	----	7,900
2-Methylphenol	U	U	U	U	U	U	U	U	350	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U	U	U	U	U	U	350	----	----
4-Methylphenol	U	U	U	U	U	U	U	U	350	----	900
N-Nitroso-di-n-propylamine	U	U	U	U	U	U	U	U	350	----	----
Hexachloroethane	U	U	U	U	U	U	U	U	350	----	----
Nitrobenzene	U	U	U	U	U	U	U	U	350	----	200 or MDL
Isophorone	U	U	U	U	U	U	U	U	350	----	4,400
2-Nitrophenol	U	U	U	U	U	U	U	U	350	----	330 or MDL
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	350	----	----
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	350	----	400
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	350	----	3,400
Naphthalene	U	U	U	U	U	U	U	U	350	----	13,000
4-Chloroaniline	U	U	U	U	U	U	U	U	350	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U	U	U	U	U	U	350	----	----
Hexachlorobutadiene	U	U	U	U	U	U	U	U	350	----	----
4-Chloro-3-methylphenol	U	U	U	U	U	U	U	U	350	----	240 or MDL
2-Methylnapthalene	U	U	U	U	U	U	U	U	350	----	36,400
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	350	----	----
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	350	----	----
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	720	----	100
2-Chloronapthalene	U	U	U	U	U	U	U	U	350	----	----
2-Nitroaniline	U	U	U	U	U	U	U	U	720	----	430 or MDL
Dimethylphthalate	U	U	U	U	U	U	U	U	350	----	2,000
Acenaphthylene	U	U	U	U	U	U	U	U	350	----	41,000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	350	----	1,000
3-Nitroaniline	U	U	U	U	U	U	U	U	720	----	500 or MDL
Acenaphthene	U	U	U	U	U	U	U	U	350	----	50,000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	720	----	200 or MDL
4-Nitrophenol	U	U	U	U	U	U	U	U	720	----	100 or MDL
Dibenzofuran	U	U	U	U	U	U	U	U	350	----	6,200
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	350	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 4							AOC 5			
SAMPLE IDENTIFICATION	AOC 4-2	AOC 4-3	AOC 4-3	AOC 4-4	AOC 4-4	AOC 4-5	AOC 4-5	AOC 5A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'			
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/7/2005	12/7/2005	12/7/2005			
DILUTION FACTOR	1	1.0	1.0	1.0	1.0	1.0	1.0	2.0			
PERCENT SOLIDS	84	93	93	71	89	87	76	90			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U	U	U	U	U	U	350	----	7,100
4-Chlorophenyl-phenylether	U	U	U	U	U	U	U	U	350	----	----
Fluorene	U	U	U	U	U	U	U	U	350	----	50,000
4-Nitroanline	U	U	U	U	U	U	U	U	720	----	----
4,6-Dinitro-2-methylphenol	U	U	U	U	U	U	U	U	720	----	----
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	350	----	----
4-Bromophenyl-phenylether	U	U	U	U	U	U	U	U	350	----	----
Hexachlorobenzene	U	U	U	U	U	U	U	U	350	----	410
Pentachlorophenol	U	U	U	U	U	U	U	U	720	----	1,000 or MDL
Phenanthrene	U	U	U	U	U	U	U	220 J	350	----	50,000
Anthracene	U	U	U	U	U	U	U	U	350	----	50,000
Carbazole	U	U	U	U	U	U	U	U	350	----	----
Di-n-butylphthalate	U	U	U	U	U	U	U	U	350	----	8,100
Fluoranthene	U	U	U	U	U	U	U	500 J	350	----	50,000
Pyrene	U	U	U	U	U	U	U	570 J	350	----	50,000
Butylbenzylphthalate	40 J	150 J	U	U	U	76 J	U	U	350	----	50,000
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	350	----	----
Benzo(a)anthracene	U	U	U	U	U	U	U	230 J	350	----	224 or MDL
Chrysene	U	U	U	U	U	U	U	410 J	350	----	400
bis(2-Ethylhexyl)phthalate	83 J	360	79 J	160 J	100 J	250 J	170 J	1,200	350	----	50,000
Di-n-octylphthalate	U	U	U	U	U	U	U	U	350	----	50,000
Benzo(b)fluoranthene	U	U	U	U	U	U	U	240 J	350	----	1,100
Benzo(k)fluoranthene	U	U	U	U	U	U	U	90 J	350	----	1,100
Benzo(a)pyrene	U	U	U	U	U	U	U	170 J	350	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U	U	U	U	U	120 J	350	----	3,200
Dibenzo(a,h)anthracene	U	U	U	U	U	U	U	U	350	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U	U	U	U	U	160 J	350	----	50,000
Total PAHs	0	0	0	0	0	0	0	2,710		100,000	100,000
Total CaPAHs	0	0	0	0	0	0	0	1,260		10,000	10,000
Total SVOCs	123	510	79	160	100	326	170	3,910		500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 5										
SAMPLE IDENTIFICATION	AOC 5A	AOC 5B	AOC 5B						CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	13'-15'	15'-17'								
DATE OF COLLECTION	12/7/2005	12/7/2005	12/7/2005								
DILUTION FACTOR	1.0	1.0	1.0								
PERCENT SOLIDS	95	94	98								
UNITS	(ug/kg)	(ug/kg)	(ug/kg)						(ug/kg)	(ug/kg)	(ug/kg)
Phenol	U	U	U						330	----	30 or MDL
bis(2-Chloroethyl)ether	U	U	U						330	----	----
2-Chlorophenol	U	U	U						330	----	800
1,3-Dichlorobenzene	U	U	U						330	----	1,600
1,4-Dichlorobenzene	U	U	U						330	----	8,500
1,2-Dichlorobenzene	U	U	U						330	----	7,900
2-Methylphenol	U	U	U						330	----	100 or MDL
2,2'-oxybis(1-chloropropane)	U	U	U						330	----	----
4-Methylphenol	U	U	U						330	----	900
N-Nitroso-di-n-propylamine	U	U	U						330	----	----
Hexachloroethane	U	U	U						330	----	----
Nitrobenzene	U	U	U						330	----	200 or MDL
Isophorone	U	U	U						330	----	4,400
2-Nitrophenol	U	U	U						330	----	330 or MDL
2,4-Dimethylphenol	U	U	U						330	----	----
2,4-Dichlorophenol	U	U	U						330	----	400
1,2,4-Trichlorobenzene	U	U	U						330	----	3,400
Naphthalene	U	U	U						330	----	13,000
4-Chloroaniline	U	U	U						330	----	220 or MDL
bis(2-Chloroethoxy)methane	U	U	U						330	----	----
Hexachlorobutadiene	U	U	U						330	----	----
4-Chloro-3-methylphenol	U	U	U						330	----	240 or MDL
2-Methylnapthalene	U	U	U						330	----	36,400
Hexachlorocyclopentadiene	U	U	U						330	----	----
2,4,6-Trichlorophenol	U	U	U						330	----	----
2,4,5-Trichlorophenol	U	U	U						660	----	100
2-Chloronapthalene	U	U	U						330	----	----
2-Nitroaniline	U	U	U						660	----	430 or MDL
Dimethylphthalate	U	U	U						330	----	2,000
Acenaphthylene	U	U	U						330	----	41,000
2,6-Dinitrotoluene	U	U	U						330	----	1,000
3-Nitroaniline	U	U	U						660	----	500 or MDL
Acenaphthene	U	U	U						330	----	50,000
2,4-Dinitrophenol	U	U	U						660	----	200 or MDL
4-Nitrophenol	U	U	U						660	----	100 or MDL
Dibenzofuran	U	U	U						330	----	6,200
2,4-Dinitrotoluene	U	U	U						330	----	----

TABLE C-3 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SEMIVOLATILE ORGANIC COMPOUNDS

