CITY OF NAPLES
PURCHASING DIVISION
CITY HALL, 735 8TH STREET SOUTH
NAPLES, FLORIDA 34102
PH: 239-213-7100 FX: 239-213-7105

ADDENDUM NUMBER 2

NOTIFICATION DATE:	BID TITLE:	BID NUMBER:	BID OPENING DATE & TIME:
05/01/14	RFQ for Jay and Patty Baker Park Project	14-040	05/09/14 2:00PM

THE FOLLOWING INFORMATION IS HEREBY INCORPORATED INTO, AND MADE AN OFFICIAL PART OF THE ABOVE REFERENCED BID.

The following additional information is provided for the referenced solicitation from received written questions:

1. Has the FDEP officially signed off on arsenic in soil concerns at the Site?

ANSWER: The City does not have data that would indicate there are arsenic concerns at the site.

2. Can you provide copies of the analytical data generated by MACTEC? No analytical data is attached to the documents provided in the bid package, or in OCULUS. This data is needed to determine appropriate language to include in the soil management plan for future earthwork activity at the site, and to evaluate potential exposure concerns for future patrons of the facility. Additionally, review of this data may identify the need for further assessment activity, and/or preparation of a risk based closure.

Answer: MACTEC Data is attached.

3. Has the Florida Department of State signed off on the cultural resource survey for the Site?

ANSWER: Unknown

4. Generally, a submerged land lease is required with bridge/dock construction over sovereign waters of the State. Has a lease agreement been negotiated with the State?

ANSWER: Not at this time.

5. Please clarify the discrepancy between project related experience as indicated on Page 10 vs Page 19. Page 10 indicates projects of similar scope conducted within the last 2 years, while page 19 indicates projects completed with the last 5 years.

ANSWER: Please provide both. Page 10 is indicating general firm references, while page 19 is requesting client reference for your specifically assigned Project Manager / Major Task Leader as an indicator of ability.

IMPORTANT MESSAGE

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID COVER SHEET.

6. Does selection as design engineering firm preclude the selected firm from bidding on actual construction of the facility?

ANSWER: Undetermined at this time.

Please find below:

EXHIBIT A – Test Pit Observations and Soil and Ground Water Testing
EXHIBIT B – Preliminary Geotechnical Evaluation

IMPORTANT MESSAGE

PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID COVER SHEET.

EXHIBIT A

REPORT OF ENVIRONMENTAL CONSULTING SERVICES
TEST PIT OBSERVATIONS AND
SOIL AND GROUND WATER TESTING

PROPOSED PULLING LANDING PARK

Naples, Collier County, Florida

— Prepared For —

THE CITY OF NAPLES

— Prepared By —

MACTEC Engineering and Consulting, Inc.
Naples, Florida

MACTEC Project 6787-04-4060

July 2, 2004

July 2, 2004

Mr. Ron Wallace
CITY OF NAPLES - ENGINEERING
295 Riverside Circle
Naples, Florida 34102
(239) 213-5000

Subject: Report of Environmental Consulting Services
PROPOSED PULLING LANDING PARK
Goodlette-Frank Road
Naples, Collier County, Florida
MACTEC Project 6787-04-4060

Dear Mr. Wallace:

MACTEC Engineering and Consulting, Inc. (MACTEC), is pleased to submit this report of environmental consulting services. Our services were performed in accordance with MACTEC Proposal MIAM-04-39 dated January 19, 2004, and authorized by you on April 30, 2004.

This report is intended for the use of the City of Naples, under the contractual terms of our Proposal. Reliance on this document by any other party is forbidden without the express written consent of MACTEC, and that party's acceptance of mutually agreeable terms and conditions consistent with those on our Agreement for Secondary Client. Use of this report for purposes beyond those reasonably intended by the City of Naples and MACTEC will be at the sole risk of the user.

We appreciate the opportunity to provide our professional services for this project. Please contact us if you have questions or if we may be of further assistance.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Thomas D. Bates, E.I.
Project Professional

Jo C. Tucker, P.E.
Principal Engineer
Florida Registration 46950

TDB/JCT:6787-04-4060

1.0 SUMMARY

PROPOSED PULLING LANDING PARK

Test Pit Observations and Soil and Ground WaterTesting
City of Naples, Collier County, Florida

MACTEC Engineering and Consulting, Inc. (MACTEC) observed excavations at twelve test pits, screened soil samples for soil gases, and collected twelve soil samples and four ground water samples for laboratory analysis. The project was conducted in accordance with MACTEC Proposal MIAM-04-39 dated January 19, 2004. This summary is provided for convenience. The remainder of this report should be reviewed for purpose, scope, methodology and limitations.

Findings

The test pit observations indicate that buried waste, composed primarily of organic horticultural waste, is present over most of the site. The depth, quantity and thickness of debris varied with location. The deepest debris extends to a depth of 18 feet or more. One pit (Pit 4) contained a significant amount of construction debris.

A soil gas survey was performed by measuring hydrocarbon vapors with an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID). The soil screening indicated that methane was present in soil in nearly all tested locations. In most locations the methane concentrations exceeded 1000 parts per million (ppm), which was the upper limit of the instrument's readout scale. Another instrument with a greater measurement capacity would be necessary to further quantify methane concentrations.

