ANNEX H HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

Annex H	Hazardou	us, Toxic, and Radioactive Waste
	This page intentionally left blank.	
Post Authorization Change	e Report	March 2018

Hazardous.	Tayic and	Padioactivo	\M/acto
nazaruous.	TOXIC allu	nauloactive	waste

H.1	A-2 Flow Equalization Basin Lands Hazardous, Toxic and Radioactive Waste Audits

Annex H

PHASE II ENVIRONMENTAL SITE ASSESSMENT

For the

A-2 FLOW EQUALIZATION BASIN PALM BEACH COUNTY, FLORIDA

Prepared for

SOUTH FLORIDA
WATER MANAGEMENT DISTRICT
ENVIRONMENTAL SCIENCE UNIT
MAINTENANCE MANAGEMENT SECTION
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33406

Prepared by

Professional Service Industries, Inc. 5801 Benjamin Center Drive Tampa, FL 33634 Telephone (813) 886-1075

PSI PROJECT NO. 05521114

March 25, 2013





March 25, 2013

South Florida Water Management District Environmental Science Unit Maintenance Management Section 3301 Gun Club Road West Palm Beach, Florida 33406

Attn: Mr. Robert Kukleski

Re: Phase II Environmental Site Assessment Report

A-2 Flow Equalization Basin Palm Beach County, Florida PSI Project No.: 05521114 SFWMD Work Order #8

Dear Mr. Kukleski:

In accordance with our agreement, Professional Service Industries, Inc. (PSI) has performed a Phase II Environmental Site Assessment for the above referenced project. The Phase II ESA Report is attached.

Thank you for choosing PSI as your consultant for this project. If you have any questions, or if we can be of additional service, please call us at (813) 886-1075.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Stephen P. Long, P.E. P.G.

Chief Engineer

P:\552-Env\SFWMD\WO#8 (05521114) - A-2 FEB\Report\A-2 FEB Phase II ESA - Final.doc



PHASE II ENVIRONMENTAL SITE ASSESSMENT

For the

A-2 FLOW EQUALIZATION BASIN PALM BEACH COUNTY, FLORIDA

Prepared for

SOUTH FLORIDA
WATER MANAGEMENT DISTRICT
ENVIRONMENTAL SCIENCE UNIT
MAINTENANCE MANAGEMENT SECTION

Prepared by

Professional Service Industries, Inc. 5801 Benjamin Center Drive Tampa, FL 33634 Telephone (813) 886-1075

PSI PROJECT NO. 05521114

March 25, 2013

Andrew Cadle Project Scientist

Steve Long Chief Engineer

TABLE OF CONTENTS

1.	. INT	RODUCTION	1
	1.1	Property/Project Description	
	1.2	Authorization	
	1.3	Scope of Work	
2	DD(OPERTY DESCRIPTION AND PHYSICAL SETTING	
Z .	. PKC	Property Description	
		Physical Setting	
	2.2.	,	
		2 Regional Hydrogeology	
_			
3.		ASE II ESA METHODOLOGY	
	3.1	Soil Sampling Methodology	6
4.	. PH <i>F</i>	ASE II ESA RESULTS	9
	4.1	Regulatory Guidance Concentrations	9
	4.1.		
	4.1.	2 Sediment	9
	4.1.3	3 Applicable Criteria1	0
	4.2	Sampling Results1	1
	4.3	Data Validation1	
	4.4	Geostatistical Evaluation1	4
5.	. SCF	REENING LEVEL ECOLOGICAL RISK ASSESSMENT1	6
_	5.1	SLERA Methodology1	
	5.2	SLERA Results	
6.	. COI	NCLUSIONS AND RECOMMENDATIONS1	9
7.		RRANTY2	
•		MANTI	J
T.	ABLES	5	
	Ta	able 1 – Summary of Soil Analytical Results	
		able 2 – SPLP Analytical Results	
		•	
F	IGURE	S	
	Fi	igure 1 – USGS Site Vicinity Map	
	Fi	igure 2 – Site Map	
	Fi	igure 3 – Cultivated Soil Sampling Location Map	
	Fi	igure 4 – Copper Concentration Map	
_			
A	PPEND		
		ppendix A – Laboratory Analytical Results	
	A	ppendix B – Screening Level Ecological Risk Assessment	



1. INTRODUCTION

1.1 Property/Project Description

The proposed A-2 Flow Equalization Basin (FEB) project encompasses approximately 14,408 acres of agricultural land located between US Highway 27 and the Miami Canal, in southern Palm Beach County. A USGS Topographic Map and Site Vicinity Map showing the property boundaries are provided on **Figures 1 and 2**.

The property has been cultivated in sugar cane since the early 1960's. PSI has previously completed a draft Summary Environmental Report for the A-2 FEB, dated September 17, 2012. The report describes the due diligence assessment that was performed by the District when the property was acquired, as well as further assessment and remediation efforts that were performed by PSI, on behalf of Talisman Sugar Corporation. The Summary Environmental Report documents that all known point sources on the property have been addressed and the Florida Department of Environmental Protection (FDEP) has issued Site Rehabilitation Completion Orders (SRCOs) for all known point sources within the project boundary. However, no broad cultivated area sampling was performed on the property at the time the pre-acquisition assessment was completed. Therefore, sampling of the cultivated areas was requested by the United States Fish and Wildlife Service (USFWS) and FDEP.

1.2 AUTHORIZATION

This Phase II ESA was performed in substantive compliance with Work Order #8 under SFWMD Contract No. 4600002399.

1.3 SCOPE OF WORK

The scope of work for this Phase II ESA has been divided into three tasks, as follows:

Task 1	Phase I	l ESA Field a	and Labora	atory Services
--------	---------	---------------	------------	----------------

Task 2 SLERA and Geostatistical Analysis

Task 3 Report Preparation

A general description of the services included in these tasks is described below. A more detailed description is provided in Section 3.1 of this report.

Task 1 Soil Sampling

PSI collected soil samples in general accordance with the current *Protocol for Assessment, Remediation and Post-Remediation Monitoring for Environmental Contaminants on Everglades Restoration Projects.* The sampling procedures for composite sampling for large properties of greater than 1,000 acres was utilized, which required the collection of 50-acre composite samples from a representative fraction of



the property. Based upon agreement with SFWMD and USFWS, PSI collected samples from 10% of the property during the initial assessment.

All composite soil samples were analyzed for organochlorine pesticides by EPA method 8081, chlorinated herbicides by EPA method 8321, organophosphorus pesticides by EPA method 8270, total organic carbon (TOC), and RCRA 8 metals plus copper by EPA method 6010/7471.

Task 2 SLERA and Geostatistical Analysis

PSI contracted with Formation Environmental to conduct a geostatistical analysis of the data and to prepare a Screening Level Ecological Risk Assessment (SLERA).

Once the composite soil sampling data was received, Formation performed standard statistical evaluation of the data to evaluate distribution, standard deviation, probability plots, and general statistical parameters.

The soil results were initially compared to human health cleanup target levels (e.g., SCTLs and GCTLs) and ecological screening values (e.g., SQAGs). Formation conducted a screening level ecological risk assessment (SLERA) on any constituents of potential ecological concern (COPECs) within the agricultural areas that exceeded the ecological screening levels. The SLERA was performed to determine whether the contaminant concentrations present a significant ecological concern. The SLERA consisted of the following tasks:

- A statistical evaluation of the sample results was prepared in order to calculate a mean and 95% upper confidence limit (UCL) estimate of the mean.
- 95% UCL values and maximum detected values of each COPEC were input into the USFWS/SFWMD Ecological Food Web Model (aka/ Goodrich model). Hazard quotients were calculated for each COPEC.
- Alternate cleanup target levels were proposed for any COPEC with a hazard quotient above one.
- The SLERA assumed worst-case conditions (i.e., that the property shall be flooded for significant portions of the year).
- The SLERA did not include any biological testing, bioaccumulation testing, desorption testing or other laboratory studies.

Task 3 Report Preparation

Task 3 included the preparation of this written report. The primary objective for the written report is to describe the methodology and results of the Phase II ESA investigation. The report does not include significant discussion of point sources within the project footprint. These point source areas were all discussed in detail in the draft Summary Environmental Report, dated September 17, 2012. All of the point sources have been granted closure by the FDEP.



2. PROPERTY DESCRIPTION AND PHYSICAL SETTING

2.1 Property Description

The A-2 FEB project lands consist of eight separate parcels. The tract numbers, prior ownership, and acreage are shown in the table below.

	A-2 FEB							
Tract No.	Former Owner	Acreage						
D7100-044	TALISMAN SUGAR CORPORATION	2						
D7100-047	TALISMAN SUGAR CORPORATION	10						
D7100-066	TALISMAN SUGAR CORPORATION	12						
D7100-067	TALISMAN SUGAR CORPORATION	1						
D7100-104	TALISMAN SUGAR CORPORATION	14,371.53**						
D7100-139	TALISMAN SUGAR CORPORATION	1						
D7100-141	WEINLEIN, JOAN	10						
D7200-005	TALISMAN SUGAR CORPORATION	1						
	A-2 Total	14,408.53						

** Note: Acreages shown include only the portion of the tract that is within the proposed limits of construction for the A-2 FEB project. The total acreage of Tract D7100-104 is 20,525 acres, and includes lands outside the current project footprint.

Most of the project area has been historically cultivated in sugar cane, with occasional rotational crops of rice or corn. The property is being leased to New Hope Sugar Corporation for sugar cane cultivation. There are no significant remaining structures on the property with the exception of a few pump stations, and all of the point sources on the property have been addressed and SRCOs have been issued by FDEP for all. A Site Plan is provided as **Figure 2**.

The primary parcel (Tract D7100-104) was acquired from Talisman Sugar Company in 1999 by the District. Several of the smaller parcels listed above were also owned and operated by Talisman Sugar Corporation, but these parcels were deferred from transfer during the original transaction until environmental concerns on these small areas could be addressed. The Weinlan parcel (Tract D7100-141) was leased to Talisman Sugar at the time of the 1999 acquisition and was evaluated with the remainder of Tract D7100-104.

Since the acquisition, the lands have been cultivated in sugar cane, with rotational crops of rice, beans, or corn. At the time of PSI's Phase II ESA, most of the sugar cane had been recently harvested from the fields, and replanting had been conducted. While agrochemical application may occur at any time during the life cycle of sugar cane, the agrochemical application schedule during replanting and early development is most intensive. Agrochemicals were being actively applied in some areas of the property



during the Phase II ESA, and PSI was instructed to refrain from sampling in fields that were marked with placards indicating application within the last two weeks.

The proposed project will consist of the construction of a Flow Equalization Basin (FEB) for water quality pre-treatment and storage. However, the project design is not yet complete and PSI was not provided with design details indicating the exact limits of the FEB or the expected depth to water or hydroperiod for the FEB. For the purposes of this document, PSI has assumed worst-case conditions that the entirety of the property will be inundated for at least a significant portion of each year.

2.2 PHYSICAL SETTING

2.2.1 REGIONAL GEOLOGY

The region is overlain by layers of Peat known locally as "muck". Muck is an organically rich soil that forms when the rate of accumulation of organic matter exceeds the rate of decay. The accumulation rate can vary, but can be as much as 10 centimeters per 100 years. Much of the muck has been subjected to subaerial exposure since the dewatering of large areas of marshland through water drainage canals. This exposure has had the effect of causing the muck volume to steadily decrease through biochemical oxidation, compaction, erosion, and fire. It is estimated that the muck soil in these dewatered areas diminishes by as much as 1 inch per year.

Underlying the muck is the Fort Thompson Formation, which is locally referred to as the "cap rock" and is primarily dense, fossiliferous limestone. The Fort Thompson Formation is considered to be Pleistocene in age.

The Caloosahatchee Formation underlies the Fort Thompson Formation. The Caloosahatchee Formation is a marl that is composed of a sequence of sandy limestone lenses that are interbedded with layers of calcareous clays and sands. The Caloosahatchee Formation appears to straddle the Pliocene/Pleistocene boundary.

Underlying the Caloosahatchee Formation, the Tamiami Formation is a complex Pliocene age unit of sand, clay, and reef facies, all of which contain at least small amounts of phosphate. The Tamiami Formation occurs over much of southern Florida and is unconformably overlain by the Caloosahatchee and Fort Thompson Formations, which consist of highly fossiliferous carbonates and siliclastic sediments.