SAMPLE LOCATION	AOC 5										
SAMPLE IDENTIFICATION	AOC 5A	AOC 5B	AOC 5B						CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE DEPTH	2'-4'	13'-15'	15'-17'								
DATE OF COLLECTION	12/7/2005	12/7/2005	12/7/2005								
DILUTION FACTOR	1.0	1.0	1.0								
PERCENT SOLIDS	95	94	98								
UNITS	(ug/kg)	(ug/kg)	(ug/kg)						(ug/kg)	(ug/kg)	(ug/kg)
Diethylphthalate	U	U	U						330	----	7,100
4-Chlorophenyl-phenylether	U	U	U						330	----	----
Fluorene	U	U	U						330	----	50,000
4-Nitroanline	U	U	U						660	----	----
4,6-Dinitro-2-methylphenol	U	U	U						660	----	----
N-Nitrosodiphenylamine	U	U	U						330	----	----
4-Bromophenyl-phenylether	U	U	U						330	----	----
Hexachlorobenzene	U	U	U						330	----	410
Pentachlorophenol	U	U	U						660	----	1,000 or MDL
Phenanthrene	U	U	U						330	----	50,000
Anthracene	U	U	U						330	----	50,000
Carbazole	U	U	U						330	----	----
Di-n-butylphthalate	U	U	U						330	----	8,100
Fluoranthene	U	U	U						330	----	50,000
Pyrene	U	U	U						330	----	50,000
Butylbenzylphthalate	U	U	U						330	----	50,000
3,3'-Dichlorobenzidine	U	U	U						330	----	----
Benzo(a)anthracene	U	U	U						330	----	224 or MDL
Chrysene	U	U	U						330	----	400
bis(2-Ethylhexyl)phthalate	140 J	100 J	85 J						330	----	50,000
Di-n-octylphthalate	U	U	U						330	----	50,000
Benzo(b)fluoranthene	U	U	U						330	----	1,100
Benzo(k)fluoranthene	U	U	U						330	----	1,100
Benzo(a)pyrene	U	U	U						330	----	61 or MDL
Indeno(1,2,3-cd)pyrene	U	U	U						330	----	3,200
Dibenzo(a,h)anthracene	U	U	U						330	----	14 or MDL
Benzo(g,h,i)perylene	U	U	U						330	----	50,000
Total PAHs	0	0	0							100,000	100,000
Total CaPAHs	0	0	0							10,000	10,000
Total SVOCs	140	100	85							500,000	500,000

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
MDL : Method Detection Limit.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-1A	P-1B	P-1C	P-2A	P-2B	P-2C	P-3A	P-3B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	(8-10)	(10-12)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	91	96	81	81	98	94	95			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	U	U	200	33	---	---
TOTAL PCBs	0	0	0	0	0	0	0	200			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-3C	P-4A	P-4B	P-4C	P-5A	P-5B	P-5C	P-6A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	95	87	98	93	93	99	93			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	U	U	U	33	---	---
TOTAL PCBs	0	0	0	0	0	0	0	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-6B	P-6C	P-7A	P-7B	P-7C	P-8A	P-8B	P-8C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(10-12)	(12-14)	(8-10)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)			
DATE OF COLLECTION	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	92	98	9	84	96	92	95	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	U	60	U	33	---	---
TOTAL PCBs	0	0	0	0	0	0	60	0			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-9A	P-9B	P-9C	P-10A	P-10B	P-10C	P-11A	P-11B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2016	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	87	98	97	94	88	97	92	80			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	100	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	100	U	U	U	U	93	U	33	---	---
TOTAL PCBs	100	100	0	0	0	0	93	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-11C	P-12A	P-12B	P-12C	P-13A	P-13B	P-13C	P-14A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	93	97	89	95	93	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	52	U	U	33	---	---
TOTAL PCBs	0	0	0	0	0	52	0	0			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-14B	P-14C	P-15A	P-15B	P-15C	P-16A	P-16B	P-16C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)			
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	91	98	98	97	98	96	96	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	U	U	U	33	---	---
TOTAL PCBs	0	0	0	0	0	0	0	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-17A	P-17B	P-17C	P-18A	P-18B	P-18C	P-19A	P-19B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(11-12)	(12-14)	(6-8)	(10-12)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	10.0	1.0	1.0	1.0			
PERCENT SOLIDS	88	98	98	93	58	96	88	89			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	12,000 P	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	4,200	U	U	210	33	---	---
TOTAL PCBs	0	0	0	0	16,200	0	0	210			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-19C	P-20A	P-20B	P-20C	P-21A	P-21B	P-21C	P-22A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(12-14)	(2-4)	(11-13)	(13-15)	(6-8)	(10-12)	(12-14)	(4-6)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	95	81	84	84	97	97	98	94			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	U	U	U	33	---	---
TOTAL PCBs	0	0	0	0	0	0	0	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-22B	P-22C	P-23A	P-23B	P-23C	P-24A	P-24B	P-24C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(9-11)	(11-13)	(2-4)	(10-12)	(12-14)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	94	97	85	93	84	92	86	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	430 P	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	U	120	U	33	---	---
TOTAL PCBs	0	0	0	0	0	0	550	0			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-25A	P-25B	P-25C	P-26A	P-26B	P-26C	P-27A	P-27B	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(2-4)	(11-12)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	5.0			
PERCENT SOLIDS	92	91	97	95	97	98	93	86			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	1,100 P	U	U	440 P	U	U	3,100 P	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	210	790	U	U	80	U	U	2,000	33	---	---
TOTAL PCBs	210	1,890	0	0	520	0	0	5,100			1,000/10,000 *

Qualifiers:
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B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-27C	P-28A	P-28B	P-28C	P-29A	P-29B	P-29C	P-30A	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(12-14)	(2-4)	(8-9)	(9-11)	(4-6)	(9-11)	(11-13)	(4-6)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	82	94	84	95	96	80	92			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	U	U	55	U	U	33	---	---
TOTAL PCBs	0	0	0	0	0	55	0	0			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-30B	P-30C	P-31A	P-31B	P-31C	P-32A	P-32B	P-32C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(8-10)	(10-12)	(4-6)	(10-12)	(12-14)	(2-4)	(10-12)	(14-16)			
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/21/2006	4/21/2006	4/21/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	82	95	97	94	97	86	87	100			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	250 P	U	U	63 P	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	190	U	U	U	U	33	---	---
TOTAL PCBs	0	0	0	440	0	0	63	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	P-33A	P-33B	P-33C	P-34B	P-34C	E12B-51A	E12B-51B	E12B-51C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(6-8)	(9-11)	(11-13)	(11-12)	(12-14)	(0-2)	(14-16)	(16-18)			
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	98	97	95	98	97	96	98	96			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	96 P	U	U	U	U	U	180 P	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	U	U	U	44	U	U	34	U	33	---	---
TOTAL PCBs	96	0	0	44	0	0	214	0			1,000/10,000 *

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	E12B-54B	E12B-54C	E13B-28A	E13B-28B	E13B-28C	E13B-38A	E13B-38B	E13B-38C	CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(11.5-13.5)	(14-16)	(2-4)	(10-12)	(12-14)	(4-6)	(9-11)	(12-14)			
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/17/2006	4/17/2006	4/17/2006			
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
PERCENT SOLIDS	71	96	92	97	97	87	86	98			
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1221	U	U	U	U	U	U	U	U	67	---	---
Aroclor-1232	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1242	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1248	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1254	U	U	U	U	U	U	U	U	33	---	---
Aroclor-1260	1,200	U	U	U	U	U	570	U	33	---	---
TOTAL PCBs	1,200	0	0	0	0	0	570	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-4 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
POLYCHLORINATED BIPHENYLS

SAMPLE LOCATION	AOC 3										
SAMPLE IDENTIFICATION	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C				CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVE
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)						
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006						
DILUTION FACTOR	1.0	1.0	1.0	1.0	1.0						
PERCENT SOLIDS	87	96	96	96	96						
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Aroclor-1016	U	U	U	U	U				33	---	---
Aroclor-1221	U	U	U	U	U				67	---	---
Aroclor-1232	U	U	U	U	U				33	---	---
Aroclor-1242	U	U	U	U	U				33	---	---
Aroclor-1248	U	U	U	U	U				33	---	---
Aroclor-1254	U	U	U	U	U				33	---	---
Aroclor-1260	U	U	U	47	U				33	---	---
TOTAL PCBs	0	0	0	47	0	0	0	0			1,000/10,000 *

Qualifiers:
U: Constituent analyzed for but not detected.
B: Constituent concentration is less than the CRDL, but greater than the IDL.
P: Concentration estimated, possibly biased low since primary and confirmation column concentrations had a percent difference >25%; lower value reported.