A total of twelve soil samples were collected for laboratory analysis from the upper 2 feet of soil. The results of the soil analytical results indicate arsenic concentrations exceed the current residential direct exposure Soil Cleanup Target Level (SCTL) in four of twelve locations. None of the sample results exceed the current commercial use arsenic SCTL. The Florida Department of Environmental Protection (FDEP) recently reevaluated the arsenic SCTLs; however, the new SCTLs were not in effect at the time of this report. If the results are compared with the proposed revisions, none of the sample results exceed the proposed residential SCTL.

Four ground water samples for laboratory analyses were collected with a direct push unit. Each sample was analyzed for the EPA Priority Pollutant List. The ground water contaminants detected by the laboratory methods did not exceed their respective state Ground Water Cleanup Target Levels (GCTLs).

Recommendations

Based on the data collected for this project, further assessment of soil and ground water is not warranted at this time.

Based on the OVA screening and experience with other properties in the area, we expect relatively high levels of methane gas over most of the site. Under certain circumstances methane gas may accumulate in structures to explosive or ignitable levels. Therefore, methane is a concern for potential structures on the property. We understand the buildings proposed for the site are small non-enclosed structures, such as gazebos and restrooms. We recommend that the restrooms are well ventilated. If enclosed buildings may be constructed in the future we recommend construction includes methane mitigation measures, both during construction and for any proposed enclosed buildings.

The buried waste presents geotechnical issues regarding site development and construction. A preliminary evaluation of the geotechnical considerations will be submitted under separate cover.

The Florida Department of Environmental Protection (FDEP) published a guidance document titled *Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida.* If the site will be disturbed beyond simple structures, paving, and landscaping, consideration should be given to using this document as guidance during future development of the site.

2.0 INTRODUCTION

The subject site is east of Goodlette-Frank Road, near Central Avenue, within the City of Naples. The site is located east of Riverside Drive near the existing City of Naples Solid Waste Division facility. The site lies on the west bank of the Gordon River. The site was previously used as a landfill; the northern portion of the site was reportedly excavated down to bedrock and backfilled with horticultural waste, and the southern half may have been randomly filled with unknown constituents. The City proposes to make a park at the site and requested we evaluate potential soil and ground water contamination from the buried waste on the site

MACTEC provided the City with Proposal MIAM-04-39, dated January 19, 2004, which set forth a proposed scope of services for the project. Mr. Ron Wallace, from the City of Naples, accepted MACTEC's proposal on April 30, 2004.

This report is intended for the exclusive use of the City of Naples, under the terms and conditions of our proposal. The contents of this report should not be relied upon by other parties without the express written consent of MACTEC. If other parties wish to rely on this report, please have them contact us so that a mutual understanding of and agreement on the terms and conditions for our services can be established prior to their use of this information.

3.0 PURPOSE AND SCOPE

The purpose of the project was to visually evaluate subsurface soils at the site for evidence of fill materials, and particularly for evidence of wastes that may cause soil or ground water contamination or may generate landfill gases. MACTEC also collected samples for laboratory analysis and screened samples for hydrocarbon vapors.

The scope of services outlined in MACTEC's Proposal MIAM-04-39 was as follows:

- Excavate ten to twelve test pits to observe and document the subsurface materials.
- Use test pit information to provide a brief evaluation of geotechnical considerations related to development of parking lots and small structures (e.g., gazebos).
- Use an Organic Vapor Analyzer (OVA) to screen selected samples of the exposed soils to provide an approximate measurement of hydrocarbon vapors, including methane.
- Obtain ten to twelve soil samples from the surface and near-surface soils to be laboratory analyzed for total residual petroleum hydrocarbons (TRPH) and the eight RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium).
- Collect four ground water samples using a geoprobe direct push unit to be laboratory analyzed for the Priority Pollutants.

Please note that this report is not suitable for geotechnical evaluation or foundation analysis, except as indicated in relevant sections of the report text. The project was preliminary in nature and not intended to satisfy regulatory requirements for a contamination assessment.

4.0 METHODS AND PROCEDURES

Field activities at the site included the excavation of observation pits, the collection of soil and ground water samples for laboratory analysis and the collection and screening of soil samples in the field. Decontamination and sampling procedures were performed in general accordance with the Florida Department of Environmental Protection (FDEP) *Standard Operating Procedures for Field Activities* (DEP-SOP-001/01) dated January 1, 2002.

4.1 OBSERVATION PITS

Twelve observation pits were excavated with a trackhoe to depths of approximately 16 to 18 feet below land surface (bls), or to the apparent vertical extent of buried material. Eighteen feet was the practical limit of excavation.

4.2 SOIL GAS SCREENING

The soil gas screening was performed on the site with a Foxboro 128 Organic Vapor Analyzer (OVA) equipped with a flame ionization detector (FID). The soil screening was performed in accordance with methods outlined in Chapter 62-770 Florida Administrative Code (FAC). The OVA calibration was checked at the work site after the instrument warmed to operating temperature by comparing OVA readings to a known concentration of methane. The OVA reading was adjusted to approximately 95 ppm while measuring a known 95 ppm methane calibration gas.