Underlying the Tamiami Formation is the Miocene-age Hawthorn Group, which is composed of a variety of sediments including carbonates, quartz sands, clay, and phosphate. The Hawthorn Group has been subdivided into two formations; the Peace River Formation forming the upper Hawthorn siliclastic section and the Arcadia Formation, which forms the lower Hawthorn carbonate section.

The Hawthorn Group is underlain by a 3000-feet thick carbonate sequence consisting of Oligocene and Eocene aged sediments. The Suwannee Limestone, the Ocala Limestone,



and the Avon Park Formation comprise the Oligocene sediments. The Eocene sediments are made up of the Oldsmar Formation.

2.2.2 REGIONAL HYDROGEOLOGY

The underlying hydrogeologic formations of the area may best be categorized as two aquifers separated by an impermeable confining zone.

The shallow, non-artesian aquifer system extends to a depth of approximately 150 feet BLS and is recognized as the northernmost extension of the Biscayne Aquifer. It consists primarily of the Fort Thompson, Caloosahatchee, and Tamiami Formations. The base of the shallow aquifer is marked by the top of the Hawthorn Group, which is the intermediate confining unit for the underlying Floridan aquifer.

The deep, artesian aquifer is known as the Floridan Aquifer and is the most productive aquifer in the area, with permeable zones as deep as 1,200 feet BLS. The Floridan Aquifer consists of the lower units of the Hawthorn Group, the Suwannee Limestone, the Ocala Group, and the Avon Park Limestone.

Groundwater levels throughout the area vary from one to six feet BLS. Groundwater flow in the surficial aquifer is generally to the south-southeast; however, flow direction is strongly influenced by the system of canals and pumping stations present throughout the area. When the canals are pumped and water levels in the canals are lowered, shallow groundwater tends to flow toward the canals.



3. PHASE II ESA METHODOLOGY

The intent of the Phase II ESA was to conduct sampling and laboratory analysis of representative soil samples from the cultivated areas of the subject property. No point source samples were collected as part of this assessment. PSI understands that data from this Phase II ESA will be used by SFWMD and USACE to evaluate whether residual agrochemicals are present in the surficial soils at concentrations that might pose potential human health and/or ecological risks associated with the use of these soils in the construction of the proposed A-2 Flow Equalization Basin.

3.1 Soil Sampling Methodology

Field investigation and sampling activities were directed by Mr. Drew Cadle and Mr. Ryan Fetter of PSI during the days of January 22 through 25, 2013. The assessment was performed in general accordance with the authorized scope of work. All field sampling activities was performed in accordance with the FDEP Standard Operating Procedures for Field Investigation Activities (DEP-SOP 001/01).

Additionally, the U.S. Fish and Wildlife (FWS) has established a protocol for evaluation and sampling of historical agricultural properties in South Florida, titled *Protocol for Assessment, Remediation, and Post-Remediation Monitoring for Environmental Contamination on Everglades Restoration Projects (AKA/the ERA Protocol)*, which is an attachment to the Draft Memorandum of Agreement between United States Fish and Wildlife Service (USFWS or the Service) and SFWMD, dated March 13, 2008. PSI typically performs due diligence investigations on behalf of the District in strict accordance with the ERA Protocol. However, a less stringent investigation was agreed upon by SFWMD, FDEP, and USFWS in order to provide a general indication of large scale concerns on the property. The following requirements under the ERA Protocol were not met by this investigation:

- For very large properties (>1,000 acres), the ERA Protocol recommends dividing the property into 50 acre grids and collecting composite samples from a percentage of the grids. The percentage is not defined, but is to be agreed upon by SFWMD, USFWS, and FDEP, and has typically ranged from 25% to 50%. In this case, PSI sampled 10% of the grids. Based on previous experience with sugar cane cultivated areas with no history of row crops, we expected the chemical concentrations to be relatively uniform.
- For sites where composite samples are collected, the ERA Protocol requires analysis of discrete aliquots on a limited number of "clean grids", as part of a false negative analysis. This false negative sampling was not performed as part of this investigation.
- For sites where composite samples are collected, the ERA Protocol requires analysis of discrete aliquots within sampling grids where composite results



indicate exceedances of the risk thresholds, in order to delineate the extent of impacted soil. This discrete sampling effort was not performed, therefore the entirety of any grids with exceeding results were assumed to be impacted.

The property was divided initially divided into 30 super-grids, each encompassing approximately 500 acres. Each super-grid was further subdivided into ten 50-acre grids. One grid was selected at random from each super-grid for sampling (i.e., 10%). In a few cases, the randomly selected grids were moved to another location within the super-grid due to remaining mature sugar cane or very recent agrochemical application within the selected grid. A composite sample was collected representing each selected 50-acre grid for laboratory analysis as described below:

- The samples were collected from the surficial soils at a depth of 0-6 inches.
 Samples were collected using a stainless steel hand auger and were composited in the field.
- In order to collect the composite samples, PSI further divided each 50-acre grid into ten, 5-acre sub-grids. PSI collected a close-proximity soil sample from approximately the center of each 5-acre sub-grid cell. Within each sub-grid cell, PSI collected a 5-point close-proximity composite sample by collecting equal aliquots from the center of the sub-grid cell, and five feet away in all four cardinal directions. The aliquots were homogenized in a stainless steel bowl using a stainless steel spatula or spoon. A 4-ounce aliquot of each sub sample was placed into a larger mixing bowl which was utilized to collect the composite Once all ten subsamples were collected in the mixing bowl, the samples. sample was further homogenized and a composite sample representing the entire 50-acre grid was collected in a 4 ounce glass laboratory container. The composite samples were labeled as Comp-1 through Comp-30. sampling locations were recorded on a global positioning system (GPS) receiver with an accuracy of +/- 1 meter. The soil sampling locations are shown on Figure 3.
- The collected samples were placed in an iced cooler and shipped to the primary or secondary laboratory (splits) for laboratory analysis under chain of custody protocols. The soil samples were analyzed for organochlorine pesticides by EPA method 8081, chlorinated herbicides by EPA method 8321, organophosphorus pesticides by EPA method 8270, total organic carbon (TOC), and RCRA 8 metals plus copper and selenium by EPA method 6010/7471. The samples were immediately placed on ice and submitted to the analytical laboratory under chain of custody procedures.
- Duplicate and split soil samples and equipment blanks were collected for quality assurance purposes.
 - Duplicate samples were collected at a frequency of 10% of the collected samples by collecting an aliquot from the same mixing bowl as the primary sample. The duplicate samples were collected and analyzed using the



- same procedures and methods as the primary sample, and were analyzed by the same laboratory.
- Split samples were collected at a frequency of 10% of the collected samples by collecting an aliquot from the same mixing bowl as the primary sample. The split samples were collected using the same methods as the primary samples, but the split samples were submitted to a different, secondary laboratory for analysis.
- One pre-cleaned equipment blank was collected prior to the initial sample collection event to evaluate the efficacy of the decontamination cleaning procedures used in PSI's office to pre-clean the equipment prior to mobilization. Field cleaned equipment blanks were also collected at a rate of one blank per sampling team per day during the sampling. The pre-cleaned and field cleaned equipment blanks were collected by running analyte free water over the decontaminated sampling equipment and then collecting the water in laboratory provided containers. The equipment blanks were analyzed for the same analytes as the soil samples.



4. PHASE II ESA RESULTS

4.1 REGULATORY GUIDANCE CONCENTRATIONS

Analyte concentrations in all media were compared to applicable or relevant and appropriate requirements, depending upon current and future proposed usage of each tract. These criteria are summarized below.

4.1.1 SOIL

The following human-health based criteria are established by the FDEP in Chapter 62-777 of the Florida Administrative Code (FAC 62-777), for both direct exposure and leachability.

- Residential The Soil Cleanup Target Level for direct exposure in a residential setting (SCTL-RDE) is the default standard for site screening purposes in Florida, and assumes potential contact with soils on a regular basis by adults and children.
- Industrial The Soil Cleanup Target Level for direct exposure in a non-residential setting (SCTL-IDE) assumes extended contact with soils on a daily basis by adult workers at commercial/industrial sites, or on agricultural properties where farming practices result in frequent site contact. Use of this standard requires that a deed restriction be recorded against the property.
- Leaching to Groundwater The Soil Cleanup Target Level for leaching to groundwater (SCTL-LGW) also represents a default standard for site screening purposes in Florida, and is based on soil concentrations which are considered likely to result in an exceedance of the groundwater quality standard for a particular chemical.
- Leaching to Surface Water The Soil Cleanup Target Level for leaching to surface water (SCTL-LSW) is applicable where impacted soils may be in contact with a surface water body. These criteria were deemed appropriate for comparison because the entirety of the subject property may become inundated at the time of project construction. However, it should be noted that the SCTL-LSW criteria were developed based on soil proximity to Class III fresh water bodies. In this case, the FEB would not likely be considered as a Class III water body. While the SCTL-LSW are not directly applicable, they were used for comparison screening purposes.

4.1.2 SEDIMENT

The FDEP has previously indicated that soils within proposed wetland or water storage areas should be regulated as sediments, as these soils will ultimately become inundated. For sediments, the Sediment Quality Assessment Guidelines (SQAGs) as defined in *Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4*, (MacDonald, 2000) have generally been applied for screening purposes. The SQAGs are not a human health-based criteria, but are instead relevant only to the evaluation of ecological risk. The referenced guideline outlines two potential standards which were developed specifically with respect to benthic macroinvertebrate species, which represent the bottom of the food chain, as follows:



- No Observed Adverse Effects Level The threshold effects concentration (SQAG-TEC) is the more conservative value and is utilized as a screening tool in evaluating sediments. Contaminant concentrations below the SQAG-TEC generally do not warrant further investigation.
- Lowest Observed Adverse Effects Level The probable effects concentration (SQAG-PEC) represents the level above which adverse effects are likely to occur. It should also be noted here that SFWMD and FWS have agreed to an Interim Effects Concentration for copper only, which replaces the SQAG-PEC for copper recommended in MacDonald 2000.

However, it should be noted that SQAGs may not be established for all analytes of interest. FWS protocols for ecological risk assessment (FWS, March 2004) recommend consideration of Ecological Screening Values (ESV) established by EPA Region IV in *Ecological Screening Values or Surface Water, Sediment, and Soil* (WSRC, November 1998) when Florida SQAGs are not available.

In the case of copper, the USFWS utilizes an interim screening value (ISV) of 85 mg/kg, for protection of the endangered Everglades Snail Kite. Measured copper concentrations are compared with both the ISV and the SQAGs.

No SQAGs have been established for selenium. However, an ecological screening criterion of 4.2 mg/kg was negotiated with USFWS for organic soils on the C9/C11 project, and it appears that a similar level would be appropriate on the A-2 FEB project.

4.1.3 APPLICABLE CRITERIA

All of the above criteria will be considered in evaluating the analytical results obtained during the soil sampling activities described herein. Since some portions of the site may not become inundated, it is appropriate to compare analyte concentrations in the soil to the human health-based SCTLs established in Chapter 62-777, FAC. Therefore, soil data were compared to both the SCTLs for residential direct exposure (SCTL-RDE) and to the SCTLs for leaching to groundwater (SCTL-LGW) and leaching to surface water (SCTL-LSW).

It is likely that most of the site will be inundated; at least for a portion of each year, and that important ecological receptors will utilize the property. Therefore, it is also necessary to compare the site data to the SQAGs. For most analytes of interest (arsenic being the notable exception), the SQAG-TEC criteria are more stringent than the SCTL-RDE criteria. Therefore, in most cases, a cleanup to SQAG-TEC criteria is also protective of human health. It should also be noted that the SQAGs are not standards or deterministic values (i.e., an exceedance does not indicate absolutely that adverse effects will occur); the SQAGs are merely screening values. Data exceeding the SQAG values generally indicate the need for further study. Conversely, chemical concentrations which do not exceed the SQAGs are generally screened out from any further consideration with respect to ecological risk.



Since the soils will also need to be handled by construction workers during project construction and may be relocated off-site or placed in areas of the proposed project that are not inundated and which are accessible to the public, the soil data was also compared to both the SCTLs for residential direct exposure (SCTL-RDE) and to the SCTLs for leaching to groundwater (SCTL-LGW) and leaching to surface water (SCTL-LSW).

4.2 SAMPLING RESULTS

Laboratory analytical results for the soil samples are summarized on **Table 1**. Laboratory reports are provided in **Appendix B**. These results have been evaluated by comparison with the appropriate human-health based SCTLs established in Chapter 62-777, FAC and the ecologically-based SQAG criteria recommendations for sediments.

