DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458

667 Ponce De León, PMB 130
San Juan, PR 00909

July 27, 2003.

Mr. Edwin Muñiz
Chief, Regulatory Section
San Juan Area Office
Jacksonville District, Corps Of Engineers
400 Fernández Juncos Avenue
San Juan, Puerto Rico 00901-3299

03 JUL 29 AM 7:51

RE: Jurisdictional Determination
Monte Grande Residential Project
Corps of Engineers Case 200206110 (CD-ML)

Dear Mr. Muñiz:

We have been retained by Mr. Herminio Hernández to coordinate the referenced project with you. The attached report details the findings of our investigation of the project site. Our findings indicate that the project impacted approximately one acre of wetland area adjacent to an unnamed and unmapped tributary of Río Viejo.

Should you have any questions or if we can be of assistance in any way, please call me at 787-380-5458.

Sincerely,

Tony Vázquez
Environmental Consultant

WETLAND STUDY

Monte Grande

CABO ROJO, PUERTO RICO

Prepared for:

Mr. Herminio Hernández
PO Box 6144
Mayagüez, Puerto Rico 00681

Preparado por:

Dr. A. Antonio Vázquez
667 Ponce De León, PMB 130
San Juan, Puerto Rico 00909
Tel. 787-380-5458

July 2003

03 JUL 29 AM 7:51

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INTRODUCTION

The purpose of this study was to identify the waters of the United States present within an approximately 24-acre tract. The study area is approximately located at PR 102, km 22.7, Monte Grande Ward, Cabo Rojo, Puerto Rico (see Figure 1). The study area has been impacted by a cut and fill operation. Most of the study area has considerable amounts of compacted fill varying in depth from less than a foot to over 5 feet.

The term "waters of the United States" is defined in 33 CFR 328.3 and includes a variety of waterbodies such as lakes, rivers, streams or creeks (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, natural and, in some cases, artificial ponds.

Wetlands are a subset of the waters of the United Sates. Pursuant to Section 404 of the Clean Water Act the U.S. Army Corps of Engineers defines wetlands in 33 CFR 328.3b as those areas that area inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Under current rules, regulations and policies, the wetland definition requires that, under normal circumstances, three criteria be met for an area to be declared a jurisdictional wetland. These three criteria are hydrophytic or wetland vegetation, wetland hydrology and hydric soils. If one of the three criteria is, under normal circumstances, not present, then the area is not a jurisdictional wetland.

Section 404 prohibits the discharge of dredged or fill material into the waters of the United States unless previously authorized by a Department of the Army permit. The U.S. Army Corps of Engineers (Corps) administers the Section 404 program.

METHODS

The study was conducted following the technical standards and procedures recommended in the Corps Wetland Delineation Manual (Environmental Laboratory, 1987) for the impacted area determination method due to the impacted nature of most of the site.

The project area was located on the United States Geological Survey Cabo Rojo, Puerto Rico Quadrangle, 7.5 Minute Series (topographic) (Exhibit 1) and on the Soil Conservation Survey (SCS) Soil Survey of Mayagüez Area of Western Puerto Rico (1975), sheet 59 (see Figure 2).

The field inspection was conducted during the month of June 2003. The soil survey was utilized to identify the limits of hydric soils (SCS, 1993) mapped within or in the vicinity of the study area. A total of 25 soil observation points were established within the study area. At each observation point a pit was excavated utilizing a backhoe. The soil profile characteristics found below the fill material were identified and recorded. The soil pit was also carefully examined for hydric soil indicators (Table 1).

After examining the soil at each observation point, at those areas were feasible, the area around the pit in an approximately 50-foot radius was examined for wetland hydrology indicators (Table 2). The dominant plant species within a 50-foot radius of the observation point were also recorded. Species dominance was determined by visually estimating the percent aerial cover at each species. Reed (1988) was utilized to determine the indicator status of the dominant species within the study area. Table 3 details the definitions used for each National Wetland Plant List indicator category. Under these indicator categories and under normal circumstances, areas dominated by Facultative Wetland (FACW) and/or Obligate Wetland (OBL) plants are wetlands; while areas dominated by Facultative Upland and/or Obligate Upland (UPL) plant species are not wetlands. Areas dominated by Facultative (FAC) plant species are considered the transition zone and can be either wetlands or non-wetlands depending on the other parameters and the existence of normal circumstances. At those sites where the soils and hydrology criteria are met the area was

considered a wetland if more than 50% of the dominant species in each community are FAC, FACW and/or OBL. Dominance by UPL and/or FACU species was utilized as a back up to the soils and hydrology and to establish the limits of the jurisdictional delineation. However, the majority of the determination was based on the presence of hydric or non-hydric soils. The data gathered was recorded in field data sheets copies of which are included with this report.