Notes:
--- : Not established.
* : Recommended Soil Cleanup Objective is 1 mg/kg for surface soil and 10 mg/kg for subsurface soil.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Recommended Soil Cleanup Objective.

TABLE C-5
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-1A	P-1B	P-1C	P-2A	P-2B	P-2C	P-3A	P-3B	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	(8-10)	(10-12)			
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/17/2006	4/17/2006			
PERCENT SOLIDS	94	91	96	81	91.0	98.0	94.0	95.0			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	0.1 B	0.055 B	U	U	U	0.056	---	---
Arsenic	2.2	3.3	0.84	4.5	2.4	0.56 B	2.1	3.5	0.076	20	3 - 12*
Beryllium	0.28	0.28	0.038 B	0.46	0.22 B	0.13 B	0.2 B	0.16 B	0.0061	---	0 - 1.75
Cadmium	0.15 B	0.18 B	0.011 B	0.22	0.33	0.0075 B	0.6	3.6	0.0055	78	0.1 - 1, (10***)
Chromium	7.5	8.7	2.6	16.2	17.1	4.2	33.0	22.1	0.014	390	1.5 - 40*, (50***)
Copper	6.0	13.3	2.3	13.7	10.8	5.5	10.7	265	0.21	---	1 - 50
Lead	4.4	8.3	1.2	10.4	8.2	1.4	7.8	69.8	0.041	400	200 - 500**
Mercury	0.021 B	0.056	U	0.041	0.044	0.0069 B	0.029 B	0.59	0.007	23	0.001 - 0.2
Nickel	3.5	7.1	0.92 B	5.3	3.5	1.2 B	3.1	8.0	0.026	---	0.5 - 25
Selenium	0.80 B	1.8	0.71 B	1.6	1.2	0.85 B	0.99 B	1.3	0.067	390	0.1 - 3.9
Silver	0.047 B	0.085 B	0.025 B	0.23 B	1.1	U	0.33 B	3.1	0.019	---	---
Thallium	U	U	U	U	U	U	U	U	0.079	---	---
Zinc	47.5	26.2	3.7	32.9	23.4	6.0	30.3	266.0	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-3C	P-4A	P-4B	P-4C	P-5A	P-5B	P-5C	P-6A			
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
PERCENT SOLIDS	98.0	95.0	87.0	98.0	93.0	93.0	99.0	93.0			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	0.12 B	U	U	U	U	0.056	---	---
Arsenic	0.48 B	2.1	1.9	0.32 B	2.2	2.1	0.65	2.1	0.076	20	3 - 12*
Beryllium	0.021 B	0.2 B	0.17 B	0.075 B	0.23	0.22	0.031 B	0.22	0.0061	---	0 - 1.75
Cadmium	0.066 B	0.099 B	0.29	0.13 B	U	U	0.094 B	U	0.0055	78	0.1 - 1, (10***)
Chromium	2.5	10.8	12.3	3.4	13.7	13.6	3.4	11.6	0.014	390	1.5 - 40*, (50***)
Copper	4.2	5.3	8.2	3.8	6.2	5.3	7.2	5.8	0.21	---	1 - 50
Lead	2.1	5.7	6.0	0.76	6.1	6.6	2.3	5.1	0.041	400	200 - 500**
Mercury	0.026 B	0.019 B	0.023 B	U	0.023 B	0.024 B	0.1	0.023 B	0.007	23	0.001 - 0.2
Nickel	0.8 B	2.8	2.9	1.1 B	2.9	2.8	0.85 B	2.7	0.026	---	0.5 - 25
Selenium	0.26 B	1.2	0.85 B	0.49 B	0.33 B	0.33 B	0.43 B	0.3 B	0.067	390	0.1 - 3.9
Silver	U	U	U	0.044 B	U	U	U	U	0.019	---	---
Thallium	U	U	U	U	0.48 B	0.44 B	U	0.66 B	0.079	---	---
Zinc	10.8	16.9	28	14.0	16.5	14.1	11.9	16	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-6B	P-6C	P-7A	P-7B	P-7C	P-8A	P-8B	P-8C			
SAMPLE DEPTH	(10-12)	(12-14)	(8-10)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006	4/17/2006			
PERCENT SOLIDS	92	98	91	84	96	92	95	98			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	U	0.15 B	U	U	0.17 B	0.056	---	---
Arsenic	3.2	0.91	1.9	9.4	0.94	2.7	2.5	0.67	0.076	20	3 - 12*
Beryllium	0.27	0.04 B	0.17 B	0.29	0.036 B	0.29	0.2 B	0.12 B	0.0061	---	0 - 1.75
Cadmium	0.0046 B	U	0.36	3.2	U	U	U	U	0.0055	78	0.1 - 1, (10***)
Chromium	15.4	3.9	17.8	45.6	3.0	27.5	20.5	5.0	0.014	390	1.5 - 40*, (50***)
Copper	14.0	6.7	6.2	75.3	4.2	8.6	35.8	8.9	0.21	---	1 - 50
Lead	9.9	1.3	4.6	37.5	1.4	10.8	10.4	1.7	0.041	400	200 - 500**
Mercury	0.23	0.011 B	0.025 B	0.18	0.013 B	0.034	0.046	U	0.007	23	0.001 - 0.2
Nickel	3.5	0.61 B	2.6	7.1	0.58 B	4.4	2.6	1.2 B	0.026	---	0.5 - 25
Selenium	0.33 B	0.17 B	0.69 B	0.82 B	0.27 B	U	0.53 B	0.29 B	0.067	390	0.1 - 3.9
Silver	U	U	U	3.3	U	2.4	U	U	0.019	---	---
Thallium	0.64 B	0.12 B	0.16 B	0.74 B	0.3 B	0.74 B	0.62 B	0.35 B	0.079	---	---
Zinc	29.1	8.4	48.9	112.0	3.1	20.5	30.3	11.0	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-9A	P-9B	P-9C	P-10A	P-10B	P-10C	P-11A	P-11B			
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/17/2006	4/17/2016	4/17/2006	4/17/2006	4/17/2006			
PERCENT SOLIDS	87	98	97	94	88	97	92	80			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	U	U	0.334 B	U	U	0.056	---	---
Arsenic	1.3	2.0	0.63 B	2.1	7.1	0.45 B	2.4	2.6	0.076	20	3 - 12*
Beryllium	0.13 B	0.17 B	0.033 B	0.22 B	0.4	0.038 B	0.41	0.27	0.0061	---	0 - 1.75
Cadmium	0.12 B	0.17 B	0.068 B	U	5.9	U	1.7	0.16 B	0.0055	78	0.1 - 1, (10***)
Chromium	7.7	9.4	2.9	12.5	59.0	2.2	16.0	12.6	0.014	390	1.5 - 40*, (50***)
Copper	8.3	29.6	4.1	4.6	690.0	4.6	80.8	25.7	0.21	---	1 - 50
Lead	10.9	14.3	2.7	5.1	250.0	1.2	9.1	4.5	0.041	400	200 - 500**
Mercury	0.014 B	0.091	0.095	0.016 B	0.9	0.013 B	0.42	0.085	0.007	23	0.001 - 0.2
Nickel	2.0	4.2	0.95 B	2.4	13.7	0.79 B	6.0	3.7	0.026	---	0.5 - 25
Selenium	0.66 B	0.74 B	0.37 B	0.086 B	3.0	0.14 B	0.52 B	0.93 B	0.067	390	0.1 - 3.9
Silver	U	U	U	U	22.4	U	0.21 B	U	0.019	---	---
Thallium	U	U	U	0.56 B	0.26 B	0.13 B	0.33 B	0.48 B	0.079	---	---
Zinc	12.9	15.2	9.2	11.4	334.0	9.5	255.0	40.7	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-11C	P-12A	P-12B	P-12C	P-13A	P-13B	P-13C	P-14A			