Organics Results

- 2-4' D (2-4-Dichlorophenoxyacetic acid) was detected in one composite sample at a concentration of 940 μg/kg, which exceeds the SCTL-LGW criterion of 700 μg/kg and the SCTL-LSW criterion of 900 μg/kg. Another sample was detected at a concentration of 860 μg/kg, which exceeds only the SCTL-LGW criterion. Both concentrations were below the SCTL-RDE criteria and SQAG criteria have not been established. The analyte was detected in three other samples above the laboratory method detection limit (MDL) but below all applicable regulatory criteria. The remaining samples were all below the laboratory MDL.
- Metribuzin was detected in two composite samples at concentrations of 1,700 μg/kg and 1,100 μg/kg, which exceed the SCTL-LSW criteria of 800 μg/kg, but are below all other SCTL criteria. SQAG criteria have not been established for this analyte. The analyte was detected in ten other samples above the laboratory MDL but below all applicable regulatory criteria. The remaining samples were all below the laboratory MDL.
- Phorate was detected in two composite samples at concentrations of 120 μg/kg and 93 μg/kg, which exceed the SCTL-LSW criterion of 1 μg/kg, but are below all other SCTL criteria. SQAG criteria have not been established for this analyte. The analyte was detected in one other sample above the laboratory MDL but below all applicable regulatory criteria. The remaining samples were all below the laboratory MDL.
- Atrazine was detected in 16 composite samples (including 2 split samples and 1 duplicate sample) at concentrations exceeding the SQAG-TEC criterion of 0.30 μg/kg (no SQAG-PEC criterion has been established). The atrazine concentrations in the 16 samples ranged from 27 μg/kg to 3,500 μg/kg. Twelve of the sixteen samples were also detected at concentrations exceeding the SCTL-LSW and SCTL-LGW criteria of 40 μg/kg and 60 μg/kg, respectively. Atrazine was detected in another sample at a concentration of 55 μg/kg which exceeds the SCTL-LSW criteria of 40 μg/kg, but is below all other SCTL criteria. None of the detected atrazine concentrations exceed the SCTL-RDE.



- Dieldrin was detected in four samples at concentrations exceeding the SQAG-TEC criterion of 1.9 μg/kg, but below the SQAG-PEC criteria of 62 μg/kg. The dieldrin concentrations were also above the SCTL-LGW and SCTL-LSW criteria of 2 μg/kg and 0.1 μg/kg, respectively. The concentrations in the four samples ranged from 2.7 μg/kg to 5.1 μg/kg. Dieldrin was not detected in any of the other samples above the laboratory MDL.
- Due to the detection of multiple samples containing atrazine and dieldrin at concentrations significantly exceeding the SCTL-LGW and/or SCTL-LSW, PSI subsequently conducted Synthetic Precipitation Leaching Procedure (SPLP) in order to evaluate the potential for leaching of atrazine and dieldrin from the soils into surface water or groundwater. The SPLP test is intended to simulate the leaching of contaminants from soil into groundwater or surface water under typical acid rainfall conditions. PSI analyzed two soil samples containing the highest atrazine concentrations (Comp-8 and Comp-15) by the SPLP for atrazine and two samples containing the highest dieldrin concentrations (Comp-10 and Comp-15) by the SPLP for OCPs. The SPLP test is conducted by adding an acidic solution to the soil sample and mixing the slurry for an extended period of time, before re-extracting the liquid for analyses. The SPLP extract is subsequently analyzed for the constituents of concern (e.g., OCPs or OPPs) and the results are compared to the surface water and/or groundwater cleanup target levels in Chapters 62-302, FAC and 62-777, FAC, respectively.
 - Atrazine was detected in the SPLP extract at concentrations exceeding the Chapter 62-777, FAC Groundwater Cleanup Target Level (GCTL) and Chapter 62-302, FAC Surface water Cleanup Target Level (SwCTL) in both samples (Comp-8 and Comp-15).
 - Dieldrin was not detected in either sample above the laboratory MDL, which was below the GCTL. However, the laboratory MDL for Dieldrin is 0.0011 µg/L which is above the SwCTL criteria of 0.00014 µg/L.

Metals Results

- Arsenic was detected in all of the composite samples at concentrations exceeding the SCTL-RDE criterion of 2.1 mg/kg, but below all SQAG-TEC criterion of 9.8 mg/kg. The measured arsenic concentrations ranged from 3.1 mg/kg to 6.8 mg/kg. The highest arsenic concentration (6.8 mg/kg) was detected in sample Comp-1.
- Barium was detected in of the composite samples at concentrations exceeding the SQAG-PEC criterion of 60 mg/kg. The measured barium concentrations ranged from 69 mg/kg to 118 mg/kg. The highest barium concentration (118 mg/kg) was detected in sample Comp-11 Split (the barium concentration in the parent sample was 98 mg/kg). All of the barium concentrations are below the SCTL criteria.
- Chromium was detected in all of the samples at concentrations exceeding the SCTL-LSW criterion of 4.2 mg/kg, but below all other applicable criteria. The measured chromium concentrations ranged from 5.6 mg/kg to 29 mg/kg.



- Copper was identified in all of the composite soil samples collected from the property. Copper concentrations in seven of the composite samples exceeded the USFWS Interim Screening Level (ISL) for protection of the Everglades Snail Kite (85 mg/kg). The measured copper concentrations in the samples ranged from 53 mg/kg to 110 mg/kg. The measured copper concentrations in all of the samples exceeded the SQAG-TEC of 32 mg/kg. None of the copper concentrations exceeded the SQAG-PEC or SCTL-RDE criteria of 150 mg/kg. The extent of copper impacted soils exceeding the USFWS ISL is shown on Figure 4.
- Cadmium and lead were identified in one or more of the composite soil samples collected on the property but at concentrations which are below the applicable SCTLs and SQAG-TEC criteria.
- Mercury was detected in all of the samples at concentrations exceeding the SCTL-LSW criterion of 0.01 mg/kg, but below all other regulatory criteria. Mercury concentrations ranged from 0.077 mg/kg to 0.14 mg/kg. The measured concentrations in the samples appear to be consistent with regional background conditions from atmospheric deposition.
- Selenium was detected in 27 of the 36 composite samples (including duplicate and split samples) at concentrations exceeding the SCTL-LSW criteria of 0.05 mg/kg. The measured selenium concentrations in the samples ranged from 1.5 mg/kg to 3.7 mg/kg. Selenium concentrations were below the laboratory MDL in all of the other samples; however the laboratory MDLs ranged from 0.47 mg/kg to 0.66 mg/kg which are above the SCTL-LSW criteria, in all cases except one (one sample had an MDL of 0.47 mg/kg the other eight samples had MDLs above the SCTL-LSW criteria of 0.5 mg/kg). No SQAGs have been established for selenium. An action level of 4.2 mg/kg was negotiated with USFWS for organic soils on the C9/C11 project, and it appears that a similar action level would be appropriate on the A-2 FEB. None of the detected selenium concentrations exceeded 4.2 mg/kg.
- Silver was detected in all three split samples at concentrations exceeding the SCTL-LSW criteria of 0.01 mg/kg. The measured silver concentrations in the three split samples were 0.61 mg/kg, 0.61 mg/kg, and 0.64 mg/kg. The silver concentrations in all of the original samples were below the laboratory MDL. Silver was below the laboratory MDL in all of the other samples; however the laboratory MDLs ranged from 0.26 mg/kg to 0.42 mg/kg which are above the SCTL-LSW criteria.
- Total organic carbon measurements ranged from 198,000 mg/kg to 503,000 mg/kg in the samples analyzed by the primary and secondary laboratories.

4.3 DATA VALIDATION

Validation of the laboratory data was performed using the FDEP ADaPT program to ensure that all required quality control targets were met. ADaPT data validation forms are provided with the laboratory reports in **Appendix A**. The data generally met the



quality control requirements for both field and laboratory activities. Some of the data were qualified as noted in the laboratory report and in the summary tables, but none of the data were rejected due to quality control concerns.

- Comparison of the data for original and duplicate samples analyzed by the primary laboratory indicated good precision in measurement by the primary laboratory.
- Comparison of the data between the primary and secondary laboratory indicated good correlation between the laboratory results for the original and split samples.
- No target analytes were detected in the equipment blanks, indicating that laboratory and field decontamination procedures were effective.
- No target analytes were detected in the laboratory method blanks.
- A number of the primary samples had to be diluted for analysis of 4,4-DDT due to unknown matrix interference. The laboratory method detection limits for DDT ranged from about 0.9 ug/kg to 11 ug/kg, and exceeded the SQAG-TEC of 4.2 ug/kg, but were still below all regulatory criteria.
- The laboratory method detection limits for a number of chemicals exceeded the SCTL-LSW criteria. However, a review of the FDEP Guidance for the Selection of Analytical Methods and for the Evaluation of Practical Quantitation Limits indicates that the laboratory method detection limits are below the practical quantitation limits recommended in the FDEP guidance and generally represent the best commercially available detection limits for the methods.
- The laboratory method detection limits for dieldrin in the SPLP analysis leachate exceeds the FDEP Chapter 62-302, FAC surface water standard. However, the laboratory method detection limit is lower than the recommended practical quantitation limit in the FDEP guidance referenced above.

4.4 GEOSTATISTICAL EVALUATION

Since the density of sampling within the cultivated areas of the A-2 FEB was lower (10%) than composite sampling typically conducted under the ERA Protocol, the copper data was further evaluated to determine if it was adequate to make risk management decisions for the site.

As previously discussed, copper concentrations in the 30 composite soil samples ranged from 53 to 110 mg/kg, with an average concentration equal to 77.2 + 13.3 mg/kg and the 95% UCL copper concentration was equal to 83.1 mg/kg. In order to have confidence in the calculated 95% UCL, a sufficient number of samples must be collected to meet Type I and Type II error rate requirements for decision making. Type I



error (alpha) is the probability of incorrectly predicting that the average copper concentrations on the site are less than the snail kite benchmark when they are actually higher than the benchmark. In the case of a 95% UCL, the Type I error rate is set at 5%. Type II error (beta) is the probability of predicting that the average copper concentrations are greater than the snail kite benchmark when they are actually less.

The sample size calculations provided in USEPAs ProUCL tool (ProUCL v 4.1, 2012) use established USPEA guidance for sample size calculations to provide a minimum number of samples necessary to meet Type I and Type II error rates at a given standard deviation and tolerable error margin (delta). The delta value provides a 'grey area' which represents a margin of error attributable to laboratory precision, laboratory reporting accuracy, sampling error, etc.

The ProUCL calculator was used in this case by setting the alpha equal to 0.05 and the beta equal to 0.1. The standard deviation of the copper concentrations in soil was equal to 13.3 mg/kg and the data were normally distributed allowing for the use of parametric statistics. The delta was set equal to 8.5 mg/kg or 10% of the 85 mg/kg benchmark. Using those parameters, the ProUCL calculator indicates that a minimum of 23 samples are required to meet the minimum requirements of a 95% UCL estimate of the mean with a 10% Type II error rate using the data collected at the A-2 FEB. This indicates that an adequate number of samples were collected to calculate a reliable estimate of the 95% UCL of the soil copper concentration.



5. SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT

5.1 SLERA METHODOLOGY

PSI contracted with Formation Environmental, LLC to prepare a screening level ecological risk assessment (SLERA) for the subject property. The SLERA is provided in **Appendix B**. The purpose of the SLERA was to evaluate potential risks to benthic invertebrates and higher trophic species, particularly aquatic wading birds, associated with exposure to the site soils, assuming that a water quality project is implemented and the land is inundated. The SLERA was conducted in accordance with the SFWMD-USFWS-FDEP ERA Protocol.

Once flooded, aquatic organisms such as benthic invertebrates may inhabit the site and could be exposed to residual chemicals. Flooding changes the potential for ecological exposure because many contaminants are more mobile and bioavailable in aqueous environments, and may bio-accumulate more readily in aquatic systems than in terrestrial systems. For the purposes of this analysis, the receptors of greatest concern are aquatic-feeding wildlife, especially Federal or State Trust resources that could be attracted to the newly flooded parcels if an aquatic prey base becomes established. Bioaccumulation of residual chemicals in aquatic prey species could lead to toxic exposure of Trust resources feeding at newly formed aquatic environments. Also considered is the potential for effects to benthic invertebrate communities that could lead to loss of ecosystem function within the newly created aquatic system.