Taxonomy of plant species followed that of Reed (1988) and Liogier and Martorell (1982).

RESULTS

Vegetation

Most of the study area is devoid of vegetation. Where present, the dominant upland species was guinea grass (*Panicum maximum*). The dominant wetland species, where present, were cortadora (*Paspalum* millegrana) and paragrass (*Brachiaria purpurascens*).

Soils

The majority of the site is covered with varying amounts of compacted fill. Soil data was gathered below the fill material. The SCS (1975) identifies seven soil-mapping units belonging to four different soil series in the study area. These mapping units are Lares clay (LaB2), 0 to 5% slopes, Lares clay (LaD2), 5 to 20% slopes, Monte Grande clay (MvC) 2 to 20% slopes, Morado clay loam (MwD2), 20 to 40% slopes, Mucara clay (MxC), 5 to 12 % slopes, Mucara clay (MxD2), 12 to 20% slopes and Mucara clay (MxE2), 20 to 40% slopes. None of these series soil-mapping units is included in the list of hydric soils (SCS, 1993). However, the Monte Grande series may contain depressions meeting the 2B3 hydric soil criteria. The field investigation revealed that the soils within the study area are not as mapped by SCS (1975) due to extensive filling and cutting within the area. Positive hydric soil indicators were observed at 10 observation points. Most of these were at sites covered

by two or more feet of compacted fill material. The hydric soil indicators consisted of low chroma matrix colors with mottles.

Hydrology

Prior to the development of the site the area had significant topographic variations, from a high elevation of approximately 32 meters along the west to a low near 22 meters above sea level on the east that resulted in slopes varying from 0 to 40%. Positive wetland hydrology indicators consisting of soil surface inundation and/or saturation were identified in an unnamed drainage swale within the study area. This swale cuts roughly through the middle of the property running west to east and joins another unnamed swale that runs roughly parallel to the eastern property boundary. This second swale joins other swales in the area and eventually connects to Rio Viejo north of PR-102.

CONCLUSIONS

Positive indicators of all three criteria were identified within the study area, thus, wetlands exist within the property. Therefore, it is our professional opinion that waters of the United States subject to Section 404 of the Clean Water Act are present within the study area. The enclosed map displays our professional opinion of the Section 404 jurisdiction within the study area (see Figure 4). Our investigation revealed that approximately one acre of wetland area was impacted by the existing development.

LITERATURE CITED

Environmental Laboratory, Department of the Army, Waterways Experimental Station. 1987. Corps of Engineers Wetland Delineation Manual. U.S. Army Corps of Engineers, Washington, DC. Technical Report Y-87-1. 100pp. plus appendices.

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TABLE 1

FIELD INDICATORS FOR HYDRIC SOILS FOR LRR Z

ALL SOILS

A1. Histosols, except folists
A2. Histic Epipedon
A3. Black Histic
A4. Hydrogen Sulfide
A5. Stratified Layers (for testing only)
A6. Organic Bodies
A7. 5 cm Mucky Mineral
A8. Muck Presence
A9. Not in LRR Z
A10. 2 cm Muck (for testing only)

SANDY SOILS

S1. Sandy Mucky Mineral
S2. Not in LRR Z
S3. Not in LRR Z
S4. Sandy Gleyed Matrix
S5. Sandy Redox
S6. Stripped Matrix
S7. Dark Surface
S8. Not in LRR Z
S9. Not in LRR Z
S10. Not in LRR Z