MACTEC collected duplicate soil samples for OVA screening at each screening location. The first sample was screened to obtain a total reading. The OVA responds to a range of volatile compounds. In order to isolate the methane and other non-petroleum components the second sample was screened with a charcoal filter, which filters out most petroleum hydrocarbons but allows methane and ethane to pass through to the OVA. Therefore, the filtered reading is assumed to represent primarily methane gas. Fresh charcoal was placed in the filter to avoid potential residual effects from previous instrument use.

4.3 SOIL SAMPLING

Soil samples were placed into clean containers supplied by the laboratory. Clean powder-free latex or nitrile gloves were worn for handling the sample material when filling sample containers. The gloves were changed before handling each sample. The pit samples were collected from the pit sidewalls.

Laboratory analytical services were provided by Severn Trent Laboratories in Miramar, Florida (STL-Miami). The samples were temporarily held in on ice in the field until packed in an ice-filled cooler and shipped overnight to STL-Miami.

4.4 GROUND WATER SAMPLING

Ground water samples were collected from four locations on the site using GeoProbe® direct push technology. A 4-foot ground water sampler was advanced to approximately 20 to 24 feet below surface with the use of a hydraulically driven hammer. A wire-bound stainless steel screen with a slot width of 0.004 inches (0.1 mm) was then deployed at the desired sampling depth. A 3/8-inch O.D. polyethylene tube was inserted into the sampler and lowered to the bottom of the rod string. Development and sampling were accomplished by connecting the tubing to a low-flow peristaltic pump. The pump and well tubing was replaced with new material between probe points.

Ground water samples were collected through the peristaltic pump except for volatiles and semi-volatiles. Volatiles samples were collected with the drop tubing in order to avoid aerating the sample. Semi-volatiles were collected with a Teflon vacuum trap on the inlet side of the peristaltic pump.

4.5 INVESTIGATIVE DERIVED WASTE

Water from GeoProbe development and purging was placed in a labeled 55-gallon drum and left on the site pending laboratory results.

5.0 FIELD ACTIVITIES AND RESULTS

MACTEC personnel Thomas Bates and Tomasz Trebacz performed the field work for the test pits and soil sampling on May 12, 2004. MACTEC personnel Scott Yelverton and Tomasz Trebacz collected ground water samples with the GeoProbe on June 2, 2004. Laboratory data sheets and chain of custody are attached to the end of the report.

5.1 OBSERVATION PITS

Twelve test pits were excavated, in the locations depicted on the attached figure. The observation logs are attached to this report. The excavations indicate that there is waste buried to depths up to 18 feet or more below the surface over the entire filled area, except for Pits 2, 3, and 9. Pit 9 was located on a small projection of land that projects into the Gordon River and was not filled to the same extent as the remainder of the property. Pits 2 and 3 were located near the south edge of the property, where fill material sloped down to natural grade.

In general, the primary component observed was organic horticultural waste including shredded wood or mulch, roots, tree trunks, branches and coconuts. Lesser amounts of plastic sheeting were also present in most pits. Pit 4, located near the present boat club trailer along the river, contained construction debris. Relatively small amounts of trash were unearthed, usually from deeper strata. No drums or petroleum/chemical containers were observed in the excavated material.

5.2 SOIL GAS SCREENING

Table 1 shows that methane was detected in all samples screened with the OVA. The soil gas concentration exceeded 1,000 ppm in most samples, which exceeded the instrument readout scale. The charcoal filtered results indicate there is a large methane component in the detected soil gasses. Methane gas generation would be expected in a landfill situation where organics are present.

5.3 LABORATORY SOIL SAMPLES

Twelve soil samples for laboratory analyses were collected from the upper 2 feet of soil at each pit location. Laboratory analytical results are compiled in Table 2. The results are compared with the Florida Soil Cleanup Target Levels (SCTLs) that are set forth in Chapter 62-777 of the Florida Administrative Code (FAC). The SCTLs apply to Brownfield sites and contaminated properties in the

petroleum and dry cleaner cleanup programs. They are also used as default cleanup objectives in lieu of performing risk assessments. The FDEP is in the process of revising the SCTLs for certain contaminants and their application to other sites; however, these were not in effect at the time this report was written. There are three SCTLs that are applied according to planned land usage (residential or commercial) or to prevent ground water contamination through leachability. The upper 2 feet was selected as the sample depth because no obviously stained soils or odors were present at deeper strata and the SCTLs generally apply to the upper 2 feet of soil, because of the potential for human exposure. A summary of laboratory results follows.

- Four of the eight RCRA metals (cadmium, mercury, selenium and silver) were not detected above the laboratory detection limits.

- Three RCRA metals (barium, chromium and lead) were detected but did not exceed their respective SCTLs.

- Arsenic was detected in four of twelve soil samples. The arsenic concentrations ranged from below method detection limits (BDL) to 1.7 milligrams per kilogram (mg/kg). The four samples containing detectable concentrations of arsenic all exceeded the current residential land use SCTL of 0.8 mg/kg. The four results ranged from 1.1 to 1.7 mg/kg. None of the twelve sample results exceeded the current commercial land use SCTL of 3.7 mg/kg.