SAMPLE DEPTH	(12-14)	(4-6)	(9-11)	(11-13)	(4-6)	(10-12)	(12-14)	(4-6)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/17/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006			
PERCENT SOLIDS	82	95	93	97	89	95	93	98			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	U	U	U	U	U	0.056	---	---
Arsenic	0.45 B	1.6	2.1	0.47 B	2.3	1.8	0.48 B	1.7	0.076	20	3 - 12*
Beryllium	0.046 B	0.17 B	0.21	0.036 B	0.22 B	0.18 B	0.095 B	0.16 B	0.0061	---	0 - 1.75
Cadmium	U	0.2 B	0.21	0.11 B	0.38	0.30	0.098 B	0.085 B	0.0055	78	0.1 - 1, (10***)
Chromium	1.9	11.7	13.1	2.5	20.6	8.1	3.6	6.5	0.014	390	1.5 - 40*, (50***)
Copper	4.4	4.3	7.8	6.9	9.0	11.1	4.6	3.7	0.21	---	1 - 50
Lead	2.0	4.7	6.3	1.3	8.9	6.9	1.9	2.5	0.041	400	200 - 500**
Mercury	0.03 B	0.017 B	0.029 B	0.014 B	0.037	0.031	U	0.0069 B	0.007	23	0.001 - 0.2
Nickel	0.69 B	2.3	4.3	0.87 B	3.6	2.7	1.2 B	3.3	0.026	---	0.5 - 25
Selenium	0.3 B	1.0	0.95	0.62 B	1.4	1.1	0.35 B	0.94 B	0.067	390	0.1 - 3.9
Silver	U	U	U	U	0.8 B	U	U	U	0.019	---	---
Thallium	0.12 B	U	U	U	U	U	U	U	0.079	---	---
Zinc	2.2	12.7	22.5	11.5	24	28.2	8.3	13.9	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-14B	P-14C	P-15A	P-15B	P-15C	P-16A	P-16B	P-16C			
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(6-8)	(9-11)	(11-13)	INSTRUMENT DETECTION	SITE SPECIFIC CLEANUP	EASTERN USA BACKGROUND
DATE OF COLLECTION	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/18/2006	4/19/2006	4/19/2006	4/19/2006	LIMIT	CRITERIA	LEVELS
PERCENT SOLIDS	91	98	98	97	98	96	96	98			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	U	U	U	U	U	0.056	---	---
Arsenic	0.58 B	1.0	0.89	0.56 B	0.55 B	1.8	2.2	1.2	0.076	20	3 - 12*
Beryllium	0.087 B	0.063 B	0.089 B	0.048 B	0.075 B	0.18 B	0.17 B	0.099 B	0.0061	---	0 - 1.75
Cadmium	0.013 B	0.028 B	0.017 B	0.015 B	0.032 B	0.11 B	0.093 B	0.049 B	0.0055	78	0.1 - 1, (10***)
Chromium	6.5	9.2	4.8	5.3	3.8	10.0	8.1	6.0	0.014	390	1.5 - 40*, (50***)
Copper	5.3	4.0	4.7	5.2	4.1	9.2	17.2	9.7	0.21	---	1 - 50
Lead	1.4	1.4	1.2 B	1.2	1.1	9.1	4.9	3.1	0.041	400	200 - 500**
Mercury	U	0.0072 B	0.012 B	0.01 B	0.01 B	0.031	0.065	0.026 B	0.007	23	0.001 - 0.2
Nickel	1.1 B	0.9 B	1.1 B	0.89 B	1.3 B	3.8	2.6	0.79 B	0.026	---	0.5 - 25
Selenium	0.67 B	0.59 B	0.37 B	0.55 B	0.73 B	0.94 B	0.84 B	1.6	0.057	390	0.1 - 3.9
Silver	U	U	U	U	0.037 B	0.056 B	0.11 B	0.072 B	0.019	---	---
Thallium	U	U	U	U	U	0.054 B	U	U	0.079	---	---
Zinc	6.4	4.9	5.2	3.6	8.6	14.6	12.6	7.7	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-17A	P-17B	P-17C	P-18A	P-18B	P-18C	P-19A	P-19B			
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(6-8)	(11-12)	(12-14)	(6-8)	(10-12)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
PERCENT SOLIDS	88	98	98	93	58	96	88	89			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	0.044 B	U	0.94 B	U	U	U	0.056	---	---
Arsenic	4.0	0.5 B	0.38 B	3.6	10.4	0.40 B	3.8	4.4	0.076	20	3 - 12*
Beryllium	0.49	0.062 B	0.08 B	0.29	0.55	0.091 B	0.30	0.26	0.0061	---	0 - 1.75
Cadmium	0.16 B	U	U	0.18	20.8	0.042 B	0.26	1.4	0.0055	78	0.1 - 1, (10***)
Chromium	16.2	4.8	3.0	8.3	47	3.6	52.1	29.7	0.014	390	1.5 - 40*, (50***)
Copper	6	2.4	3.8	7.9	700	4.3	7.8	36.3	0.21	---	1 - 50
Lead	8.4	1.0	1.0	9.1	215	1.0	16.2	15.3	0.041	400	200 - 500**
Mercury	0.04	U	0.0065 B	0.022 B	1.3	U	0.039	0.26	0.007	23	0.001 - 0.2
Nickel	9.8	1.0 B	1.0 B	7.5	23.3	1.1 B	4.2	5.0	0.026	---	0.5 - 25
Selenium	2.0	0.58 B	0.41 B	1.3	4.6	0.49 B	2.1	1.2	0.067	390	0.1 - 3.9
Silver	U	0.017 B	0.019 B	0.022 B	54.9	0.027 B	0.11 B	0.47 B	0.019	---	---
Thallium	0.12 B	U	U	U	U	U	U	U	0.079	---	---
Zinc	24.7	3.6	3.6	19.7	869	6.1	28.4	85	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-19C	P-20A	P-20B	P-20C	P-21A	P-21B	P-21C	P-22A			
SAMPLE DEPTH	(12-14)	(2-4)	(11-13)	(13-15)	(6-8)	(10-12)	(12-14)	(4-6)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006	4/21/2006			
PERCENT SOLIDS	95	81	84	84	97	97	98	94			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.061 B	U	U	U	U	U	U	U	0.056	---	---
Arsenic	0.36 B	6.5	1.4	0.45 B	1.7	1.1	0.47 B	2.6	0.076	20	3 - 12*
Beryllium	0.029 B	0.20 B	0.11 B	0.049 B	0.17	0.14 B	0.16 B	0.23	0.0061	---	0 - 1.75
Cadmium	0.031 B	0.090 B	0.068 B	0.019 B	0.17	0.11 B	0.045 B	0.32	0.0055	78	0.1 - 1, (10***)
Chromium	2.6	6.3	4.5	3.3	8.1	7.7	5.6	25.6	0.014	390	1.5 - 40*, (50***)
Copper	1.6	9.1	8.6	3.2	16.2	16.7	8.5	7.4	0.21	---	1 - 50
Lead	0.94	6.7	2.9	0.91	6.0	6.3	1.3	8.3	0.041	400	200 - 500**
Mercury	U	0.10	0.022 B	U	0.063	0.087	0.0095 B	0.027 B	0.007	23	0.001 - 0.2
Nickel	0.87 B	4.4	1.3 B	0.85 B	4.0	2.6	1.5	3.2	0.026	---	0.5 - 25
Selenium	0.48 B	1.1	1.0	0.25 B	0.75 B	0.65 B	0.58 B	1.2	0.067	390	0.1 - 3.9
Silver	U	0.049 B	0.11 B	0.025 B	0.12 B	0.15 B	0.029 B	1.2	0.019	---	---
Thallium	U	0.077 B	U	U	U	U	U	U	0.079	---	---
Zinc	5.2	13.2	6.8	3.9	17.3	11.7	4.8	22.3	0.056	---	9 - 50