To evaluate potential effects to benthic invertebrates, soil data were compared to the SQAG-TEC and SQAG-PEC values. Risk to aquatic-feeding wildlife was evaluated by estimating the potential exposure of avian receptors to chemicals through the ingestion of aquatic prey species that might accumulate chemicals from soils after they have been flooded. Exposure and risks were calculated for aquatic-feeding wildlife using a model developed for the District specifically for the purposes of this program (Goodrich 2002 and NewFields 2006). The model provides conservative (i.e., protective) exposure estimates for key species of wildlife that are common in central and southern Florida. The model was developed to incorporate potential bioaccumulation of organic and inorganic chemicals into an aquatic food web that could develop at a flooded agricultural site. The model has been approved by the USFWS for use by the District in making decisions regarding property acquisition.

The SLERA was conducted using consistently conservative assumptions about toxicity, bioavailability, and exposure patterns. The combination of conservative assumptions can result in substantial uncertainty and overestimation of risks of adverse ecological effects. In most cases, the District has elected to use SLERA results as a basis for corrective actions, seeking to err on the side of environmental protection. In other cases where very large areas are involved, the District has sought to reduce uncertainty in exposure assessments by performing additional tests outlined in the ERA Protocol.



5.2 SLERA RESULTS

Formation Environmental generated the following conclusions based on the SLERA analysis:

Benthic Invertebrates

- Maximum detected concentrations of copper and dieldrin were greater than the SQAG-TEC only. Risks to the benthic invertebrate community due to exposure to both are predicted to be low but cannot be conclusively dismissed. The 95% UCL of both copper and dieldrin exceeded the SQAG-TEC. The very high levels of organic carbon in the soils likely mitigate the risk to both constituents of potential concern (COPCs) due to decreased bioavailability. Similarly, the mean PEC-HQ was lower than 0.5, indicating that cumulative risk from exposure to copper and dieldrin is expected to be low.
- All detected concentrations of barium, as well as the 95% UCL, exceeded the SQAG-PEC. However, no risk is predicted from exposure to barium because all of the samples collected from the A-2 FEB are within the range of barium concentrations defined by FDEP (Carvalho and Schropp 2002) as clean areas and areas established as a statewide reference for healthy biological communities.
- Concentrations of atrazine, 2,4-D, metribuzin, and phorate were also detected in several samples across the A-2 FEB. While elevated concentrations of each of these herbicides and insecticides were observed, communication with Florida Crystals farm managers indicates that all are actively applied as part of their general farming practice. All of the detected chemicals have relatively short half-lives and are not expected to persist for long periods after farming on the A-2 FEB is ceased. Best management practices should be followed to allow for sufficient time for the COPCs to degrade prior to completion of the A-2 FEB.

Aquatic-Feeding Birds

- Selenium concentrations in A-2 FEB soil samples exceeded the USFWS screening benchmark for effects to aquatic-feeding wildlife at a number of locations. Risks were subsequently evaluated using the SLERA model which resulted in no HQs greater than 1.0 using maximum detections. Risks were also predicted using the TTF model from Presser and Luoma (2010) and the data from the C9/C11 selenium study to estimate bird egg selenium concentrations. At maximum sediment concentrations, bird egg selenium concentrations were not predicted to be greater than the 95% lower confidence limit of the recommended egg tissue effect threshold concentrations. Based on these results and the results of the C9/C11 selenium study completed by the District, no unacceptable risk to aquatic-feeding birds is predicted in the A-2 FEB.
- Copper concentrations exceeded the 85 mg/kg interim benchmark for protection of the Everglade snail kite in just over 25% of the composite samples. However, the 95% UCL copper concentration was less than the benchmark. Given the relationship between organic carbon content in sediments and the bioavailability



of copper, the observed low magnitude exceedances of the benchmark are not expected to result in unacceptable levels of risk to the Everglade snail kite. The District should consider periodic monitoring of copper concentrations in surface water, periphyton, and apple snails following construction to provide data pertinent to the management of risks to the Everglade snail kite.

 All other HQs calculated via the food-web model using maximum detected composite sample concentrations were less than 1 indicating risks from these COIs are de minimus.

Overall, no evidence of elevated agrochemical contamination within the soils was found that would cause concern related to the construction of the A-2 FEB based on risk to the future aquatic community or to USFWS trust species that may utilize the future habitat provided by its construction. Due to the observed copper concentrations greater than the 85 mg/kg benchmark, monitoring of copper in surface water and apple snails following construction is recommended.



6. CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

- Very few organic agrochemicals were detected in the site soil at concentrations exceeding ecological or human health risk screening criteria. The majority of the detected chemicals, including 2,4-D, atrazine, metribuzin, and phorate are being actively applied on the property and soil concentrations are likely to dissipate rather quickly once the agricultural use of the property is ceased, given these chemicals relatively low persistence in the soil.
- Dieldrin is the only persistent organic chemical that was detected, but it was only sporadically detected at concentrations exceeding the SQAG-TEC, but below the SQAG-PEC. The hazard quotients for dieldrin that were calculated in the SLERA for a number of aquatic-feeding birds were well below one; thus, potential impacts to Trust species from exposure to residual dieldrin are likely to be very low.
- Copper was the primary constituent of potential ecological concern that was detected in the site soils.
 - Copper was detected in approximately 27% of the composite samples at concentrations exceeding the USFWS ISL of 85 mg/kg. The detected copper concentrations ranged as high as 110 mg/kg and exhibited a normal data distribution with a mean concentration of 77.2 mg/kg and a 95% upper confidence limit (UCL) of 81.3 mg/kg. Spatially, the data present a random pattern, and no discernible areas of higher concentrations could be interpreted from the maps.
 - Based on the copper data from the 10% sampling coverage, it is estimated that on the order of 3,850 acres of the property may contain copper concentrations exceeding the USFWS ISL. However, most of the exceedances are likely to only marginally exceed the ISL, and would be within the 85-95 mg/kg range.
 - The USFWS ISL for copper was developed for protection of the endangered Everglades snail kite and the ISL was derived using a standard bioaccumulation model that is thought to be generally applicable for the sandy soils, containing only small amounts of organic carbon, associated with citrus groves where copper sulfate is liberally applied as a fungicide in south Florida. Organic carbon concentrations in sandy soils are typically less than 1% while the organic carbon content in the A-2 FEB soils ranges from about 20% to about 50%. Metals, including copper are known to bind tightly with organic matter in the soil, and would be less bioavailable in these organic soils than they would be in sandy soils. A review of available published studies relating bioavailability to organic content in the soil was performed as part of the SLERA. These previous studies suggest a strong correlation between increased organic content



and decreased bioavailability; however, no direct numeric correlation could be gained from these studies that would allow us to calculate an alternate ISL for these soils based on the increased carbon content. Qualitatively, copper concentrations that only marginally exceed the ISL of 85 mg/kg in these highly organic soils are not likely to represent a significantly increased risk to the Everglades snail kite. As low as a 10 – 20% reduction in bioavailability would be expected to reduce uptake into the apple snails to levels equal to or less than predicted by the 85 mg/kg benchmark over the large majority of the A-2 FEB footprint.

- The Everglades snail kite could be exposed to copper concentrations in its primary food source, the apple snail, which may accumulate copper in its tissue from direct contact with the soil, or through ingestion of periphyton. The model makes certain assumptions regarding the bioaccumulation of copper up through the food chain and the degree to which ingested copper would be adsorbed by the Everglades snail kite. Apple snail bioaccumulation, Everglades snail kite exposure, and bioavailability studies are currently being conducted by both USFWS and SFWMD to evaluate these critical assumptions in the model. results are not yet available. Bioaccumulation studies currently being performed by SFWMD suggest that copper concentrations in the surface water are likely to peak shortly after initial filling of the A-2 FEB, but would decline rapidly following the completion of the FEB. Since apple snails are not likely to establish a population large enough to support the foraging requirements of one or more snail kites immediately upon filling of the FEB, the snails and therefore, the Everglades snail kite, are not likely to be exposed to the peak concentrations of copper. The initial study data combined with the consideration of copper bioavailability discussed in the previous bullet suggest that the impacts to the Everglades snail kite to copper concentrations only marginally exceeding the ISL are not likely to be significant.
- PSI does not believe that corrective action to address copper impacted soils is warranted based on:
 - the marginal exceedance of the ISL,
 - the fact that the 95% UCL copper concentration across the site is less than 85 mg/kg,
 - the low likelihood of impacts from exposure to these soils given the decreased bioavailability associated with these soils, and
 - the interim study results indicating that the model assumptions used to develop the ISL may be overly conservative,.
- Based on the presumption that no corrective action is warranted for marginally impacted soils, PSI does not believe that further soil sampling for copper is warranted. Given the normal distribution and low standard



deviation of the data set, additional sampling is not likely to result in increased power or increased confidence in the data set.

- Arsenic concentrations across the majority of the A-2 FEB footprint are likely to exceed the FDEP Soil Cleanup Target Level for Residential Direct Exposure, but the detected concentrations are all below the SQAG-TEC criterion. Arsenic concentrations are not likely to represent a human health or ecological risk, as long as the soil is managed on-site and is not disposed off-site at an uncontrolled site
- A number of chemicals, including 2,4-D, atrazine, metribuzin, phorate, dieldrin, chromium, mercury, selenium, and silver were detected in one of more of the composite soil samples at concentrations exceeding the soil cleanup target levels for leaching to surface water (SCTL-LSW). However, it should be noted that the SCTL-LSW criteria are based on leaching of chemicals from the soil into a Class III surface water body. In this case, the soils will be in direct contact with surface water once the project is constructed; however, the overlying surface water body would be classified as a treatment cell, and not as a Class III surface water. Therefore, the Class III surface water criteria and the SCTL-LSW criteria do not apply to these soils.
- Class III surface water criteria must be met for waters that are discharged from the A-2 FEB and therefore, comparison of the chemical concentrations in the soil with the SCTL-LSW criteria may be beneficial in evaluating whether exceedances of the Class III surface water criteria are likely at the A-2 FEB discharge point. An evaluation of the chemical data indicates that exceedances of the Class III surface water at the discharge of the A-2 FEB are very unlikely due to the following factors:
 - A number of the chemicals such as 2,4-D, atrazine, metribuzin, and phorate are relatively short-lived in the environment and were recently applied during active crop management. These chemicals are not likely to be present in the soil at significant concentrations when the reservoir is constructed.
 - Dieldrin is biologically persistent, but was only detected sporadically in the A-2 FEB footprint. The effect of dilution from incoming surface water and water overlying clean areas of the FEB are likely to dilute any leaching of these chemicals within these limited areas.
 - Chromium, mercury, and selenium were consistently detected and silver was detected at a few locations at concentrations exceeding the SCTL-LSW criteria. However, these metals all sorb strongly to organic matter in the soil and are not likely to leach to a significant degree from the highly organic soils in the A-2 FEB. Default SCTL-LSW criteria are based on soils with a much lower organic content than the soils on the subject property.



Overall, no evidence of elevated agrochemical contamination within the soils was found that would cause concern related to the construction of the A-2 FEB based on risk to the future aquatic community or to USFWS trust species that may utilize the future habitat provided by its construction.

6.2 RECOMMENDATIONS

- Based on the exceedances of the USFWS ISL for copper in a number of the soil samples, PSI recommends that the District conduct a monitoring program at start-up of the FEB to verify copper concentrations in the surface water, periphyton ,and in any apple snails that may occupy the FEB in the early stages of habitat development. This monitoring may be discontinued once it is verified that copper concentrations in the surface water, periphyton, and apple snails are below acceptable risk thresholds for protection of the Everglades snail kite.
- Based on the exceedance of the SCTL-LSW for atrazine, 2,4-D, metribuzin, phorate, dieldrin, chromium, mercury, and selenium in a number of soil samples, one-time surface water sampling for these parameters is recommended during start-up of the FEB to verify that these chemicals are not leaching into the surface water.
- An agrochemical best management practices (BMP) plan is recommended to address the use of agrochemicals on the property in the interim use period prior to project construction, assuming that the property will continue to be used for agricultural purposes in the interim. The intent of the BMP plan is to ensure that further agrochemical application does not result in increased concentrations for the chemicals of concern that were identified in the Phase II ESA. Further application of copper-containing fertilizers will need to be particularly scrutinized. A ramp-down period for some of the readily degradable agrochemicals (e.g., atrazine) may be warranted to ensure that the concentrations of these chemicals are below ecological risk thresholds at the time of project construction.
- Based on the presence of arsenic in the site soils at concentrations exceeding the SCTL-residential criteria, these soils should not be transported off-site for uncontrolled disposal. A soil management plan should be developed for project construction to ensure proper handling and disposal of the soils.