  The FDEP is in the process of revising the SCTLs for certain contaminants, including arsenic. The proposed SCTLs are 2.1 mg/kg for residential land use and 12 mg/kg for commercial use. None of the soil sample results exceed the proposed residential arsenic SCTL.

- Petroleum hydrocarbons by the FLPRO method (TRPH) were detected in all twelve samples, but none exceeded the residential and leachability SCTLs of 340 mg/kg, or the higher commercial SCTL of 2,500 mg/kg.

5.4 LABORATORY GROUND WATER SAMPLES

Four ground water samples, designated GP-1 through GP-4, were collected with the direct push unit. GP-3 was placed near Pit 4, where the greatest amount of construction debris was unearthed. The other locations were distributed through the site as shown on the attached figure. The ground water samples were analyzed for the EPA Priority Pollutant List including metals, volatiles, semi-volatiles, phenols, pesticides and PCBs.

The detected analytes are listed in Table 3. None of the detected parameters exceeded current Ground Water Cleanup Target Levels (GCTLs).

- Cyanide was detected in two of four ground water samples. The results did not exceed the current GCTL, which is also a drinking water Maximum Contaminant Level (MCL).

- Four metals (chromium, lead, nickel, and zinc) were detected; however, the concentrations did not exceed the current GCTls. The GCTLs for chromium, lead, and nickel are also drinking water MCLs.

- Phenols were detected in all samples by Method 420.2. However, the individual phenols were not detected in the samples by the more accurate Method 625/8270. According to the STL laboratory Quality Assurance representative, Method 420.2 is a colorimetric method and subject to interference by color in water samples. The samples collected at the site exhibited a tan to amber color.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on review of the data collected from this limited testing program, MACTEC concludes the following.

- Waste is buried over most of the test area at depths up to 18 or more feet below the land surface. The composition generally appears to be primarily organic horticultural waste. Construction debris is also present, as observed at Pit 4, and in smaller quantities in other pits.

- Methane gas is present over the entire area where organic waste has been placed. The detected concentrations were generally greater than 1000 ppm. The results exceed the instrument scale. Other instruments and a soil gas survey would be required to quantify the methane concentrations, if desired. Methane is a byproduct generated by decomposing organic material. High concentrations of methane can become a concern if it accumulates to ignitable or explosive levels within structures.

- The soil analytical results indicate arsenic concentrations exceed the current residential direct exposure SCTL in four of twelve locations. The FDEP recently reevaluated (but has not yet adopted) the arsenic SCTLs. If the results are compared with the proposed revisions, none of the samples exceed the proposed residential SCTL. None of the soil sample results exceeded the current commercial use direct exposure SCTL. If the site will be developed before the new target levels are adopted, consideration will need to be given to removing or covering the affected areas. However, after the revisions, no action regarding arsenic will be necessary.

- The ground water contaminants detected by the laboratory methods did not exceed their respective state GCTLs.

Based on the data collected for this project, further assessment of soil and ground water is not warranted at this time.

Based on the OVA screening and experience with other properties in the area, we expect relatively high levels of methane gas over most of the site. Under certain circumstances methane gas may accumulate in structures to explosive or ignitable levels. Therefore, methane is a concern for potential structures on the property. We understand the buildings proposed for the site are small non-enclosed structures, such as gazebos and restrooms. We recommend that the restrooms are well ventilated. If enclosed buildings may be constructed in the future we recommend construction include methane mitigation measures, both during construction and for any proposed enclosed buildings.

The Florida Department of Environmental Protection (FDEP) published a guidance document titled *Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida.* If the site will be disturbed beyond simple structures, paving, and landscaping, consideration should be given to using this document as guidance during future development of the site.

7.0 QUALIFICATIONS AND LIMITATIONS

The findings of this report are relevant to the dates of our services and should not be relied upon to represent conditions at substantially later dates. Although this limited soil and ground water evaluation has been a prudent assessment of the potential for contamination at the property, there exists a possibility that potential sources of contamination have not been detected due to the limited scope of the subsurface study that was performed during this assessment, or due to undocumented or improperly documented events of environmental concern. The discovery of any additional information concerning environmental conditions at the site should be reported to us so we can reassess potential environmental impacts and modify our recommendations, if necessary.

We note that this testing was limited to the indicated locations by the specified test methods and may not be representative of areas elsewhere on the site.