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TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-22B	P-22C	P-23A	P-23B	P-23C	P-24A	P-24B	P-24C			
SAMPLE DEPTH	(10-12)	(12-14)	(4-6)	(9-11)	(11-13)	(2-4)	(10-12)	(12-14)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/21/2006	4/21/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006	4/19/2006			
PERCENT SOLIDS	94	97	85	93	84	92	86	100			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.074 B	0.048 B	U	U	U	0.19 B	0.27 B	0.037 B	0.056	---	---
Arsenic	2.2	0.53 B	1.7	1.1	0.52 B	3.5	5.2	0.55	0.076	20	3 - 12*
Beryllium	0.21	0.12 B	0.17 B	0.12 B	0.1 B	0.37	0.25	0.019 B	0.0061	---	0 - 1.75
Cadmium	0.28	0.045 B	0.0085 B	0.0077 B	U	0.17 B	9.6	0.024 B	0.0055	78	0.1 - 1, (10***)
Chromium	20.1	3.8	5.9	9.6	9.6	6.6	83.4	2.8	0.014	390	1.5 - 40*, (50***)
Copper	11.8	8.0	2.9	3.4	3.2	12.3	1,420.0	4.1	0.21	---	1 - 50
Lead	8.1	1.1	2.5	1.4	0.9	10.8	127.0	1.0	0.041	400	200 - 500**
Mercury	0.026 B	U	U	U	0.025 B	0.12	0.01 B	U	0.007	23	0.001 - 0.2
Nickel	3.2	1.3 B	3.1	2.3	1.2 B	5.4	24.4	0.61 B	0.026	---	0.5 - 25
Selenium	1.0	0.52 B	1.3	0.9 B	0.63 B	1.3	2.8	0.42 B	0.067	390	0.1 - 3.9
Silver	0.67 B	0.030 B	U	U	U	0.3 B	12	0.026 B	0.019	---	---
Thallium	U	U	0.15 B	U	U	U	U	U	0.079	---	---
Zinc	54.4	5.5	10.9	6.9	5.0	61.4	555.0	5.8	0.056	---	9 - 50

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: Value exceeds the Site Specific Cleanup Criteria
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TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-25A	P-25B	P-25C	P-26A	P-26B	P-26C	P-27A	P-27B			
SAMPLE DEPTH	(4-6)	(10-12)	(12-14)	(4-6)	(10-12)	(12-14)	(2-4)	(11-12)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
PERCENT SOLIDS	92	91	97	95	97	98	93	86			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.16 B	0.098 B	U	U	U	0.091 B	U	1.5	0.056	---	---
Arsenic	2.3	2.2	0.4 B	3.5	2.3	0.56 B	2.3	9.9	0.076	20	3 - 12*
Beryllium	0.25	0.16 B	0.044 B	0.34	0.2	0.11 B	0.32	0.46	0.0061	---	0 - 1.75
Cadmium	1.8	1.1	0.15 B	0.26	0.27	0.078 B	0.31	[redacted]	0.0055	78	0.1 - 1, (10***)
Chromium	8.0	15.2	2.6	8.9	11.2	5.5	6.1	[redacted]	0.014	390	1.5 - 40*, (50***)
Copper	41.8	42.4	2.5	11	46.7	5.8	9.6	[redacted]	0.21	---	1 - 50
Lead	3.9	16.7	1.1	10.0	14.6	1.3	5.1	291.0	0.041	400	200 - 500**
Mercury	0.088	0.047	U	0.021 B	0.13	U	0.023 B	[redacted]	0.007	23	0.001 - 0.2
Nickel	3.4	2.8	1.0 B	4.9	2.6	0.99 B	4.4	[redacted]	0.026	---	0.5 - 25
Selenium	1.2	0.75 B	0.39 B	1.4	0.85 B	0.58 B	1.2 B	[redacted]	0.067	390	0.1 - 3.9
Silver	0.34 B	0.85 B	0.03 B	0.13 B	0.4 B	0.04 B	0.12 B	22.9	0.019	---	---
Thallium	0.064 B	U	U	0.2 B	U	U	U	U	0.079	---	---
Zinc	[redacted]	[redacted]	14.5	[redacted]	30.7	6.5	44.4	[redacted]	0.056	---	9 - 50

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[redacted] : Value exceeds the Site Specific Cleanup Criteria
[redacted] : Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-27C	P-28A	P-28B	P-28C	P-29A	P-29B	P-29C	P-30A			
SAMPLE DEPTH	(12-14)	(2-4)	(8-9)	(9-11)	(4-6)	(9-11)	(11-13)	(4-6)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006			
PERCENT SOLIDS	98	82	94	84	95	96	80	92			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	0.23 B	U	U	U	0.073 B	U	U	0.056	---	---
Arsenic	0.5 B	4.9	2.7	0.96	0.35 B	0.96	0.6 B	4.7	0.076	20	3 - 12*
Beryllium	0.046 B	0.28	0.17 B	0.34	0.079 B	0.25	0.077 B	0.62	0.0061	---	0 - 1.75
Cadmium	0.082 B	0.21 B	0.24	0.2 B	0.13 B	1.3	0.078 B	0.37	0.0055	78	0.1 - 1, (10***)
Chromium	4.2	8.3	13.1	4.2	5.8	5.4	7.7	9.7	0.014	390	1.5 - 40*, (50***)
Copper	4.8	6.3	7.4	17.9	37.0	113.0	12.7	3.8	0.21	---	1 - 50
Lead	1.3	6.5	9.1	3.6	5.4	2.0	1.3	4.4	0.041	400	200 - 500**
Mercury	0.011 B	0.028 B	0.01 B	0.030 B	0.2	0.064	0.016 B	0.0082 B	0.007	23	0.001 - 0.2
Nickel	0.81 B	7.0	4.0	1.3 B	1.2 B	2.5	0.97 B	8.5	0.026	---	0.5 - 25
Selenium	0.48 B	1.3	1.1	1.2 B	0.36 B	0.43 B	0.55 B	2.3	0.067	390	0.1 - 3.9
Silver	0.048 B	0.28 B	0.29 B	0.034 B	0.69 B	0.12 B	0.043 B	0.06 B	0.019	---	---
Thallium	U	U	U	U	U	U	U	U	0.079	---	---
Zinc	9.5	18.1	12.0	8.2	15.2	90.3	5.9	29.4	0.056	---	9 - 50

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TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-30B	P-30C	P-31A	P-31B	P-31C	P-32A	P-32B	P-32C			
SAMPLE DEPTH	(8-10)	(10-12)	(4-6)	(10-12)	(12-14)	(2-4)	(10-12)	(14-16)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/20/2006	4/21/2006	4/21/2006	4/21/2006			
PERCENT SOLIDS	822	95	97	94	97	85	87	100			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	0.067 B	U	0.042 B	U	U	U	U	0.056	---	---
Arsenic	2.2	0.52 B	1.8	3.0	0.55 B	3.4	1.5	1.2	0.076	20	3 - 12*
Beryllium	0.63	0.0088 B	0.23	0.32	0.14 B	0.35	0.15 B	0.048 B	0.0061	---	0 - 1.75
Cadmium	0.22	0.045 B	0.23	3.6	0.032 B	0.18 B	0.085 B	0.024 B	0.0055	78	0.1 - 1, (10***)
Chromium	13.1	6.1	11.4	13.4	3.5	6.8	5.1	29.1	0.014	390	1.5 - 40*, (50***)
Copper	9.7	1.5	4.6	240	8.1	7.8	8.6	6.4	0.21	---	1 - 50
Lead	6.2	0.84	6.3	43.7	1.8	9.3	5.4	1.4	0.041	400	200 - 500**
Mercury	U	U	0.018 B	0.27	0.011 B	0.022 B	0.048	0.025 B	0.007	23	0.001 - 0.2
Nickel	9.2	1.1 B	2.9	6.4	1.9	6.2	2.7	1.9	0.026	---	0.5 - 25
Selenium	1.2	0.76 B	1.1	1.3	0.56 B	1.3	0.63 B	0.58 B	0.067	390	0.1 - 3.9
Silver	0.03 B	0.025 B	0.31 B	2.0	0.032 B	0.12 B	0.18 B	0.063 B	0.019	---	---
Thallium	0.22 B	U	U	0.32 B	U	U	U	U	0.079	---	---
Zinc	33.9	3.9	14.4	202	7.2	74.8	21.6	3.6	0.056	---	9 - 50