LOAMY AND CLAYEY SOILS

F1. Loamy Mucky Mineral
F2. Loamy Gleyed Matrix
F3. Depleted Matrix
F4. Depleted Below Dark Surface
F5. Thick Dark Surface
F6. Redox Dark Surface
F7. Depleted Dark Surface
F8. Redox Depressions
F9. Not in LRR Z
F10. Not in LRR Z
F11. Not in LRR Z
F12. Not in LRR Z
F13. Not in LRR Z
F14. Not in LRR Z
F15. Not in LRR Z
F16. Not in LRR Z

TABLE 2

FIELD INDICATORS FOR WETLAND HYDROLOGY

1. **Visual observation of inundation**
2. **Visual observation of soil saturation**
3. **Oxidized root channels (Rhyzospheres) associated with living roots**
4. **Water marks**
5. **Drift lines**
6. **Water borne sediments**
7. **Surface scoured areas**
8. **Wetland drainage patterns**
9. **Morphological plant adaptations**

TABLE 3

PLANT INDICATOR STATUS CATEGORIES

Indicator Category	Indicator Symbol	Definition
Obligate Wetland Plant	OBL	Plants that occur almost always(estimated probability >99%) in wetlands under natural conditions , but which may occur rarely (estimated probability <1%) in nonwetlands. Examples: Typha dominguensis, Pterocarpus officinalis, Rhyzophora mangle.
Facultative Wetland Plant	FACW	Plants that occur usually (estimated probability 67% to 99%) in wetlands, but also occurring in both wetlands and nonwetlands. Examples: Paspalum virgatum, Paspalum millegrana, Erythrina fusca
Facultative Plants	FAC	Plants with similar likelihood (estimated probability 33% to 67%) of occurring in both wetlands and nonwetlands. Examples: Cecropia peltata, Cynodon dactylon, Coccoloba rugosa.
Facultative Upland Plants	FACU	Plants that occur sometimes (estimated probability 1% to 33%) in wetlands, but occur more often (estimated probability 67% to 99%) in nonwetlands. Examples: Cocos nucifera, Commelina virginica, Panicum maximum.
Obligate Upland Plants	UPL	Plants that occur rarely (estimated probability <1%) in wetlands, but almost always occurs (estimated probability >99%) in nonwetlands under natural conditions. Examples: None of the species listed in Reed (1988), Region C, is classified as UPL

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 1 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Panicum maximum*	Guinea grass	FACU
2. *Cynodon dactylon*	Bermuda grass	FAC

Hydrophytic Vegetation __Yes X No Basis: Less than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology XX Yes ____ No Basis: Assumed wetland hydrology indicators due to impacted character of site

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 3/2		Silty clay loam
6"	A	10YR 4/2		Silty clay loam
9"	B	10YR 4/2		Clay loam
12"	Poly cromatic			Clay loam
16"	Poly cromatic			Clay loam
20"	Poly cromatic			Clay loam

Confirmed mapped type? ____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils _____ Yes ___XX No Basis: Hydric soil indicators not observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes ___XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 2 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Panicum maximum*	Guinea grass	FACU

Hydrophytic Vegetation __Yes X No Basis: Less than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology XX Yes ____ No Basis: No wetland hydrology indicators observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 4/2		Clay loam
6"	A	10YR 4/2		Clay loam
9"	A	10YR 4/2		Clay loam
12"	B	10YR 3/2		Clay loam
16"	B	10YR 3/2		Clay loam
20"	B	10YR 3/2		Clay loam

Confirmed mapped type? ____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 3 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Trees		
1. *Albizia procera*	Albizia	NL
2. *Spondias purpurea*	Jobillo	NL
Herbs		
1. *Panicum maximum*	Guinea grass	FACU

Hydrophytic Vegetation __Yes X No Basis: Less than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	Secondary Indicators	Recorded Data
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology __ Yes X No Basis: No wetland hydrology indicators observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 3/2		Clay loam
6"	A	10YR 4/2		Clay loam
9"	A	10YR 4/2		Clay loam
12"	B	10YR 4/2		Clay loam
16"	B	10YR 4/2		Clay loam
20"	B	10YR 4/2		Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 4 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 5 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	5GY 4/1		Clay loam (COMPACTED)
6"	A	5GY 4/1		Clay loam (COMPACTED)
9"	A	5GY 4/1		Clay loam (COMPACTED)
12"	A	5GY 4/1		Clay loam (COMPACTED)
16"	A	5GY 4/1		Clay loam (COMPACTED)
20"	A	5GY 4/1		Clay loam (COMPACTED)