TABLE OF CONTENTS

LABORATORY DATA SHEETS

AND

CHAIN-OF-CUSTODY

TABLES

FIGURE

OBSERVATION LOGS

Test Pit Observation Logs
Date of excavation: 5/12/04

PIT 1

Depth (feet)	Description
0 - 1	Sand and top soil
1 - 3	Yellowish lime sludge and plastic
3 - 17	Very high percentage of wood (roots, branches, coconuts, chipped horticultural waste). Lesser amounts of concrete and plastic
17 - 18.5	Sand with no apparent debris or wood

PIT 2

Depth (feet)	Description
0 - 3	Yellowish lime sludge
3 - 8	Dark gray sand with silt or clay
8 - 9	Light gray to white fine sand with no apparent debris or wood

PIT 3

Depth (feet)	Description
0 - 3	Yellowish lime sludge
3 - 8	High percentage of organics (roots, wood, coconuts), plastic, hubcap
8 - 9	Fine sand with no apparent debris or wood

PIT 4

Depth (feet)	Description
0 - 6	Construction debris (concrete, tire, piling, wood, reinforcing rods, PVC pipe, carpet)
6 - 14	Organics (mulch, coconuts, tree trunks), plywood, plastic, and construction debris
14 - 18	Clayey sand with no apparent debris

Test Pit Observation Logs
Date of excavation: 5/12/04

PIT 5

Depth (feet)	Description
0 - 4	Sand and lime sludge
4 - 18	High percentage of organics (mulch and horticultural waste) with plastic and small amounts of trash. Buried material apparently extends deeper

PIT 6

Depth (feet)	Description
0 - 3	Organics and horticultural waste
3 - 4	Yellowish lime sludge
4 - 12	Organics and horticultural waste
12 - 15	Clayey sand or lime sludge
15 - 18	Organic debris. Buried material may extend deeper

PIT 7

Depth (feet)	Description
0 - 2	Sand, organics and concrete fragments
2 - 3	Yellowish lime sludge
3 - 15	Organics, coconuts, wood, plastic and sand
15 - 18	Clay with no apparent debris

PIT 8

Depth (feet)	Description
0 - 6	Sand and low percentage of organics
6 - 7	Yellowish lime sludge
7 - 18	High percentage of organics. Buried material may extend deeper

Test Pit Observation Logs
Date of excavation: 5/12/04

PIT 9

Depth (feet)	Description
0 - 4	Sand with no apparent debris
4 - 5.5	Peat with no apparent debris
5.5	Sand with no apparent debris

PIT 10

Depth (feet)	Description
0 - 4	Sand with low percentage of fine organics and concrete
4 - 5	Yellowish lime sludge
5 - 12	Organics, concrete, plastic (small amount)

PIT 11

Depth (feet)	Description
0 - 2	Sand with low percentage of fine organics
2 - 7	Yellowish lime sludge
7 - 14	High percentage of organics
14	Sand with no apparent debris

PIT 12

Depth (feet)	Description
0 - 11	High percentage of organics
11 - 13	Clay or lime sludge
13 - 18	Sand clay with organics and small amounts of trash (hoses, bottles), debris apparently continues deeper

TABLE 1. SOIL GAS SCREENING RESULTS
MAY 12, 2004

Location	Depth (feet bls)	Total OVA (ppm)	Filtered OVA (ppm)	Methane Corrected OVA (ppm)
Pit 1	Not taken			
Pit 2	0-3	200	530	NQ
	3-6	> 1000	> 1000	NQ
	6-9	> 1000	> 1000	NQ
Pit 3	0-3	> 1000	> 1000	NQ
	3-6	> 1000	> 1000	NQ
	6-9	> 1000	> 1000	NQ
Pit 4	0-3	0	-	0
	3-6	20	10	10
Pit 5	0-3	10	5	5
	3-6	> 1000	> 1000	NQ
Pit 6	3-6	> 1000	> 1000	NQ
Pit 7	0-3	20	10	10
	3-6	> 1000	> 1000	NQ
Pit 8	0-2	450	320	130
	2-4	> 1000	> 1000	NQ
	4-6	> 1000	> 1000	NQ
Pit 9	0-2	0	-	-
	2-4	80	40	40
Pit 10	0-2	95	450	NQ
	2-4	> 1000	> 1000	NQ
Pit 11	0-2	10	25	NQ
	2-4	> 1000	> 1000	NQ
	4-6	> 1000	> 1000	NQ
Pit 12	0-2	10	0	10

Notes: OVA = Organic Vapor Analyzer with Flame Ionization Detector (FID)
bls = below land surface
ppm = parts per million
Filtered OVA readings taken through charcoal filter, primarily containing methane
` - sample not screened with charcoal filter
NQ – not quantifiable, the instrument capacity was exceeded

TABLE 2. LABORATORY RESULTS FOR OBSERVATION PIT SOIL SAMPLES, MAY 12, 2004
(DETECTED ANALYTES ONLY)

Concentrations Expressed in Milligrams per Kilogram (mg/Kg)

SAMPLE	DEPTH (FEET BLS)	TRPH	ARSENIC	BARIUM	CHROMIUM	LEAD
Pit 1	0-2	140	**1.2**	7.4	4.9	6.6
Pit 2	0-2	8.21	BDL	26.2	1.5	BDL
Pit 3	0-2	57.8	BDL	10.3	5.9	3.8
Pit 4	0-2	45.9	BDL	12.1	5.1	3.3
Pit 5	0-2	46.2	**1.7**	16.0	2.2	BDL
Pit 6	0-2	39.5	BDL	8.8	3.96	6.49
Pit 7	0-2	169	BDL	23.4	15.9	93.0
Pit 8	0-2	97.4	**1.4**	5.9	5.6	7.7
Pit 9	0-2	22.8	BDL	1.9	1.7	2.1
Pit 10	0-2	177	BDL	12.1	7.6	14.0
Pit 11	0-2	36.8	**1.1**	5.6	4.1	4.4
Pit 12	0-2	64.4	BDL	6.3	7.7	8.61
Residential SCTL		340 (460)	0.8 (2.1)	110 (120)	210 (210*)	400 (no change)
Commercial SCTL		2,500 (2,700)	3.7 (12)	87,000 (130,000)	420 (470*)	920 (1,400)
Leachability		340 (340)	29 (**)	1,600 (no change)	NA (38)	NA (**)