7. WARRANTY

PSI warrants that the findings and conclusions reported herein were conducted in general accordance with good commercial and customary practice for conducting a Phase II Environmental Site Assessment. However, these findings and conclusions contain all of the limitations inherent in these methodologies.

The Phase II Environmental Site Assessment has been developed to provide the client with information regarding apparent indications of chemical impacts to the subject property. It is necessarily limited to the conditions observed and to the information available at the time of the work. The assessment and conclusions presented herein were based upon the subjective evaluation of limited data. They may not represent all conditions at the subject site as they reflect the information gathered from specific locations. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental investigation methodology and only for the site described in this report.

Due to the limited nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of report preparation. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods. The description, type, and composition of what are commonly referred to as "hazardous materials or conditions" can also change over time. PSI does not accept responsibility for changes in the state of the art, nor for changes in the scope of various lists of hazardous materials or conditions. PSI believes that the findings and conclusions provided in this report are reasonable. However, no other warranties are implied or expressed.



TABLES



TABLE 1: SOIL ANALYTICAL DATA SUMMARY - COMPOSITE SAMPLES (detected constituents only)

PROJECT NAME: A-2 Flow Equalization Basin

PSI PROJECT NO.: 05521114

			Chlorinated Herbicides (ug/kg)	lerbicides OPPs (ug/kg)		OPPs (ug/kg) OCPs		Metals (mg/kg)					TOC (mg/kg)				
Sample ID	Date Collected	Sample Interval (ft bls)	D, 2-4'	Atrazine	Metribuzin	Phorate	Dieldrin	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Total Organic Carbon
		SCTL-RDE	770,000	4,300	54,000	16,000	60	2.1	120	82	210	150	400	3	440	410	***
		SCTL-LGW	700	60	2,200	300	2	SPLP	1600	7.5	38	***	SPLP	2.1	5.2	17	***
		SCTL-LSW	900	40 ***	800 ***	1 ***	0.1	SPLP	***	***	4.2	***	***	0.01	0.5	0.01	***
		SQAG-PEC	***	0.30	***	***	62 1.9	33 9.8	60	5.0 1.0	110	150 85*	130	1.1 0.18	***	2.2	***
Comp. 4.040242	4/22/2042	SQAG-TEC			+			1	20		43	-	36			1.0	
Comp-1 012313	1/23/2013	0-0.5	58 U	99 I	41 I	3.6 U	1.7 U	6.8	110	0.11 U	19	110	7.8	0.1	1.71	0.33 U	320,000
Comp-2 012513	1/25/2013	0-0.5	65 U	29 U	20 U	4.1 U	1.9 U	5.2	93	0.11 U	15	59	6.7	0.098	2.01	0.33 U	383,000
Comp-3 012313	1/23/2013	0-0.5	65 U	29 U	20 U	4.1 U	1.9 U	4.3	91	0.11 U	16	82	5.4	0.11	2.5	0.33 U	440,000
Comp-4 012413	1/24/2013	0-0.5	65 U	29 U	20 U	9.61	1.9 U	4.7	95	0.12 U	5.6	91	5.9	0.14	2.3	0.36 U	354,000
Comp-4 DUP 012413	1/24/2013	0-0.5	74 U	33 U	23 U	4.7 U	1.1 U	4.1	93	0.14 U	6.8	80	5.7	0.13	1.81	0.42 U	259,000
Comp-5 012513	1/25/2013	0-0.5	63 U	27 U	20 U	3.9 U	1.8 U	4.6	94	0.11 U	15	53	5.5	0.12	2.1	0.33 U	423,000
Comp-6 012513	1/25/2013	0-0.5	70 U	30 U	22 U	4.3 U	0.99 U	4.5	110	0.12 U	18	75	6.1	0.12	0.66 U	0.36 U	440,000
Comp-7 012313	1/23/2013	0-0.5	57 U	25 U	18 U	3.6 U	1.6 U	6.4	97	0.10 U	20	75	6.3	0.11	0.55 U	0.30 U	389,000
Comp-7 DUP 012313	1/23/2013	0-0.5	58 U	25 U	18 U	3.6 U	1.7 U	5.7	97	0.11 U	19	74	7.1	0.11	2.8	0.33 U	329,000
Comp-8 012313	1/23/2013	0-0.5	62 U	1,100	240	3.8 U	1.8 U	3.8	96	0.12 U	14	87	6.3	0.13	0.62 U	0.34 U	358,000
Comp-9 012213	1/22/2013	0-0.5	200 I	380	280	3.9 U	1.8 U	3.9	92	0.12 U	13	67	5.3	0.12	2.4	0.35 U	430,000
Comp-9 DUP 012213	1/22/2013	0-0.5	170 I	440	280	4.4 U	1.0 U	3.5	110	0.14 U	17	65	5.8	0.12	3	0.40 U	419,000
Comp-10 012313	1/23/2013	0-0.5	57 U	25 U	18 U	3.6 U	4.5 I	4.9	95	0.11 U	12	68	5.9	0.13	1.6 I	0.31 U	384,000
Comp-11 012413	1/24/2013	0-0.5	63 U	27 U	20 U	3.9 U	1.8 U	3.6	98	0.11 U	15	79	5.6	0.14	0.58 U	0.31 U	450,000
Comp-11 SPLIT	1/24/2013	0-0.5	70 U	30 U	NA	4.3 U	10.5 U	6.4	118	0.10 I	14.2	83.5	6.2	0.087	2.4	0.61 I	461,000
Comp-12 012513	1/25/2013	0-0.5	63 U	27 U	20 U	3.9 U	1.8 U	3.8	100	0.11 U	13	87	6.8	0.14	3.7	0.32 U	470,000
Comp-13 012213	1/22/2013	0-0.5	59 U	110 I	19 U	3.7 U	1.7 U	6.2	100	0.15 I	29	90	6.7	0.13	2.3	0.32 U	400,000
Comp-14 012213	1/22/2013	0-0.5	60 U	26 U	19 U	3.8 U	1.7 U	5.5	80	0.18 I	16	68	6.6	0.11	2.2	0.34 U	374,000
Comp-15 012213	1/22/2013	0-0.5	290	3,500	730	4.3 U	4.9 I	3.4	87	0.12 I	7.8	75	7	0.11	2.6	0.35 U	477,000
Comp-15 SPLIT	1/22/2013	0-0.5	860	1,600	NA	4.1 U	9.91 U	5.46	103	0.02 U	7.36	86.0	7.36	0.077	1.99	0.61 I	461,000
Comp-16 012313	1/23/2013	0-0.5	52 U	330	58 I	120 I	5.1 I	4	91	0.096 U	23	96	6.1	0.13	2.3	0.29 U	388,000
Comp-17 012313	1/23/2013	0-0.5	60 U	160 I	600	3.8 U	1.7 U	3.8	99	0.12 U	17	85	6.4	0.13	2.6	0.33 U	409,000
Comp-18 012513	1/25/2013	0-0.5	940	3,300	1,100	3.9 U	1.8 U	3.4	97	0.11 U	11	88	4.7	0.15	1.5 I	0.32 U	450,000
Comp-19 012413	1/24/2013	0-0.5	55 U	24 U	17 U	3.4 U	1.6 U	5.5	88	0.11 U	17	59	6.5	0.12	0.57 U	0.31 U	198,000
Comp-20 012413	1/24/2013	0-0.5	57 U	25 U	140	3.6 U	1.6 U	5	90	0.10 U	14	70	6.3	0.11		0.30 U	361,000
Comp-21 012213	1/22/2013	0-0.5	52 U	55 I	200	93 I	1.5 U	3.5	69	0.17 I	9.4	79	8.4	0.099	0.47 U	0.26 U	308,000
Comp-22 012313	1/23/2013	0-0.5	63 U	27 U	20 U	3.9 U	1.8 U	4.3	100	0.16 I	12	83	6.2	0.14	2.5	0.35 U	448,000
Comp-23 012413	1/24/2013	0-0.5	59 U	26 U	19 U	3.7 U	2.7	4.2	82	0.11 U	13	59	5.4	0.12	2.6	0.32 U	384,000
Comp-24 012413	1/24/2013	0-0.5	64 U	28 U	20 U	4.0 U	1.8 U	4.1	99	0.14 I	28	82	6.6	0.14	2.5	0.35 U	464,000
Comp-25 012513	1/25/2013	0-0.5	58 U	31 I	120	3.6 U	1.7 U	6.4	100	0.11 U	19	67	5.6	0.11	2.5	0.32 U	392,000
Comp-26 012413	1/24/2013	0-0.5	57 U	25 U	18 U	3.6 U	1.6 U	5.5	98	0.11 U	17	78	6.4	0.13	0.58 U	0.32 U	355,000
Comp-27 012213	1/22/2013	0-0.5	70 U	35 I	22 U	4.3 U	0.99 U	3.5	89	0.12 U	9.1	74	5.9	0.14	2.9	0.36 U	503,000
Comp-28 012313	1/23/2013	0-0.5	58 U	190	1,700	3.6 U	1.7 U	3.1	83	0.14 I	26	69	5.8	0.13	1.8 I	0.30 U	415,000
Comp-28 SPLIT	1/23/2013	0-0.5	60 U	130 I	NA	3.8 U	9.47 U	4.79	98.2	0.02 U	22.6	78.9	6.23	0.085	2.08	0.64 I	433,000
Comp-29 012413	1/24/2013	0-0.5	74 U	33 U	23 U	4.7 U	1.1 U	4.3	86	0.14 U	7.2	60	5.2	0.13	2.3 I	0.42 U	485,000
Comp-30 012513	1/25/2013	0-0.5	63 U	27 I	20 U	3.9 U	1.8 U	3.2	96	0.12 U	21	100.0	6.9	0.15	0.65 U	0.35 U	424,000

Notes:

U = Less than the method detection limit

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

J= Estimated value

Bold type indicates that the compound was detected above the laboratory method detection limits. The font color indicates the highest of the listed regulatory limits that was exceeded. Black Bold indicates a detection above the laboratory Method Detection Limit (MDL) but below all regulatory criteria.

^{* =} interim cleanup target level for protection of Everglades Snail Kite

^{*** =} No Standard

TABLE 2: Summary of SPLP Results

PROJECT NAME: A-2 Flow Equalization Basin

PSI PROJECT NO.: 05521114

			OPPs (ug/L)	OCPs (ug/L)		
Sample ID	Date Collected	Sample Interval (ft bls)	Atrazine	Dieldrin		
		GCTL	3	0.002		
		SwCTL	1.9	0.00014		
Comp-8 012313	1/23/2013	0-0.5	7.2	NA		
Comp-10 012313	1/23/2013	0-0.5	NA	0.0011 U		
Comp-15 012213	1/22/2013	0-0.5	14	0.0011 U		

Notes:

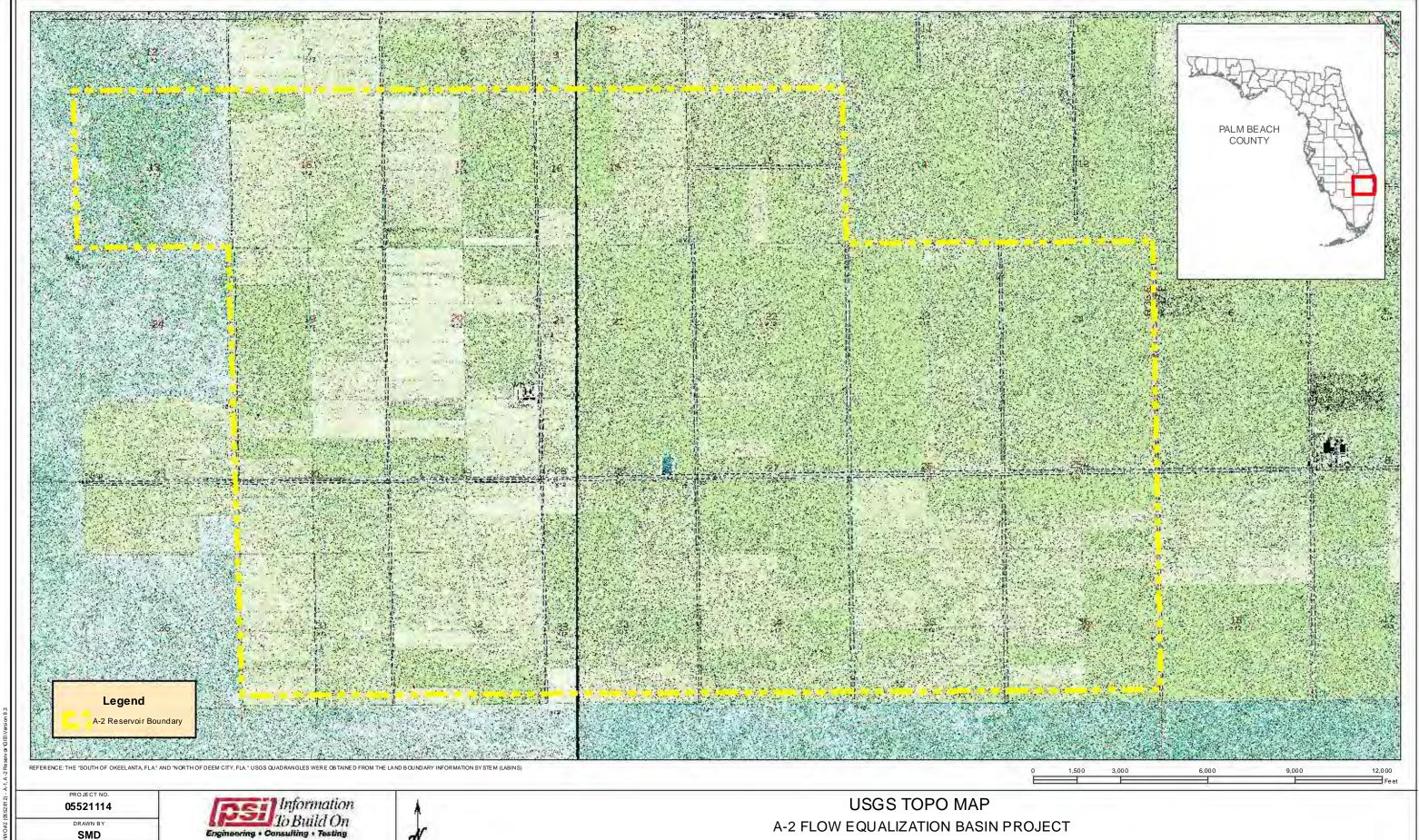
NA = Not Analyzed

Bold indicates value exceeds the applicable GCTL or SwCTL. The font color indicates the highest regulatory limit that is exceeded.

^{*** =} No Standard

FIGURES





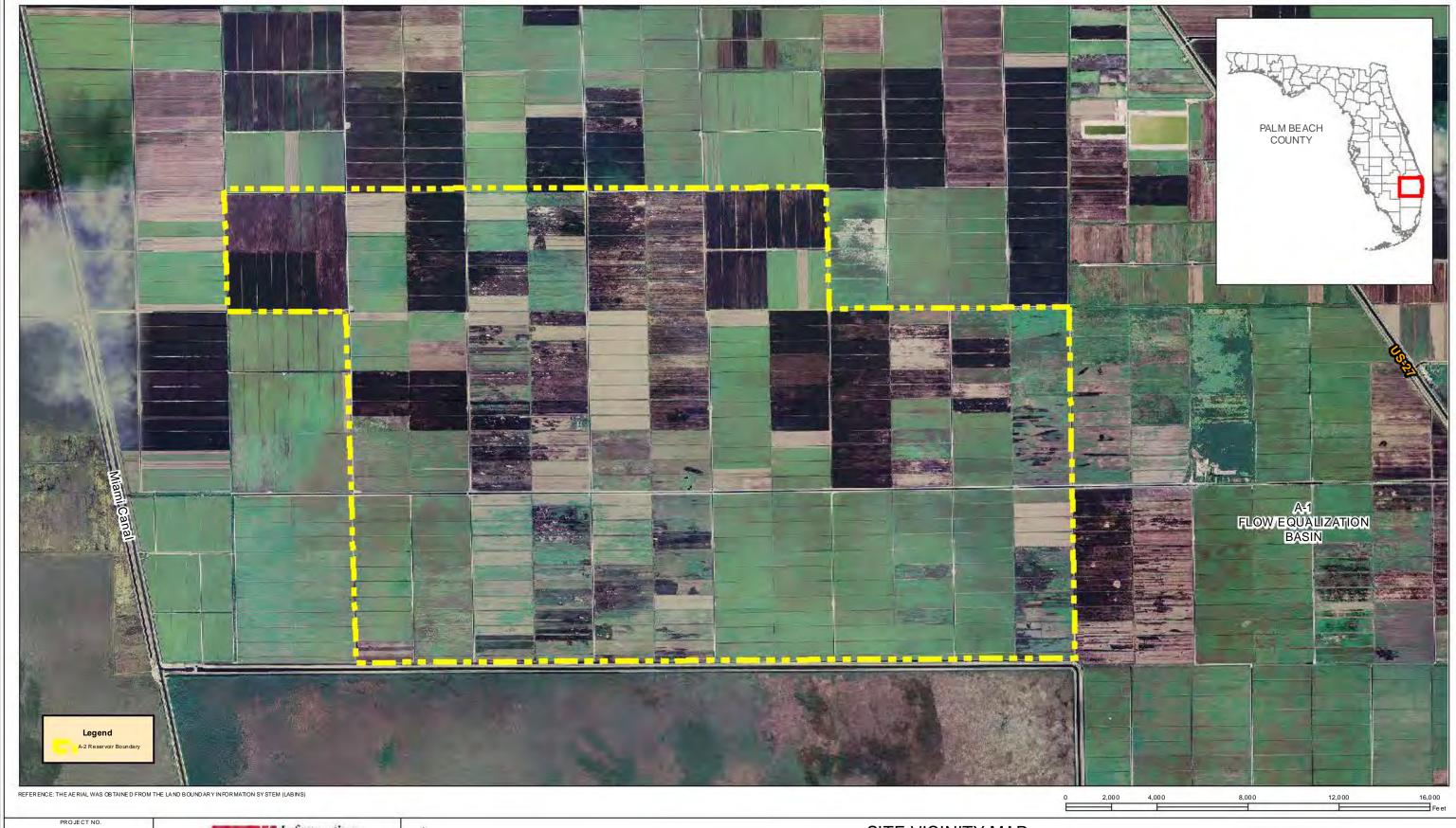
DATE CREATED 2-15-2013 SCALE: 1 inch = 3,000 feet

5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax



EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA

FIGURE 1



05521114

DRAWN BY

SMD

DATE CREATED 2-15-2013 SCALE: 1 inch = 4,000 feet Information
To Build On

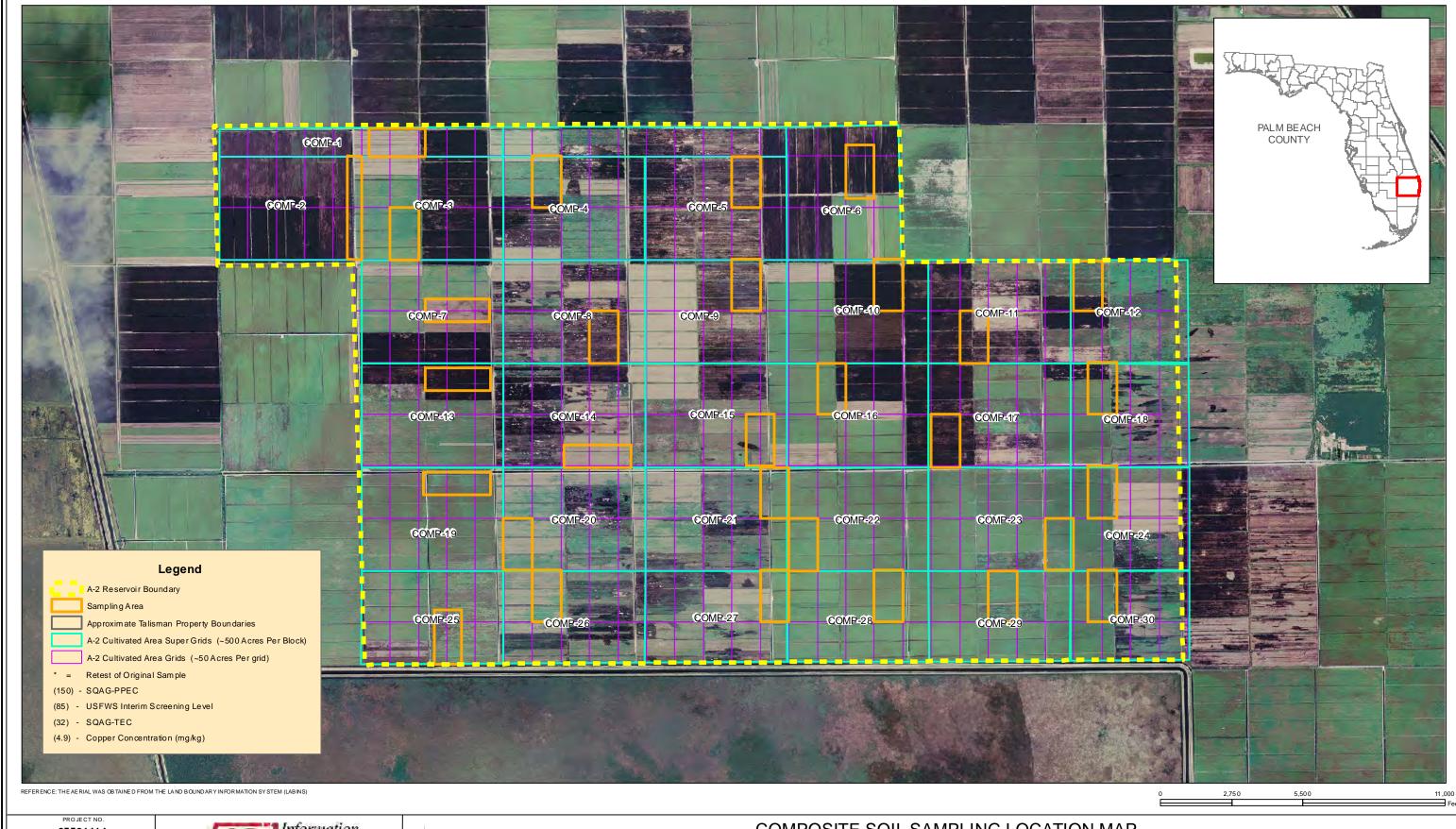
5801 Benjamin Center Drive Suite 112 Tampa, Florida 33 634 (81 3)8 86-1075 (81 3)2 49-0301 fax



SITE VICINITY MAP

A-2 FLOW EQUALIZATION BASIN PROJECT EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA

FIGURE 2



05521114

DRAWN BY SMD

DATE CREATED 2-22-2013

SCALE: 1 inch = 3,500 feet

Information To Build On

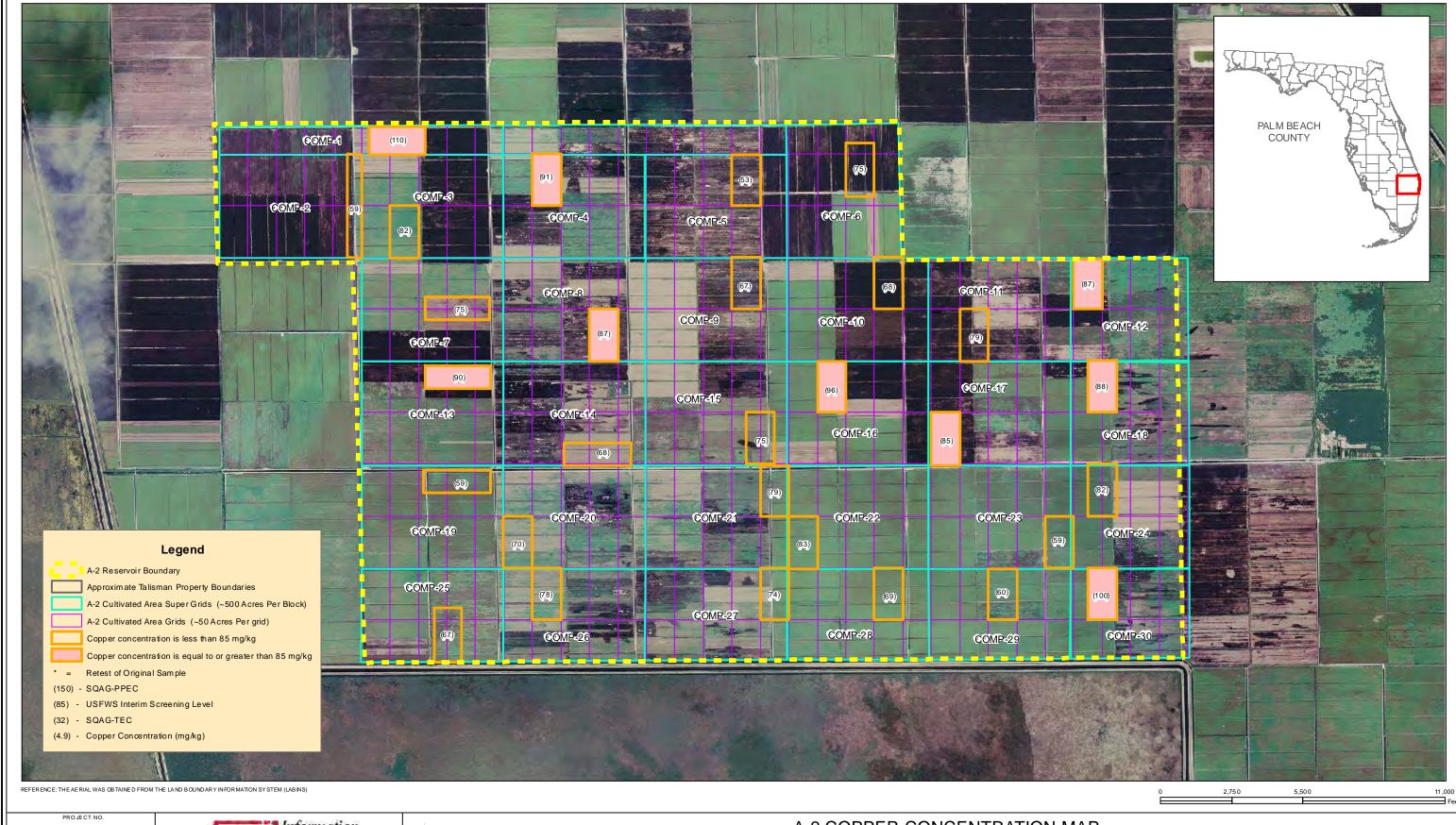
5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax



COMPOSITE SOIL SAMPLING LOCATION MAP

A-2 FLOW EQUALIZATION BASIN PROJECT EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA

FIGURE 3



05521114

DRAWN BY

SCALE: 1 inch = 3,500 feet

DATE CREATED 2-22-2013

Information
To Build On
Engineering • Consulting • Testing

5801 Benjamin Center Drive Suite 112 Tampa, Florida 33 634 (81 3)8 86-1075 (81 3)2 49-0301 fax



A-2 COPPER CONCENTRATION MAP
A-2 FLOW EQUALIZATION BASIN PROJECT

A-2 FLOW EQUALIZATION BASIN PROJECT EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA

FIGURE 4

SUMMARY ENVIRONMENTAL REPORT

For the

CENTRAL EVERGLADES STUDY A-2 RESERVOIR PALM BEACH COUNTY, FLORIDA

Prepared for

SOUTH FLORIDA
WATER MANAGEMENT DISTRICT
ENVIRONMENTAL SCIENCE UNIT
MAINTENANCE MANAGEMENT SECTION
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33406

Prepared by

Professional Service Industries, Inc. 5801 Benjamin Center Drive Tampa, FL 33634 Telephone (813) 886-1075

PSI PROJECT NO. 0552812

August 21, 2012

August 21, 2012

South Florida Water Management District Environmental Science Unit Maintenance Management Section 3301 Gun Club Road West Palm Beach, Florida 33406

Attn: Mr. Robert Kukleski

Re: A-2 Reservoir Summary Environmental Report

Central Everglades Study Palm Beach County, Florida PSI Project No.: 0552812

Dear Mr. Kukleski:

In accordance with our agreement, Professional Service Industries, Inc. (PSI) has completed the summary of previous environmental investigations for the above referenced project.

Thank you for choosing PSI as your consultant for this important project. If you have any questions, or if we can be of additional service, please call us at (813) 886-1075.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Steve Long, P.E., P.G. Chief Engineer

SUMMARY ENVIRONMENTAL REPORT

For the

CENTRAL EVERGLADES STUDY A-2 RESERVOIR PALM BEACH COUNTY, FLORIDA

Prepared for

SOUTH FLORIDA
WATER MANAGEMENT DISTRICT
ENVIRONMENTAL SCIENCE UNIT
MAINTENANCE MANAGEMENT SECTION

Prepared by

Professional Service Industries, Inc. 5801 Benjamin Center Drive Tampa, FL 33634 Telephone (813) 886-1075

PSI PROJECT NO. 0552812

Stephen P. Long, PE, PG Chief Engineer

August 21, 2012

TABLE OF CONTENTS

1	INT	RODUCTION	1
	1.1	Property Description	. 1
	1.2	Authorization	
	1.3	Purpose/Objectives	
	1.4	Proposed Construction	
_		•	
2.		BULATORY FRAMEWORK	
	2.1	Regulatory Oversight	
	2.2	ARARs	
	2.2.		
	2.2.2		
	2.2.3	3	
	2.2.4	J 5	
	2.2.		
	2.2.0		
	2.2.	1 1	
	2.2.8		
	2.2.9	9 Hazardous Waste Criteria	9
3.	SUN	MMARY OF PREVIOUS REPORTS	11
•	3.1	Former Talisman South Ranch	
	3.1.		
	3.1.2		
	3.2	Summary of Restrictive Covenants	
	3.3	Summary of Remaining HTRW Areas	
4.		DLOGY/HYDROGEOLOGY	
4.	4.1	Regional Geology	
	4.1	0	
	4.2	Regional Hydrologeology	
	4.3		
		Site Specific Hydrogeology	
5.	GO\	VERNMENTAL DATABASE REVIEW	27
6.	OVE	ERVIEW OF ASSESSMENT AND REMEDIATION	28
٥.	6.1	Point Source Areas	
	6.2	Regional Evaluation of Cultivated Areas	
	6.3	Outstanding Corrective Actions	
	6.4	Outstanding Regulatory Issues	
_			
7.	REF	ERENCES	29
8.	WAI	RRANTY	31
	GURES		
	gure 1-	·	
Fi	gure 1-2	2 Site Plan – Aerial Photograph	
	gure 3-	·	
	gure 3-2		
Fi	gure 3-	3 Deed Restrictions Map	

i

TABLES

Table 1	Summary of Assessment and Corrective Actions
Table 2	Summary of Environmental Reports
Table 3	Range of Concentrations vs. Regulatory Requirements – Talisman Borrow Pit
Table 4	Range of Concentrations vs. Regulatory Requirements – Talisman Labor Camp
Table 5	Range of Concentrations vs. Regulatory Requirements – T-21
Table 6	Range of Concentrations vs. Regulatory Requirements – T-24

APPENDICES

Appendix A	Previous Environmental Reports
Appendix B	Regulatory Comment Letters/SRCOs
Appendix C	Deed Restrictions
Appendix D	EDR Governmental Database Report

1 INTRODUCTION

1.1 Property Description

The proposed A-2 Reservoir project is located along the west side of US 27 South in unincorporated Palm Beach County and encompasses on the order of 14,408 acres. The project location is shown on **Figure 1-1**. The project lands consist of 8 separate parcels. The tract numbers, prior ownership, and acreage are shown in the table below.

A-2 Reservoir				
D7100-044	TALISMAN SUGAR CORPORATION	2		
D7100-047	TALISMAN SUGAR CORPORATION	10		
D7100-066	TALISMAN SUGAR CORPORATION	12		
D7100-067	TALISMAN SUGAR CORPORATION	1		
D7100-104	TALISMAN SUGAR CORPORATION	14,371.53		
D7100-139	TALISMAN SUGAR CORPORATION	1		
D7100-141	WEINLEIN, JOAN	10		
D7200-005	TALISMAN SUGAR CORPORATION	1		
	A-2 Total	14,408.53		

Most of the project area has been historically cultivated in sugar cane, with occasional rotational crops of rice or corn. The property is being leased to New Hope Sugar Corporation for sugar cane cultivation. A Site Plan is provided as **Figure 1-2**.

The primary parcel (Tract D7100-104) was acquired from Talisman Sugar Company in 1999 by the District. Several of the smaller parcels listed above were also owned and operated by Talisman Sugar Corporation, but these parcels were deferred from transfer during the original transaction until environmental concerns on these small areas could be addressed. The Weinlan parcel (Tract D7100-141) was leased to Talisman Sugar at the time of the 1999 acquisition and was evaluated with the remainder of Tract D7100-104. It is acknowledged that the assessment methods and protocols that were utilized at the time of the original acquisition are not entirely consistent with the current protocols for environmental risk assessment that were jointly developed by United States Fish and Wildlife (USFWS), the Florida Department of Environmental Protection (FDEP) and the South Florida Water Management District (SFWMD).

1.2 Authorization

This Summary Report was prepared in substantive compliance with PSI Proposal No. 552-58094 dated November 28, 2011, which was authorized by SFWMD Contract and Work Order No. 4600002399-WO#02.

1.3 Purpose/Objectives

The District requires a summary report for the A-2 Reservoir project, which compiles the results of the previous investigations performed on the properties within the project footprint. The primary purposes of the report are:

- Compile and summarize the results of previous environmental studies within the project area;
- Document and map known point source and non-point source areas of impact which might present increased ecological or human health risk upon construction of the project.

1.4 Proposed Construction

The proposed project will consist of the construction of a large reservoir for water storage. The design has not yet been initiated so details on the use of each parcel are not yet available. However, for the purposes of this document, PSI has assumed worst-case conditions that the entirety of the property will be inundated. If portions of the property are ultimately not flooded, the ecological risks discussed herein for those areas would be overstated.

2. REGULATORY FRAMEWORK

2.1 Regulatory Oversight

The FDEP, FWS, and SFWMD jointly developed a protocol, entitled "Protocol for Assessment, Remediation, and Post-Remediation Monitoring for Environmental Contaminants on Everglades Restoration Projects for conducting environmental assessments on agricultural lands proposed for use in water resources projects. This protocol has commonly been referred to as the Ecological Risk Assessment (ERA) Protocol. The ERA Protocol includes separate evaluation of potential point source areas (e.g., underground storage tanks, pesticide mix/load areas, etc.) and residual chemical impacts across agricultural areas associated with routine application of agrochemicals as a normal farming practice. The ERA Protocol is intended to be a dynamic document which is revised as improvements in science or regulatory framework change. The ERA Protocol was initially drafted in 2000 and the most recent revisions are reflected in the August 2008 version of the document.

As previously noted, some of the assessment work conducted on parcels within the project footprint was conducted prior to the initial version of the ERA Protocol or using earlier drafts of the document. Prior to the 2000 ERA Protocol most of the assessments focused solely on evaluation of risks associated with point source areas, and little investigation work was performed to evaluate potential non-point source risks associated with residual chemical concentrations in soil associated with routine application of agrochemicals across widespread cultivated areas.

All of the work conducted by the SFWMD for the Project was performed under the direct supervision of both FDEP (Bureau of Waste Cleanup) and the USFWS and completed in accordance with the ERA Protocol in place at the time of the assessment. Additionally, FDEP applied the following point source contamination specific rules, including:

- Chapter 62-770, FAC (Petroleum Contamination Site Cleanup Criteria)
- Chapter 62-780, F.A.C. (Contaminated Sites Rule)
- Chapter 62-777, FAC (Contaminant Cleanup Levels), F.A.C.

The ERA Protocol acknowledges that the lands are being acquired for conversion to storm water treatment areas, engineered wetlands, reservoirs, and other aquatic features. Both human health concerns and ecological risks are evaluated concurrently as part of the protocol. Human health risks evaluation was performed by comparing contaminant concentrations in all media (e.g., soil, groundwater, surface water, sediment) to human health-based cleanup target levels (CTLs) promulgated by FDEP in Chapter 62-777, F.A.C. Ecological risks were concurrently evaluated by comparing chemical concentrations to the Sediment Quality Assessment Guidelines (SQAGs) developed by FDEP for inland waters and the copper and selenium ecological restoration target established by the USFWS.