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
XX Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils XX Yes _____ No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 5 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances _ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 5 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators		**Secondary Indicators**		**Recorded Data**	
Inundated	_____	Oxidized Root Channels	_____	Stream, Lake, Tidal	_____
Saturated	_____	Water-stained leaves	_____	Aerial photo	_____
Sediment	_____	Local Soil Survey data	_____	Other	_____
Patterns	_____	FAC-neutral test	_____		
Water Marks	_____	Other	_____		
Drift Lines	_____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 5 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	7.5YR 3/1		Clay loam (COMPACTED)
6"	A	7.5YR 3/1		Clay loam (COMPACTED)
9"	A	7.5YR 3/1		Clay loam (COMPACTED)
12"	A	7.5YR 3/1		Clay loam (COMPACTED)
16"	A	7.5YR 3/1		Clay loam (COMPACTED)
20"	A	7.5YR 3/1		Clay loam (COMPACTED)

Confirmed mapped type?____Yes XX No Other indicators? _____

_____	Histic epipedon or hitosol	_____	Concretions >2mm within 3 inches of surface
_____	Sulfidic odor	_____	High organic content in surface layer (sandy soils)
_____	Aquic moisture regime	_____	Organic streaking (sandy soils)
_____	Reducing conditions	_____	Hydric soils list _____
XX	Gleyed or low chroma	_____	Other

Hydric Soils XX Yes _____ No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 6 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status

None – area impacted by approximately 4 feet of fill material
Hydrophytic Vegetation X Yes __ No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	____	Oxidized Root Channels	____	Stream, Lake, Tidal	____
Saturated	____	Water-stained leaves	____	Aerial photo	____
Sediment	____	Local Soil Survey data	____	Other	____
Patterns	____	FAC-neutral test	____		
Water Marks	____	Other	____		
Drift Lines	____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: ____ Subgroup: ____
Soil Profile: **BELOW 4 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	7.5YR 3/1		Clay loam (COMPACTED)
6"	A	7.5YR 3/1		Clay loam (COMPACTED)
9"	A	7.5YR 3/1		Clay loam (COMPACTED)
12"	A	7.5YR 3/1		Clay loam (COMPACTED)
16"	A	7.5YR 3/1		Clay loam (COMPACTED)
20"	A	7.5YR 3/1		Clay loam (COMPACTED)

Confirmed mapped type? ____ Yes XX No Other indicators? ____

____	Histic epipedon or hitosol	____	Concretions >2mm within 3 inches of surface
____	Sulfidic odor	____	High organic content in surface layer (sandy soils)
____	Aquic moisture regime	____	Organic streaking (sandy soils)
____	Reducing conditions	____	Hydric soils list ____
XX	Gleyed or low chroma	____	Other

Hydric Soils XX Yes ____ No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes ____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 7a Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 2 feet of fill material		

Hydrophytic Vegetation X Yes __ No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 2 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	7.5YR 3/2		Clay loam (COMPACTED)
6"	A	7.5YR 3/2		Clay loam (COMPACTED)
9"	A	7.5YR 3/2		Clay loam (COMPACTED)
12"	A	7.5YR 3/2		Clay loam (COMPACTED)
16"	A	7.5YR 3/2		Clay loam (COMPACTED)
20"	A	7.5YR 3/2		Clay loam (COMPACTED)

Confirmed mapped type? ____ Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators **NOT** observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 7b Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances _ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 2.5 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 2.5 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	7.5YR 3/1		Clay loam (COMPACTED)
6"	A	7.5YR 3/1		Clay loam (COMPACTED)
9"	A	7.5YR 3/1		Clay loam (COMPACTED)
12"	A	7.5YR 3/1		Clay loam (COMPACTED)
16"	A	7.5YR 3/1		Clay loam (COMPACTED)
20"	A	7.5YR 3/1		Clay loam (COMPACTED)

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
XX Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 8 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Ludwigia sp.*	Water primrose	OBL
2. *Cyperus sp.*	Sedges	FACW
3. *Paspalum millegrana*	Cortadora	FACW