Notes: bls = below land surface

SCTL = Soil Cleanup Target Level from FAC Chapter 62-777, existing and proposed (in parentheses)
From FDEP publication *Comparison of Chapter 62-777, F.A.C. - May 26, 1999 Values vs. Proposed February 26, 2004 Values*

Bold entries exceed one or more SCTL

* Existing Chromium SCTLs are for hexavalent chromium. Proposed SCTLS shown are for total chromium. (Sample test results are total chromium)

** Leachability values may be derived using the SPLP Test to calculate site-specific SCTLs

TABLE 3. LABORATORY RESULTS (DETECTED ANALYTES ONLY)
GROUND WATER SAMPLES, JUNE 2, 2004

Concentrations Expressed in Milligrams Per Liter (mg/L)

ANALYTE	Sample GP-1	Sample GP-2	Sample GP-3	Sample GP-4	GCTL	NADC
Chromium	0.005	0.019	0.009	0.009	0.1	NA
Lead	0.005	BDL	BDL	BDL	0.015	NA
Nickel	0.022	0.005	BDL	BDL	0.1	NA
Zinc	0.056	0.050	0.063	0.050	5	NA
Cyanide	0.009	BDL	BDL	0.009	0.2	NA
Phenols	0.584	0.839	0.212	0.973	NA	NA

Notes:

GCTL = Groundwater Cleanup Target Level from FAC Chapter 62-777
NADC = Natural Attenuation Default Concentration
NA= does not apply

PHOTOGRAPHS

	Photograph 1 Pit 1. Plastic and organic horticultural waste.
	Photograph 2 Pit 1. Excavation sidewalls showing organic waste and plastic.
	Photograph 3 Pit 4. Concrete, PVC pipe, and organic waste.

	Photograph 4 Pit 4 excavation sidewalls showing lumber and organic waste.
	Photograph 5 Pit 5. Typical organic horticultural waste.
	Photograph 6 Pit 12. Typical organic horticultural waste.

Joe Tucker 643-4747

MACTEC

EXHIBIT B

RECEIVED
JUL 2 2 2004
ENGINEERING

July 20, 2004

Mr. Ron Wallace
CITY OF NAPLES - ENGINEERING
295 Riverside Circle
Naples, Florida 34102
(239) 213-5000

Subject: Preliminary Geotechnical Evaluation
PROPOSED PULLING LANDING PARK
Goodlette-Frank Road
Naples, Collier County, Florida
MACTEC Project 6787-04-4060

Dear Mr. Wallace:

MACTEC Engineering and Consulting, Inc. (MACTEC), is pleased to submit this preliminary evaluation of geotechnical conditions at the subject site. Our services were performed in accordance with MACTEC Proposal MIAM-04-39 dated January 19, 2004, and authorized by you on April 30, 2004.

This report is intended for the use of the City of Naples, under the contractual terms of our Proposal. Reliance on this document by any other party is forbidden without the express written consent of MACTEC, and that party's acceptance of mutually agreeable terms and conditions consistent with those on our Agreement for Secondary Client. Use of this report for purposes beyond those reasonably intended by the City of Naples and MACTEC will be at the sole risk of the user.

Project Information

The subject site is east of Goodlette-Frank Road, near Central Avenue, within the City of Naples. The site is located east of Riverside Drive near the existing City of Naples Solid Waste Division facility. The site lies on the west bank of the Gordon River. The site was previously used as a landfill; the northern portion of the site was reportedly excavated down to bedrock and backfilled with horticultural waste, and the southern half may have been randomly filled with unknown constituents. The City proposes to make a park at the site and requested we evaluate potential soil and ground water

contamination from the buried waste on the site, and provide preliminary geotechnical information for use in planning on-site features. Our environmental assessment was provided under separate cover.

Field Observations

MACTEC observed excavations at twelve test pits, as part of an environmental assessment program at the site. The test pits were excavated with a trackhoe to depths of approximately 16 to 18 feet below land surface (bls), or to the apparent vertical extent of buried material. Eighteen feet was the practical limit of excavation. The test pit observations indicate that buried waste, composed primarily of organic horticultural waste (including shredded wood or mulch, roots, tree trunks, branches and coconuts), is present over most of the site. Lesser amounts of plastic sheeting were also present in most pits. The depth, quantity and thickness of debris varied with location. The deepest debris extends to a depth of 18 feet or more. One pit (Pit 4) contained a significant amount of construction debris. Relatively small amounts of trash were unearthed, usually from deeper strata. No drums or petroleum/chemical containers were observed in the excavated material.