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TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	P-33A	P-33B	P-33C	P-34B	P-34C	E12B-51A	E12B-51B	E12B-51C			
SAMPLE DEPTH	(6-8)	(9-11)	(11-13)	(11-12)	(12-14)	(0-2)	(14-16)	(16-18)	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/19/2006	4/19/2006	4/19/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006			
PERCENT SOLIDS	98	97	95	98	97	96	98	96			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	U	U	0.063 B	0.042 B	U	0.11 B	U	0.056	---	---
Arsenic	1.1	1.7	5.5	1.7	0.85	2.4	0.6 B	0.59 B	0.076	20	3 - 12*
Beryllium	0.096 B	0.16 B	0.036 B	0.087 B	0.067 B	0.16 B	0.058 B	0.12 B	0.0061	---	0 - 1.75
Cadmium	0.017 B	0.02 B	U	0.15 B	0.077 B	0.15 B	0.62	0.03 B	0.0055	78	0.1 - 1, (10***)
Chromium	4.3	5.7	3.3	5.6	4.1	9.6	21.3	4.6	0.014	390	1.5 - 40*, (50***)
Copper	13.0	11	5.6	7.0	2.6	21.1	132	11.5	0.21	---	1 - 50
Lead	3.9	3.9	2.0	2.9	1.2	4.0	7.8	2.0	0.041	400	200 - 500**
Mercury	0.086	0.043	0.027 B	0.013 B	U	0.075	0.32	0.0083 B	0.007	23	0.001 - 0.2
Nickel	1.6 B	2.5	1.4 B	1.7 B	0.93 B	3.3	2.3	1.7 B	0.026	---	0.5 - 25
Selenium	0.7 B	0.79 B	0.89 B	0.51 B	0.49 B	1.3	1.0 B	0.37 B	0.067	390	0.1 - 3.9
Silver	0.18 B	0.14 B	0.091 B	0.11 B	0.028 B	1.5	8.8	0.083 B	0.019	---	---
Thallium	U	U	U	U	U	0.27 B	U	U	0.079	---	---
Zinc	7.6	13.1	3.2	18.8	10.7	15.4	507	6.0	0.056	---	9 - 50

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TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3										
SAMPLE ID	E12B-54B	E12B-54C	E13B-28A	E13B-28B	E13B-28C	E13B-38A	E13B-38B	E13B-38C			
SAMPLE DEPTH	(11.5-13.5)	(14-16)	(2-4)	(10-12)	(12-14)	(4-6)	(9-11)	(12-14)	INSTRUMENT	SITE SPECIFIC	EASTERN USA
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/17/2006	4/17/2006	4/17/2006	DETECTION	CLEANUP	BACKGROUND
PERCENT SOLIDS	71	96	92	97	97	87	86	98	LIMIT	CRITERIA	LEVELS
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.17 B	0.13 B	U	U	0.044 B	U	U	U	0.056	---	---
Arsenic	6.7	0.3 B	5.7	0.38 B	1.0	3.4	7.8	0.3 B	0.076	20	3 - 12*
Beryllium	0.37	0.062 B	0.48	0.078 B	0.19	0.37	0.35	0.032 B	0.0061	---	0 - 1.75
Cadmium	11.5	0.013 B	0.2	0.013 B	0.063 B	U	1.2	U	0.0055	78	0.1 - 1, (10***)
Chromium	32.1	1.6	21.2	2.3	2.9	6.5	11.2	2.1	0.014	390	1.5 - 40*, (50***)
Copper	1270.0	3.3	10.7	6.2	13.6	8.2	128.0	1.9	0.21	---	1 - 50
Lead	101.0	0.93	18.5	1.7	1.7	12.9	23	1.1	0.041	400	200 - 500**
Mercury	4.4	0.0086 B	0.043	0.069	0.014 B	0.018 B	0.83	U	0.007	23	0.001 - 0.2
Nickel	9.7	0.8 B	7.1	1.3 B	1.2 B	4.4	10.7	0.6 B	0.026	---	0.5 - 25
Selenium	2.6	0.24 B	1.5	0.36 B	0.68 B	0.42 B	0.64 B	0.12 B	0.067	390	0.1 - 3.9
Silver	23.5	U	0.053 B	0.036 B	0.033 B	U	0.86 B	U	0.019	---	---
Thallium	U	U	U	U	U	0.74 B	0.98	0.2 B	0.079	---	---
Zinc	654.0	3.0	17.9	9.3	6.6	21.2	115.0	2.3	0.056	---	9 - 50