Hydrophytic Vegetation XX Yes _No Basis: More than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: Surface Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated		Oxidized Root Channels		Stream, Lake, Tidal	
Saturated	XX	Water-stained leaves		Aerial photo	
Sediment		Local Soil Survey data		Other	
Patterns		FAC-neutral test			
Water Marks		Other			
Drift Lines					

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators observed.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 8 inches of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	5Y 4/1		Silty Clay loam
6"	A	5Y 4/1		Silty clay loam
9"	A	5Y 4/1		Slity clay loam
12"	B	5Y 4/1		Clay loam
16"	B	5Y 4/1		Clay loam
20"				

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
XX Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 9 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 2 feet of fill material		

Hydrophytic Vegetation X Yes __No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 2 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	7.5YR 4/3		Clay loam
6"	A	7.5YR 4/3		Clay loam
9"	A	7.5YR 4/3		Clay loam
12"	A	7.5YR 4/3		Clay loam
16"	B	7.5YR 4/4		Clay loam
20"	B	7.5YR 5/4		Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 10a Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by cut		

Hydrophytic Vegetation X Yes __ No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	____	Oxidized Root Channels	____	Stream, Lake, Tidal	____
Saturated	____	Water-stained leaves	____	Aerial photo	____
Sediment	____	Local Soil Survey data	____	Other	____
Patterns	____	FAC-neutral test	____		
Water Marks	____	Other	____		
Drift Lines	____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: ____ Subgroup: ____
Soil Profile: **Removed by cut**

Depth	H* Matrix color	Mottles^	Texture
3"	10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
6"	10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
9"	10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
12"	10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
16"	10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
20"	10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam

Confirmed mapped type? ____ Yes XX No Other indicators? ____

____	Histic epipedon or hitosol	____	Concretions >2mm within 3 inches of surface
____	Sulfidic odor	____	High organic content in surface layer (sandy soils)
____	Aquic moisture regime	____	Organic streaking (sandy soils)
____	Reducing conditions	____	Hydric soils list ____
____	Gleyed or low chroma	____	Other

Hydric Soils ____ Yes XX No Basis: Hydric soil indicators not observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND ____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 10b Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by cut		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **Removed by cut**

Depth	H*	Matrix color	Mottles^	Texture
3"		10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
6"		10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
9"		10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
12"		10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
16"		10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam
20"		10YR 5/6, 2.5Y 8/4	Polychromatic	Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
_____ Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 11 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 3 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: 3 feet Depth to free water: 5 feet

Primary Indicators		**Secondary Indicators**		**Recorded Data**	
Inundated	_____	Oxidized Root Channels	_____	Stream, Lake, Tidal	_____
Saturated	XX	Water-stained leaves	_____	Aerial photo	_____
Sediment	_____	Local Soil Survey data	_____	Other	_____
Patterns	_____	FAC-neutral test	_____		
Water Marks	_____	Other	_____		
Drift Lines	_____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 3 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 3/1		Clay loam
6"	A	10YR 3/1		Clay loam
9"	A	10YR 3/1		Clay loam
12"	A	10YR 3/1		Clay loam
16"	A	10YR 3/1		Clay loam
20"	A	10YR 3/1		Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____	Histic epipedon or hitosol	_____	Concretions >2mm within 3 inches of surface
_____	Sulfidic odor	_____	High organic content in surface layer (sandy soils)
_____	Aquic moisture regime	_____	Organic streaking (sandy soils)
_____	Reducing conditions	_____	Hydric soils list _____
XX	Gleyed or low chroma	_____	Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 12a Field InvestigatorTony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 2 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: 4 feet Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	_____	Oxidized Root Channels	_____	Stream, Lake, Tidal	_____
Saturated	XX	Water-stained leaves	_____	Aerial photo	_____
Sediment	_____	Local Soil Survey data	_____	Other	_____
Patterns	_____	FAC-neutral test	_____		
Water Marks	_____	Other	_____		
Drift Lines	_____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 2 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 3/1		Clay loam
6"	A	10YR 3/1		Clay loam
9"	A	10YR 3/1		Clay loam
12"	A	10YR 3/1		Clay loam
16"	A	10YR 3/1		Clay loam
20"	A	10YR 3/1		Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____	Histic epipedon or hitosol	_____	Concretions >2mm within 3 inches of surface
_____	Sulfidic odor	_____	High organic content in surface layer (sandy soils)
_____	Aquic moisture regime	_____	Organic streaking (sandy soils)
_____	Reducing conditions	_____	Hydric soils list _____
XX	Gleyed or low chroma	_____	Other