A soil gas survey was performed by measuring hydrocarbon vapors with an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID). The soil screening indicated that methane was present in soil in nearly all tested locations. In most locations the methane concentrations exceeded 1000 parts per million (ppm), which was the upper limit of the instrument's readout scale. Another instrument with a greater measurement capacity would be necessary to further quantify methane concentrations.

Preliminary Recommendations

The Florida Department of Environmental Protection (FDEP) published a guidance document titled *Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida.* If the site will be disturbed beyond simple structures, paving, and landscaping, consideration should be given to using this document as guidance during future development of the site.

The buried waste presents geotechnical issues regarding site development and construction. Based on the OVA screening and experience with other properties in the area, we expect relatively high levels of methane gas over most of the site. Under certain circumstances methane gas may accumulate in structures to explosive or ignitable levels. Therefore, methane is a concern for potential structures on

the property. We understand the buildings proposed for the site are small non-enclosed structures, such as gazebos and restrooms. We recommend that the restrooms are well ventilated. If enclosed buildings may be constructed in the future we recommend construction include methane mitigation measures, both during construction and for any proposed enclosed buildings. In addition, impervious surfaces such as paved parking lots can trap landfill gases, resulting in pavement defects (e.g., raised areas or "bubbles"). If impervious paved areas are planned, a sub-base gas relief system such as perforated pipes, vented to the edge of the pavement, should be considered.

The main geotechnical engineering concern for support of slabs-on-grade and/or asphaltic concrete pavement sections for parking or driving areas is the compressibility of the underlying organic material. This material is highly compressible and will undergo settlement under even lightly applied loads such as landscaping fill.

It is understood that the finished grades will generally coincide with the existing grading. In order to effectively negate detrimental effects from the organic material on slabs and/or pavement, a complete undercut and replacement of the organic material and/or preloading (surcharging) the pavement area would need be properly performed. However, if some periodic pavement maintenance (such as possible patching and/or pressure grouting) and aesthetic disruptions are considered to be acceptable (such as "birdbaths" and/or slight pavement cracking), the pavement can be supported with no special site preparation procedures.

In order to reduce the potential for damaging differential settlements, a synthetic geogrid system may be used. While this reinforcement would not significantly reduce the possibility for overall soil settlements, it would help to bridge over weaker areas, resulting in a more uniform settlement. Small, lightly loaded floor slabs (gazebo, restrooms, etc.) can also be designed with additional reinforcing steel to reduce the possibility of cracking.

Basis For Recommendations

The preliminary recommendations provided are based in part on project information provided to us and they only apply to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, you should convey the correct or additional information to us and retain us to review our recommendations. We can then modify our recommendations if they are inappropriate for the proposed project.

Regardless of the thoroughness of a geotechnical exploration, there is always a possibility conditions between borings will be different from those anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions. Therefore, experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. We recommend that the owner retain MACTEC to provide this service based upon our familiarity with the project, the subsurface geotechnical conditions and the intent of the recommendations and design

We appreciate the opportunity to provide our professional services for this project. Please contact us if you have questions or if we may be of further assistance.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Dennis F. McCoy, P.E. 7.21.04
Senior Engineer
Florida Registration 54834

Jo C. Tucker, P.E.
Principal Engineer
Florida Registration 46950

by CJS with permission

Attachments
Observation Logs
Figure

Test Pit Observation Logs
Date of excavation: 5/12/04

PIT 1

Depth (feet)	Description
0 – 1	Sand and top soil
1 – 3	Yellowish lime sludge and plastic
3 – 17	Very high percentage of wood (roots, branches, coconuts, chipped horticultural waste). Lesser amounts of concrete and plastic
17 - 18.5	Sand with no apparent debris or wood

PIT 2

Depth (feet)	Description
0 – 3	Yellowish lime sludge
3 – 8	Dark gray sand with silt or clay
8 – 9	Light gray to white fine sand with no apparent debris or wood

PIT 3

Depth (feet)	Description
0 – 3	Yellowish lime sludge
3 – 8	High percentage of organics (roots, wood, coconuts), plastic, hubcap
8 – 9	Fine sand with no apparent debris or wood

PIT 4

Depth (feet)	Description
0 – 6	Construction debris (concrete, tire, piling, wood, reinforcing rods, PVC pipe, carpet)
6 – 14	Organics (mulch, coconuts, tree trunks), plywood, plastic, and construction debris
14 – 18	Clayey sand with no apparent debris

Test Pit Observation Logs
Date of excavation: 5/12/04

PIT 5

Depth (feet)	Description
0 – 4	Sand and lime sludge
4 - 18	High percentage of organics (mulch and horticultural waste) with plastic and small amounts of trash. Buried material apparently extends deeper

PIT 6

Depth (feet)	Description
0 - 3	Organics and horticultural waste
3 - 4	Yellowish lime sludge
4 - 12	Organics and horticultural waste
12 - 15	Clayey sand or lime sludge
15 - 18	Organic debris. Buried material may extend deeper

PIT 7

Depth (feet)	Description
0 - 2	Sand, organics and concrete fragments
2 - 3	Yellowish lime sludge
3 - 15	Organics, coconuts, wood, plastic and sand
15 - 18	Clay with no apparent debris