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Notes:
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: Value exceeds the Site Specific Cleanup Criteria
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TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3					AOC 4					
SAMPLE ID	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C	AOC 4-1	AOC 4-1	AOC 4-2			
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)	0-2'	2'-4'	0-2'	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	12/7/2005	12/7/2005	12/7/2005			
PERCENT SOLIDS	87	96	96	96	96	93	95	89			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.056 B	0.088 B	U	0.19 B	0.059 B	0.18 B	U	U	0.056	---	---
Arsenic	13.9	0.42 B	0.38 B	0.82	0.56 B	3.6	2.2	1.9	0.076	20	3 - 12*
Beryllium	1.2	0.031 B	0.04 B	0.045 B	0.052 B	0.46	0.079 B	0.15 B	0.0061	---	0 - 1.75
Cadmium	0.35	0.006 B	0.0091 B	0.88	0.040 B	0.36	0.36	0.5	0.0055	78	0.1 - 1, (10***)
Chromium	9.7	2.3	3.3	3.1	2.7	35.2	5.2	6.3	0.014	390	1.5 - 40*, (50***)
Copper	33.6	2.6	3.5	24.6	2.5	34.3	12.2	88.1	0.21	---	1 - 50
Lead	16.1	1.1	0.95	9.7	1.4	11.9	7	4.4	0.041	400	200 - 500**
Mercury	0.017 B	U	U	0.02 B	U	U	0.041	0.0073 B	0.007	23	0.001 - 0.2
Nickel	24.0	0.86 B	1.1 B	1.5 B	1.1 B	2.1 B	3.1	4	0.026	---	0.5 - 25
Selenium	2.0	0.51 B	0.49 B	0.53 B	0.64 B	U	U	U	0.067	390	0.1 - 3.9
Silver	0.096 B	0.018 B	0.014 B	0.22 B	0.027 B	U	0.48 B	0.51 B	0.019	---	---
Thallium	0.67 B	U	U	U	U	0.98 B	0.47 B	0.67 B	0.079	---	---
Zinc	43.1	2.9	2.9	75.8	7.7	39.3	16.8	261	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 4							AOC 5			
SAMPLE ID	AOC 4-2	AOC 4-3	AOC 4-3	AOC 4-4	AOC 4-4	AOC 4-5	AOC 4-5	AOC 5A			
SAMPLE DEPTH	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'	2'-4'	0-2'	INSTRUMENT	SITE SPECIFIC	EASTERN USA
DATE OF COLLECTION	12/7/2005	12/7/2005	12/7/2005	12/7/2005	12/7/2005	12/7/2005	12/7/2005	12/7/2005	DETECTION	CLEANUP	BACKGROUND
PERCENT SOLIDS	84	93	93	71	89	87	76	90	LIMIT	CRITERIA	LEVELS
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	U	0.42 B	U	U	U	U	U	U	0.056	---	---
Arsenic	4.5	2.9	2.2	2.1	1.1	2.8	2.6	1.8	0.076	20	3 - 12*
Beryllium	0.19 B	0.14 B	0.029 B	0.17 B	0.091 B	0.18 B	0.3 B	0.12 B	0.0061	---	0 - 1.75
Cadmium	1	1.3	1.1	0.41	0.26 B	0.6	0.53	U	0.0055	78	0.1 - 1, (10***)
Chromium	17.5	334	46	5.1	3.2	13.2	8.7	5.8	0.014	390	1.5 - 40*, (50***)
Copper	30	241	53.5	21.2	7.4	28.5	18.2	4.8	0.21	---	1 - 50
Lead	8.5	36.7	5.7	6.3	2.6	5.7	7.1	2.5	0.041	400	200 - 500**
Mercury	0.0079 B	0.046	0.0095 B	0.031 B	0.014 B	0.036	0.017 B	U	0.007	23	0.001 - 0.2
Nickel	7.9	173	26.8	3 B	2.1 B	6.7	4.7	2.7 B	0.026	---	0.5 - 25
Selenium	U	U	U	U	U	U	U	0.91 B	0.067	390	0.1 - 3.9
Silver	1.7	1.4 B	3.1	0.39 B	0.23 B	0.84 B	0.66 B	0.098 B	0.019	---	---
Thallium	0.18 B	0.37 B	0.45 B	0.62 B	0.34 B	0.76 B	0.73 B	0.37 B	0.079	---	---
Zinc	41.9	125	460	25.7	12	25.8	27.2	26	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION	AOC 3					AOC 4					
SAMPLE ID	E13B-39A	E13B-39B	E13B-39C	E13B-40B	E13B-40C	AOC 4-1	AOC 4-1	AOC 4-2			
SAMPLE DEPTH	(2-4)	(12-14)	(14-16)	(12-14)	(14-16)	0-2'	2'-4'	0-2'	INSTRUMENT DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	EASTERN USA BACKGROUND LEVELS
DATE OF COLLECTION	4/24/2006	4/24/2006	4/24/2006	4/24/2006	4/24/2006	12/7/2005	12/7/2005	12/7/2005			
PERCENT SOLIDS	87	96	96	96	96	93	95	89			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.056 B	0.088 B	U	0.19 B	0.059 B	0.18 B	U	U	0.056	---	---
Arsenic	13.9	0.42 B	0.38 B	0.82	0.56 B	3.6	2.2	1.9	0.076	20	3 - 12*
Beryllium	1.2	0.031 B	0.04 B	0.045 B	0.052 B	0.46	0.079 B	0.15 B	0.0061	---	0 - 1.75
Cadmium	0.35	0.006 B	0.0091 B	0.88	0.040 B	0.36	0.36	0.5	0.0055	78	0.1 - 1, (10***)
Chromium	9.7	2.3	3.3	3.1	2.7	35.2	5.2	6.3	0.014	390	1.5 - 40*, (50***)
Copper	33.6	2.6	3.5	24.6	2.5	34.3	12.2	881	0.21	---	1 - 50
Lead	16.1	1.1	0.95	9.7	1.4	11.9	7	4.4	0.041	400	200 - 500**
Mercury	0.017 B	U	U	0.02 B	U	U	0.041	0.0073 B	0.007	23	0.001 - 0.2
Nickel	24.0	0.86 B	1.1 B	1.5 B	1.1 B	2.1 B	3.1	4	0.026	---	0.5 - 25
Selenium	2.0	0.51 B	0.49 B	0.53 B	0.64 B	U	U	U	0.067	390	0.1 - 3.9
Silver	0.096 B	0.018 B	0.014 B	0.22 B	0.027 B	U	0.48 B	0.51 B	0.019	---	---
Thallium	0.67 B	U	U	U	U	0.98 B	0.47 B	0.67 B	0.079	---	---
Zinc	43.1	2.9	2.9	75.8	7.7	39.3	16.8	261	0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
[ ] : Value exceeds the Site Specific Cleanup Criteria
[ ] : Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-5 (continued)
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
METALS

SAMPLE LOCATION											
SAMPLE ID	AOC 5A	AOC 5B	AOC 5B						INSTRUMENT	SITE SPECIFIC	EASTERN USA
SAMPLE DEPTH	2'-4'	13'-15'	15'-17'						DETECTION	CLEANUP	BACKGROUND
DATE OF COLLECTION	12/7/2005	12/7/2005	12/7/2005						LIMIT	CRITERIA	LEVELS
PERCENT SOLIDS	95	94	98								
UNITS	(mg/kg)	(mg/kg)	(mg/kg)						(mg/kg)	(mg/kg)	(mg/kg)
Antimony	0.12 B	U	0.081 B						0.056	---	---
Arsenic	1.3	0.4 B	0.31 B						0.076	20	3 - 12*
Beryllium	0.1 B	U	0.085 B						0.0061	---	0 - 1.75
Cadmium	U	0.53	0.38						0.0055	78	0.1 - 1, (10***)
Chromium	5.1	11.1	2.8						0.014	390	1.5 - 40*, (50***)
Copper	5.5	8.8	6.5						0.21	---	1 - 50
Lead	3.1	0.96	0.69						0.041	400	200 - 500**
Mercury	U	U	U						0.007	23	0.001 - 0.2
Nickel	2.9	1.8 B	1 B						0.026	---	0.5 - 25
Selenium	0.76 B	U	U						0.067	390	0.1 - 3.9
Silver	0.046 B	0.58 B	0.10 B						0.019	---	---
Thallium	0.73 B	0.45 B	0.089 B						0.079	---	---
Zinc	31.2	25	43.5						0.056	---	9 - 50

Qualifiers:
U: Analyte analyzed for but not detected.
B: Analyte concentration is less than the CRDL, but greater than the IDL.
NA: Not Analyzed

Notes:
--- : Not established.
* : New York State Background.
** : Background for metropolitan or suburban areas.
*** : Proposed revised criteria in TAGM 4046 Appendix A.
: Value exceeds the Site Specific Cleanup Criteria
: Value exceeds the Eastern USA Background Level or Recommended Soil Cleanup Objective.

TABLE C-6
NORTHROP GRUMMAN CORPORATION
BUILDING 23 PHASE II SITE ASSESSMENT
SOIL SAMPLING RESULTS
SELECT GLYCOLS

SAMPLE LOCATION	AOC 4						CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE IDENTIFICATION	AOC 4-1	AOC 4-1	AOC 4-2	AOC 4-2	AOC 4-3	AOC 4-3			
SAMPLE DEPTH	0-2'	2'-4'	0-2'	2'-4'	0-2'	2'-4'			
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005	12/07/2005			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Ethylene Glycol	U	3.2 J	U	U	U	U	5.2	---	---

SAMPLE LOCATION	AOC 4						CONTRACT REQUIRED DETECTION LIMIT	SITE SPECIFIC CLEANUP CRITERIA	TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES
SAMPLE IDENTIFICATION	AOC 4-4	AOC 4-4	AOC 4-5	AOC 4-5					
SAMPLE DEPTH	0-2'	2'-4'	0-2'	2'-4'					
DATE OF COLLECTION	12/07/2005	12/07/2005	12/07/2005	12/07/2005					
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			(mg/kg)	(mg/kg)	(mg/kg)
Ethylene Glycol	U	U	U	U			5.2	---	---

Qualifiers:
U: Constituent analyzed for but not detected.
J: Constituent concentration found below CRDL, value estimated.

Notes:
---- : Not established.
: Value exceeds the Site Specific Cleanup Criteria.
: Value exceeds the Recommended Soil Cleanup Objective.

Appendix D

APPENDIX D

CORRESPONDENCE

New York State Department of Environmental Conservation
Division of Solid & Hazardous Materials
Bureau of Radiation & Hazardous Site Management
50 Wolf Road, Albany, NY 12233-7252
Phone: (518) 457-9255 FAX: (518) 457-9240

FILE

John P. Cahill
Commisioner

Mr. John Cofman
Lead Manager
Environmental Technology and Compliance
MS:D08-001
Northrop Grumman Corporation
South Oyster Bay Rd
Bethpage, New York 11714-3582

Dear Mr. Cofman:

Re: Remediation Plan - Plant 5 (Focused CMS)
Northrop Grumman Corp.
Bethpage, Nassau County

This office and the NYS Department of Health have reviewed the Northrop Grumman Corporation (NGC) Remediation Plan - Plant 5 (Focused CMS) dated March 2, 1999, to remediate areas of contamination at the Plant 5 facility in Bethpage. The review also included portions of the Phase I and Phase II Site Assessment Reports for Plant 5, the Phase I/II Site Assessment Report for the Structural Test Hangars, the Plant 05 Drainage Discharge Determination Report, and data from the 1993 Plant 5 Site Registry Delisting Petition. Enclosed are specific comments on the Remediation Plan - Plant 5. At this time our review of the Phase I and II Reports will be considered incomplete until all QA/QC data has been received and reviewed. Comments relating to the Phase I and II Reports will be sent separately.