Hydric Soils X Yes _____ No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 12b Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by cut and fill		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	_____	Oxidized Root Channels	_____	Stream, Lake, Tidal	_____
Saturated	_____	Water-stained leaves	_____	Aerial photo	_____
Sediment	_____	Local Soil Survey data	_____	Other	_____
Patterns	_____	FAC-neutral test	_____		
Water Marks	_____	Other	_____		
Drift Lines	_____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **Removed by cut**

Depth	H* Matrix color	Mottles^	Texture
3"	10YR 3/2, 4/3, 4/4, 5/4	Polychromatic	Clay loam
6"	10YR 3/2, 4/3, 4/4, 5/4	Polychromatic	Clay loam
9"	10YR 3/2, 4/3, 4/4, 5/4	Polychromatic	Clay loam
12"	10YR 3/2, 4/3, 4/4 , 5/4	Polychromatic	Clay loam
16"	10YR 3/2, 4/3, 4/4, 5/4	Polychromatic	Clay loam
20"	10YR 3/2, 4/3, 4/4, 5/4	Polychromatic	Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
_____ Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 13a Field Investigator: Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Panicum maximum*	Guinea grass	FACU
2. *Paspalum millegrana*	Cortadora	FACW

Hydrophytic Vegetation __Yes X No Basis: Less than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology __Yes X No Basis: Wetland hydrology indicators not observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 4/3		Silty clay loam
6"	A	10YR 4/3		Silty clay loam
9"	B	10YR 4/4		Clay loam
12"	B	10YR 4/4		Clay loam
16"	B	10YR 4/4		Clay loam
20"	B	10YR 4/4		Clay loam

Confirmed mapped type? ____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
_____ Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 13b Field Investigator: Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Panicum maximum*	Guinea grass	FACU
2. *Paspalum millegrana*	Cortadora	FACW

Hydrophytic Vegetation __Yes X No Basis: Less than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology __Yes X No Basis: Wetland hydrology indicators not observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 4/2		Silty clay loam
6"	A	10YR 4/2		Silty clay loam
9"	B	10YR 4/3		Clay loam
12"	B	10YR 4/3		Clay loam
16"	B	10YR 4/3		Clay loam
20"	B	10YR 4/4		Clay loam

Confirmed mapped type? ____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol
_____ Sulfidic odor
_____ Aquic moisture regime
_____ Reducing conditions
_____ Gleyed or low chroma
_____ Concretions >2mm within 3 inches of surface
_____ High organic content in surface layer (sandy soils)
_____ Organic streaking (sandy soils)
_____ Hydric soils list _____
_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 14 Field Investigator: Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Paspalum millegrana*	Cortadora	FACW

Hydrophytic Vegetation __Yes X No Basis: Less than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators		**Secondary Indicators**		**Recorded Data**	
Inundated	____	Oxidized Root Channels	____	Stream, Lake, Tidal	____
Saturated	____	Water-stained leaves	____	Aerial photo	____
Sediment	____	Local Soil Survey data	____	Other	____
Patterns	____	FAC-neutral test	____		
Water Marks	____	Other	____		
Drift Lines	____				

Wetland Hydrology __Yes X No Basis: Wetland hydrology indicators not observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 4/2		Silty clay loam
6"	A	10YR 4/3		Silty clay loam
9"	B	10YR 4/3		Clay loam
12"	B	10YR 4/3		Clay loam
16"	B	10YR 4/3		Clay loam
20"	B	10YR 4/4		Clay loam

Confirmed mapped type? ____ Yes XX No Other indicators? _____

____ Histic epipedon or hitosol
____ Sulfidic odor
____ Aquic moisture regime
____ Reducing conditions
____ Gleyed or low chroma
____ Concretions >2mm within 3 inches of surface
____ High organic content in surface layer (sandy soils)
____ Organic streaking (sandy soils)
____ Hydric soils list _____
____ Other

Hydric Soils ____ Yes XX No Basis: Hydric soil indicators not observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND ____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 15a Field Investigator: Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Brachiaria purpurascens*	Guinea grass	FACW
2. *Paspalum millegrana*	Cortadora	FACW