PIT 8

Depth (feet)	Description
0 - 6	Sand and low percentage of organics
6 - 7	Yellowish lime sludge
7 - 18	High percentage of organics. Buried material may extend deeper

Test Pit Observation Logs
Date of excavation: 5/12/04

PIT 9

Depth (feet)	Description
0 - 4	Sand with no apparent debris
4 - 5.5	Peat with no apparent debris
5.5	Sand with no apparent debris

PIT 10

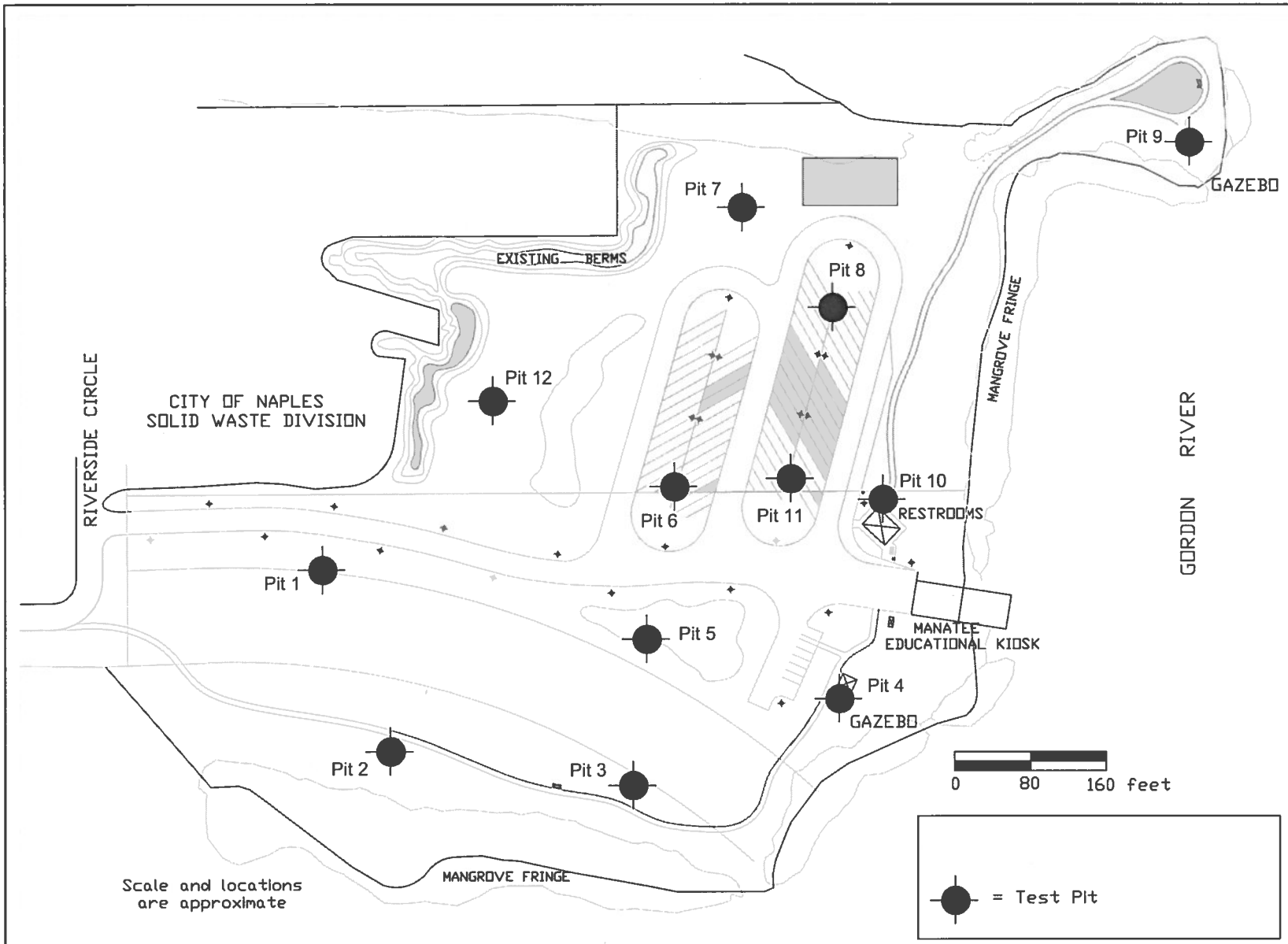
Depth (feet)	Description
0 - 4	Sand with low percentage of fine organics and concrete
4 - 5	Yellowish lime sludge
5 - 12	Organics, concrete, plastic (small amount)

PIT 11

Depth (feet)	Description
0 - 2	Sand with low percentage of fine organics
2 - 7	Yellowish lime sludge
7 - 14	High percentage of organics
14	Sand with no apparent debris

PIT 12

Depth (feet)	Description
0 - 11	High percentage of organics
11 - 13	Clay or lime sludge
13 - 18	Sand clay with organics and small amounts of trash (hoses, bottles), debris apparently continues deeper



Proposed Pulling Landing Park
Naples Florida
MACTEC Project 6787-04-4060

MACTEC

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Test Pit Locations

Drawn by: TDB 7/02/04