Based on the review of the aforementioned documents we agree with the proposal to remove contaminated concrete and/or soil from one interior and several exterior areas. This includes AOC: Former Alodine Room, Air/Electric Pits West of Shuttle Wing Hangar and High Bay 1, Former Sanitary Leaching Pools West of Plant 5, Area North of Electrical Switch Gear and Heat Exchanger Building, Pit in the Hydraulic Laboratory and Dry Well in Pipe Trench in South Structural Test Hangar. Where the remedial activities cannot achieve Division of Environmental Remediation (DER) TAGM 4046 soil cleanup objectives for unrestricted site use the residual contamination must remain covered or be covered with clean fill and/or pavements. Since the long-term plan for this facility is light industrial and commercial used appropriate deed restrictions must be used to prevent exposures to subsurface contaminants.

Based on this understanding, the proposed Remediation plan will be protective of public health. This is contingent upon successful removal of all groundwater contaminant sources through the Underground Injection Control (UIC) program and implementation of deed restrictions. The deed restrictions for Plant 5 should contain the same provisions used in the Plant 2 deed restriction relative to subsurface activities (i.e., Maintenance of a Containment System or Cap). The restrictions should also prohibit use of the site for residential or day care/preschool activities unless reviewed and approved by the Department of Health to ensure that appropriate requisite measures are taken to prevent exposure to residual contaminants. Additionally, periodic groundwater samples should be collected from downgradient monitoring wells and tested for those contaminants not remediated to DER TAGM 4046 cleanup objectives. This should be specified in the long-term site-wide monitoring plan for the Northrop Grumman Bethpage facility.

Should you have any questions regarding the contents of this letter, please do not hesitate to contact me or Henry Wilkie at (518) 457-9255.

Sincerely,

Steve Kaminski

Steve Kaminski
Supervisor
Eastern Engineering Section
Bureau Radiation and Hazardous Site Management
Division of Solid and Hazardous Materials

cc: J. Reidy, EPA Region II
A. Cava, Region 1
S. Farkas, Region 1
S. Scharf, DER
S. McCormick, DER
S. Bates/W. Gilday, NYSDOH

Specific Comments on the Remediation Plan - Plant 05

1 Table 4 of the Plan provides a very useful summary of the location, magnitude, and description of residual contaminants. This Table can serve as the historic record of remaining contamination. For this reason, all sample locations with contaminants exceeding the TAGM 4046 SVOCs (and not otherwise proposed for remediation as, for example, per the UIC program) should be included in Table 4. As discrete AOCs are remediated, these can be deleted from the list.

2 A separate Table should be prepared listing those sample locations exceeding the TAGM 4046 SCOs and proposed for remediation under the UIC program. If specific locations are not ultimately remediated to TAGM 4046 SVOCs, these can be added to Table 4.

3 The High Voltage Area borings (I18B01 and I18B01A) and Unverified Former Sanitary Leach Pool borings E13B01, E13B02, E13B03 and E13B26 appear to have been inadvertently left out of Table 4.

4 The Structural Test Hangar borings with elevated concentrations of contaminants should be included in Table 4.

5 TAGM 4046 does not present a criteria/comparison value of 10,000 µg/kg for CaPAHs. The statement to this effect on page 13 and Footnote 2 to Table 1 should be deleted.

6 The explanation of Table 1 values (bottom of page 3) does not appear accurate. Very few of the Table 1 values are consistent with the TAGM 4046 SVOCs or other SVOCs used by New York State. Many of the numbers are similar to those presented in the USEPA Region III Risk-Based Concentration tables.

7 The Plan references (page 13) screening levels of 10 mg/kg for caPAHs and 100 mg/kg for total PAHs used at the Buffalo Outer Harbor site and then inappropriately refers (pages 14 and 15) to these same values as cleanup levels. The selected remedy for the Buffalo Outer Harbor site relied upon one cleanup level (for nitrobenzene, the primary contaminant of concern). The remedy for that site also incorporates deed/site use restrictions.

8 The Plan refers to NYSDEC-approved soil cleanup levels of 10 mg/kg for caPAHs and 100 mg/kg for total PAHs at the Plant 3 site. The ROD for the NWIRP (Plant 3) Bethpage facility Sites 1, 2, and 3 dated May 1995, Table 1 Remedial Action Levels for Contaminated Soils, lists the CRQL/CRDLs as the remedial Objectives for the eight PAHs listed as chemicals of concern. Where these (0.33 mg/kg for each) objectives were not achieved, Sections 5.0 and 7.0

and Table 3 of that ROD note that cover and deed restrictions will be required to prevent human exposure to residual contamination.

9 The Plan states (page 2) that the remedial objective for soil in an industrial setting in Long Island "...can be simplified to protecting groundwater quality and preventing dermal exposure to surface soil." Protection of indoor air quality is also an important objective at VOC-contaminated sites.

10 The statement at the bottom of page 2 references systemic toxicants as the basis for the TAGM 4046 soil cleanup criteria. Carcinogenicity is also reflected in the health-based values and the criteria also consider background concentrations and analytical detection limits.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

June 14, 2001

Mr. Larry L. Leskovjan, Manager
Environmental Technology and Compliance
M/S: D08-01
Northrup Grumman Corporation
South Oyster Bay Road
Bethpage, New York 11714

Re: Plant 5 Facility
Northrup Grumman Corporation
Bethpage, New York

Dear Mr. Leskovjan:

The Ground Water Compliance Section of the U.S. Environmental Protection Agency (EPA) has reviewed the copies of the laboratory reports submitted with Northrup Grumman Corporation's May 29 letter to EPA. The laboratory reports contained the results of analyses of endpoint soil samples collected from excavated dry wells at the above-referenced site. The dry wells were identified by Northrup Grumman as:

239	Covered Dry Well in Fatigue Test Area
DWA85	Dry Well Adjacent to Wyle Chamber Building
DW210	Dry Well in Pipe Trench Adjacent to Liquid Nitrogen Tank
A62	Pit Under Stairway
SLP188	Leaching Pool Adjacent to Pilots Ready Room
DWA87	Dry Well Adjacent to Northeast Corner of Plant 5
209	Floor Drain in Condensate Vault North of Kitchen
208	Sanitary Leaching Pool Adjacent to Sewage Pump Station
207	Sanitary Leaching Pool Adjacent to Sewage Pump Station
206	Sanitary Leaching Pool Adjacent to Sewage Pump Station
205	Sanitary Leaching Pool Adjacent to Sewage Pump Station
CP230	Floor Drain in Steam Condensate Pit
CP65	Floor Drain in Steam Condensate Pit
A18	Access Pit in Optical Comparator Area
A88	Access Pit in Human Resources Training
112	Floor Drain in OAO Hanger
110	Ground Pit in Blue Room
109	Ground Pit in Blue Room
73	Dry Well in High Voltage Crew Area
71	Floor Drain in Steam Condensate Pit
A35	Four-Inch Penetration in Condensate Closet

EPA requires no further remediation of the dry wells. The dry wells must be backfilled with clean sand or soil and sealed, and this closure of the dry wells must be reported to EPA in a letter including the dates of the dry-well closures, a description of the material that was used to backfill the wells, and a description of the method of sealing the wells including the material used as the seal (for example, concrete) and the seal's approximate thickness.

If you have any questions, please call Dermott Courtney of my staff at (212) 637-4228.

Sincerely,

Derval Thomas, Acting Chief
Ground Water Compliance Section

cc: Bruce Mackay, NCDH
Paul Kolakowsky, NYSDEC