Hydrophytic Vegetation XX Yes __ No Basis: More than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: 3" Depth to saturated soil: Surface Depth to free water: Surface

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	X	Oxidized Root Channels		Stream, Lake, Tidal	
Saturated	X	Water-stained leaves		Aerial photo	
Sediment		Local Soil Survey data		Other	
Patterns		FAC-neutral test			
Water Marks		Other			
Drift Lines					

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile:

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 4/2	Yes	Silty clay loam
6"	A	10YR 4/2	Yes	Silty clay loam
9"	B	10YR 4/2	Yes	Clay loam
12"	B	10YR 4/2	Yes	Clay loam
16"	B	10YR 4/2	Yes	Clay loam
20"	B	10YR 4/3	Yes	Clay loam

Confirmed mapped type? ___ Yes XX No Other indicators? _____

___ Histic epipedon or hitosol	___ Concretions >2mm within 3 inches of surface
___ Sulfidic odor	___ High organic content in surface layer (sandy soils)
___ Aquic moisture regime	___ Organic streaking (sandy soils)
___ Reducing conditions	___ Hydric soils list _____
X Gleyed or low chroma	___ Other

Hydric Soils X Yes ___ No Basis: Hydric soil indicators observed within root zone.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XXX Yes ___ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 16 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 2 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: None Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	_____	Oxidized Root Channels	_____	Stream, Lake, Tidal	_____
Saturated	_____	Water-stained leaves	_____	Aerial photo	_____
Sediment	_____	Local Soil Survey data	_____	Other	_____
Patterns	_____	FAC-neutral test	_____		
Water Marks	_____	Other	_____		
Drift Lines	_____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 2 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 3/2	Yes	Clay loam
6"	A	10YR 3/2	Yes	Clay loam
9"	A	10YR 3/2	Yes	Clay loam
12"	A	10YR 3/2	Yes	Clay loam
16"	A	10YR 3/2	Yes	Clay loam
20"	A	10YR 3/2	Yes	Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____	Histic epipedon or hitosol	_____	Concretions >2mm within 3 inches of surface
_____	Sulfidic odor	_____	High organic content in surface layer (sandy soils)
_____	Aquic moisture regime	_____	Organic streaking (sandy soils)
_____	Reducing conditions	_____	Hydric soils list _____
X	Gleyed or low chroma	_____	Other

Hydric Soils X Yes _____ No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XXX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 17 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by cut and fill		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **Removed by cut**

Depth	H* Matrix color	Mottles^	Texture
3"	10YR 6/6, 2.5YR 3/6	Polychromatic	Clay loam
6"	10YR 6/6, 2.5YR 3/6	Polychromatic	Clay loam
9"	10YR 6/6, 2.5YR 3/6	Polychromatic	Clay loam
12"	10YR 6/6, 2.5YR 3/6	Polychromatic	Clay loam
16"	10YR 6/6, 2.5YR 3/6	Polychromatic	Clay loam
20"	10YR 6/6, 2.5YR 3/6	Polychromatic	Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
_____ Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 18 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by approximately 4 feet of fill material		

Hydrophytic Vegetation X Yes ___No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: None Depth to free water: Not found

Primary Indicators		Secondary Indicators		Recorded Data	
Inundated	_____	Oxidized Root Channels	_____	Stream, Lake, Tidal	_____
Saturated	_____	Water-stained leaves	_____	Aerial photo	_____
Sediment	_____	Local Soil Survey data	_____	Other	_____
Patterns	_____	FAC-neutral test	_____		
Water Marks	_____	Other	_____		
Drift Lines	_____				

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 4 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 4/1		Clay loam
6"	A	10YR 4/1		Clay loam
9"	A	10YR 4/1		Clay loam
12"	A	10YR 4/1		Clay loam
16"	A	10YR 4/1		Clay loam
20"	A	10YR 4/1		Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____	Histic epipedon or hitosol	_____	Concretions >2mm within 3 inches of surface
_____	Sulfidic odor	_____	High organic content in surface layer (sandy soils)
_____	Aquic moisture regime	_____	Organic streaking (sandy soils)
_____	Reducing conditions	_____	Hydric soils list _____
XX	Gleyed or low chroma	_____	Other

Hydric Soils X Yes _____ No Basis: Hydric soil indicators observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND XX Yes _____ No Basis: Criteria met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 19 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes __ No Problem area XX Yes __ No

VEGETATION

Scientific name	Common Name	Indicator Status
None – area impacted by 1.5 feet of fill		

Hydrophytic Vegetation X Yes __ No Basis: Assumed due to impacted character of site.

HYDROLOGY

Surface water depth: No Depth to saturated soil: No Depth to free water: Not found

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated _____	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators assumed due to impacted character of site.

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **Impacted by 1.5 feet of fill and by surface cut.**

Depth	H* Matrix color	Mottles^	Texture
3"	10YR 4/3, 4/4, 5/4, 5Y 5/3	Polychromatic	Clay loam
6"	10YR 4/3, 4/4, 5/4, 5Y 5/3	Polychromatic	Clay loam
9"	10YR 4/3, 4/4, 5/4, 5Y 5/3	Polychromatic	Clay loam
12"	10YR 4/3, 4/4, 5/4, 5Y 5/3	Polychromatic	Clay loam
16"	10YR 4/3, 4/4, 5/4, 5Y 5/3	Polychromatic	Clay loam
20"	10YR 4/3, 4/4, 5/4, 5Y 5/3	Polychromatic	Clay loam

Confirmed mapped type? ____ Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
_____ Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes XX No Basis: Hydric soil indicators not observed BELOW FILL.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

DR. A. ANTONIO VAZQUEZ, C.E.P., P.W.S., C.W.D.
Tel. 787.380.5458
667 Ponce De León, PMB 130
San Juan, PR 00909

FIELD DATA FORM

Observation Point No. 20 Field Investigator Tony Vázquez Date June 2003
Project site Monte Grande County Cabo Rojo State Puerto Rico
Applicant/Owner Mr. Herminio Hernández Plant Community Grassland
Normal circumstances __ Yes XX No Atypical situation XX Yes__ No Problem area XX Yes ___ No

VEGETATION

Scientific name	Common Name	Indicator Status
Herbs		
1. *Canna glauca*		OBL
2. *Paspalum conjugatum*	Sedges	FACW
3. *Paspalum millegrana*	Cortadora	FACW

Hydrophytic Vegetation XX Yes _No Basis: More than 50% of dominant species FAC, FACW or OBL

HYDROLOGY

Surface water depth: No Depth to saturated soil: Surface Depth to free water: 3 feet

Primary Indicators	**Secondary Indicators**	**Recorded Data**
Inundated _____	Oxidized Root Channels _____	Stream, Lake, Tidal _____
Saturated XX	Water-stained leaves _____	Aerial photo _____
Sediment _____	Local Soil Survey data _____	Other _____
Patterns _____	FAC-neutral test _____	
Water Marks _____	Other _____	
Drift Lines _____		

Wetland Hydrology X Yes __ No Basis: Wetland hydrology indicators observed

SOILS

Mapped series/phase: _____ Subgroup: _____
Soil Profile: **BELOW 2 feet of FILL**

Depth	H*	Matrix color	Mottles^	Texture
3"	A	10YR 3/2		Clay loam
6"	A	10YR 3/2		Clay loam
9"	A	10YR 3/2		Clay loam
12"	A	10YR 3/2		Clay loam
16"	A	10YR 3/2		Clay loam
20"	B	2.5Y 3/1		Clay loam

Confirmed mapped type?____Yes XX No Other indicators? _____

_____ Histic epipedon or hitosol	_____ Concretions >2mm within 3 inches of surface
_____ Sulfidic odor	_____ High organic content in surface layer (sandy soils)
_____ Aquic moisture regime	_____ Organic streaking (sandy soils)
_____ Reducing conditions	_____ Hydric soils list _____
_____ Gleyed or low chroma	_____ Other

Hydric Soils _____ Yes X No Basis: Hydric soil indicators observed within 18 inches of surface.

JURISDICTIONAL DETERMINATION AND RATIONALE

WETLAND _____ Yes XX No Basis: Criteria not met

Remarks:
H* - Horizon, Mottles^ - in upper 12 inches

FIGURE 3

USGS 1994 AERIAL PHOTOGRAPH