While the ERA Protocol evaluates both human health and ecological risks, in most cases the contaminant concentration thresholds for ecological risks are significantly lower than human health risk thresholds for the current and proposed future land use. For example, the USFWS ecological restoration target for copper is 85 mg/kg compared with the CTL for commercial /industrial land use which is 89,000 mg/kg. In many cases, the need for corrective action was solely driven by the need to minimize ecological risks for the aquatic environment being created

by the project. This fact is critical because USACE Regulation ER 1165-2-132 prohibits recommending projects or features implementation that would "... result in treating or otherwise abating pollution problems caused by other parties where those parties have, or are likely to have, a legal responsibility for remediation or other compliance responsibility". Contaminant concentrations in the soils within the project boundary are low enough that the landowner would not be subject to any enforcement by FDEP or Environmental Protection Agency (EPA) as long as the property continues in agricultural use.

It should be noted that site characterization and corrective actions on the Talisman parcels were performed by the property owner, rather than directly by SFWMD. Talisman performed the detailed site assessment and corrective action tasks on all "exclusion areas" which were identified based on the SFWMD Phase II ESA (Dames and Moore, 1998). Talisman's work was conducted under the oversight of both SFWMD and FDEP. However, since the assessment/corrective action work was conducted solely on point source areas, USFWS was not involved in the oversight of this work. EPA Region IV did provide concurrence on the Dames and Moore 1998 Phase II ESA. The end point for all of these exclusion areas was issuance of a No Further Action letter or Site Rehabilitation Completion Order (SRCO) from FDEP. It was previously noted that some of the SRCOs on specific point sources on the Talisman parcels are based upon recording of a deed restriction to prevent residential and other sensitive uses on these parcels.

The format and process for regulatory agency approval and concurrence of the assessment and corrective actions conducted on the site varies between point sources and non-point source issues. FDEP is the lead agency for assessment and corrective action for point sources where contaminant concentrations are high enough to exceed the CTLs for the current and future land use as outlined in Chapter 62-777, F.A.C. In these cases, FDEP issues a No Further Action Letter or Site Rehabilitation Completion Order (SRCO) upon completion of the assessment and/or corrective action process.

For non-point source areas and point source areas where contaminant concentrations exceed ecological thresholds but are below the FDEP CTLs, FDEP rules do not apply. In these situations, FDEP provides review and approval through memoranda or letter responses provided by their Bureau of Waste Cleanup. Although USFWS does not have jurisdiction over point sources with contaminant concentrations exceeding the FDEP CTLs (except to the extent Trust Species are affected), they have generally provided comment on an informal basis with regard to these issues. USFWS has generally concentrated on non-point source issues with the potential to affect Trust Species.

As a final point, neither the FDEP nor FWS review process for the assessment and corrective action work requires public comment. However, both of these agencies were involved in the permitting process for the abandoned EAA Reservoir Project, reviewing the project documents and providing the necessary permit approvals. The permit approvals were subject to public notice and all related environmental cleanup documents and approvals were included in the administrative record.

2.2 ARARS

As part of the assessment process on each parcel, chemical concentrations in all media were compared to applicable or relevant and appropriate requirements (ARARs), depending upon future proposed usage of each tract. It is acknowledged that numeric cleanup criteria have changed over time, and may not have been identical for each parcel that was assessed.

Additionally, in 1999, the FDEP shifted the cleanup target levels for soil and groundwater from individual cleanup rules (e.g., Chapter 62-770, FAC – Petroleum Cleanup Rule, Chapter 62-785, FAC – Brownfields Rule, etc.) into a separate rule, Chapter 62-777, FAC - Contaminant Cleanup Target Levels, which included the numeric cleanup criteria that applied universally to all of the cleanup rules.

For this report, chemical concentrations have been compared to current ARARs. It is acknowledged that some of the Site Rehabilitation Completion Orders (SRCOs) issued by FDEP on parcels or individual point source locations within the project footprint were based on the cleanup target levels in place at the time the SRCOs were issued, and these cleanup target levels may have been higher or lower than the current criteria. For example, all of the point sources on the Talisman property were remediated based on a commercial soil cleanup target level (SCTL) for arsenic of 3.7 mg/kg; however, the current SCTL for arsenic is 12 mg/kg.

The current ARARs for each media are summarized below.

2.2.1 **Soil**

The following human-health based criteria are established by the FDEP in Chapter 62-777 of the Florida Administrative Code (FAC). Chapter 62-777, FAC includes soil cleanup target levels (SCTLs) for both direct exposure and leaching to groundwater/surface water. Both the direct contact and leaching criteria must be considered to determine the need for corrective action.

- **Residential** The Soil Cleanup Target Level for direct exposure in a residential setting (SCTL-RDE) is the default standard for site screening purposes in Florida, and assumes potential contact with soils on a regular basis by adults and children.
- Industrial/Commercial The Soil Cleanup Target Level for direct exposure in a non-residential setting (SCTL-IDE) assumes extended contact with soils on a daily basis by adult workers at commercial/industrial sites, or on agricultural properties where farming practices result in frequent site contact. Use of this standard requires that a deed restriction be recorded against the property. It should be noted that a number of point source locations on the Talisman properties were closed with deed restrictions and these parcels are specifically identified throughout the report. Copies of the deed restrictions for any restricted closure areas are also included in the report appendix.
- Leaching to Groundwater The Soil Cleanup Target Levels for leaching to groundwater (SCTL-LGW) represent default criteria for site screening purposes in Florida, and are based on soil concentrations which are considered likely to result in an exceedance of the groundwater quality standard for a particular chemical. In cases where the default SCTL-LGW criterion is exceeded, FDEP cleanup rules allow the responsible party to conduct follow up testing by the Synthetic Precipitation Leaching Procedure (SPLP) to evaluate the leaching potential. The results of the SPLP test are compared to the Chapter 62-777, FAC Groundwater Cleanup Target Levels (GCTL) discussed below. If the SPLP results are below the applicable GCTL, the soils are not considered to present a leaching concern and only the direct contact SCTL needs to be considered.

Several heavy metals (e.g., arsenic) do not have numeric SCTL-LGW criteria and instead FDEP requires testing by the SPLP method and comparison to the GCTLs.

Leaching to Surface Water – The Soil Cleanup Target Levels for leaching to surface
water (SCTL-LSW) are applicable where impacted soils may be in contact with a surface
water body. Soils within proposed upland areas or outside the area to be inundated by
the project do not need to consider the SCTL-LSW criteria. FDEP also allows the
responsible party to test any soil samples exceeding the default SCTL-LSW criteria by
the SPLP method and the results are compared to the Surface Water Cleanup Target
Levels, discussed below.

2.2.2 Sediment Ecological Risk Criteria

The FDEP has previously indicated that soils within proposed wetland or water storage areas should be regulated as sediments, as these soils will ultimately become inundated. For sediments, the Sediment Quality Assessment Guidelines (SQAGs) as defined in *Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4*, (MacDonald, 2000) have generally been applied for screening purposes. The SQAGs are not a human health-based criteria, but are instead relevant only to the evaluation of ecological risk. The referenced guideline outlines two potential standards which were developed specifically with respect to benthic macro invertebrate species, which represent the bottom of the food chain, as follows:

- No Observed Adverse Effects Level The threshold effects concentration (SQAG-TEC) is the more conservative value and is utilized as a screening tool in evaluating sediments. Contaminant concentrations below the SQAG-TEC generally do not warrant further investigation.
- Lowest Observed Adverse Effects Level The probable effects concentration (SQAG-PEC) represents the level above which adverse effects are likely to occur. Contaminant concentrations exceeding the SQAG-PEC generally require corrective action, except when exceedences are very limited in areal extent (e.g., point sources).

It should be noted that the SQAGs are predictive of potential adverse effects to benthic invertebrates and may not adequately predict ecological risks to higher trophic level species. USFWS has generally tolerated some predicted risks to benthic invertebrates as long as the perceived risks are not predicted to affect the health of the overall ecosystem that will develop upon project construction. On previous projects, USFWS has agreed that some exceedences of the SQAG-TEC criteria are acceptable, as long as the 95% upper confidence level (UCL) estimate of the mean analyte concentrations across the site do not exceed the SQAG-TEC. USFWS has generally required corrective actions where the chemical concentrations exceed the SQAG-PEC criteria over more than an extremely limited area.

It should also be noted that SQAGs may not be established for all analytes of interest. USFWS protocols for ecological risk assessment (USFWS, March 2008) recommend consideration of Ecological Screening Values (ESV) established by EPA Region IV in *Ecological Screening Values or Surface Water, Sediment, and Soil* (WSRC, November 1998) when Florida SQAGs are not available.

Finally, it should also be noted that SQAGs are not regulatory benchmarks and do not carry the force of law like SCTLs. They are screening benchmarks that may be used in making risk management decisions.

2.2.3 Sediment - Interim Screening Levels for Ecological Risk

USFWS has established specific screening levels for certain chemicals based on specific risks. Screening levels for copper and selenium are discussed below.

For copper, the USFWS utilizes an interim screening value of 85 mg/kg for protection of the endangered Snail Kite, in addition to comparison with the SQAG-TEC.

No SQAG values have been established for selenium. However, selenium has historically been screened for potential ecological effects under the protocol using 2 mg/kg as a benchmark. The potential for effects to aquatic-feeding wildlife and/or benthic invertebrates and fish at this benchmark is uncertain.

2.2.4 Sediment - Site Specific Ecological Risk Based Concentrations

As previously stated, the SQAGs are intended to be protective of benthic invertebrates, but are not necessarily reflective of risks to higher trophic level species, included migratory bird species and wading birds, which are protected as Federal Trust Species. Where contaminant concentrations exceed the SQAGs or where potentially bioaccumulative chemicals are detected, the ERA Protocol typically requires preparation of a Screening Level Ecological Risk Assessment (SLERA) in order to develop site specific ecological Risk-Based Screening Concentrations (RBCs).

To evaluate potential effects to benthic invertebrates, soil data were compared to the SQAG-TEC and SQAG-PEC values. Risk to aquatic-feeding wildlife are typically evaluated by estimating the potential exposure of avian receptors to chemicals through the ingestion of aquatic prey species that might accumulate chemicals from soils after they have been flooded. Exposure and risks are calculated for aquatic-feeding wildlife using a model developed for the District specifically for the purposes of this program (Goodrich 2002 and NewFields 2006).

2.2.5 Groundwater

Groundwater analyte concentrations were compared to the Groundwater Cleanup Target Levels (GCTLs) found in Chapter 62-777, FAC.

2.2.6 Surface water

Surface water analyte concentrations were compared to the Surface Water Cleanup Target Levels (SwCTLs) found in Chapters 62-302 and 62-777, FAC.

2.2.7 Applicable Criteria

All of the above criteria have been considered in evaluating the analytical results obtained during the assessment activities described herein. Since some portions of the site may not become inundated, it is appropriate to compare analyte concentrations in the soil to the human health-based SCTLs established in Chapter 62-777, FAC. Therefore, soil data was compared to both the SCTLs for residential direct exposure (SCTL-RDE) and to the SCTLs for leaching to groundwater (SCTL-LGW) and leaching to surface water (SCTL-LSW).

It is likely that most of the site will be inundated; at least for a portion of each year, and that important ecological receptors will utilize the property. Therefore, it is also necessary to

compare the site data to the SQAGs and the Site-Specific Ecological RBCs generated from the SLERAs. For most analytes of interest (arsenic being the notable exception), the SQAG-TEC criteria are more stringent than the SCTL-RDE criteria. Therefore, in most cases, a cleanup to SQAG-TEC criteria is also protective of human health. It should also be noted that the SQAGs are not standards or deterministic values (i.e., an exceedance does not indicate absolutely that adverse affects will occur); the SQAGs are merely screening values. Data exceeding the SQAG values generally indicate the need for further study. Conversely, chemical concentrations which do not exceed the SQAGs are generally screened out from any further consideration with respect to ecological risk.

The SCTLs for leaching to surface water (SCTL-LSW) have also been considered for soils which are, or may become inundated.

2.2.8 USACE HTRW

Because the project may be completely or partially constructed under the direction of USACE, Engineering Regulation (ER) 1165-2-132 – Hazardous Toxic and Radioactive Wastes (HTRW) was considered to be applicable to project construction. ER 1165-2-132.prohibits USACE Districts from executing construction projects with known HTRW and assigns 100% of the cost and responsibility associated with remediation to the local sponsor.

HTRW is defined to include any material listed as a "hazardous substance" under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq (CERCLA). (See 42 U.S.C. 9601(14)). Hazardous substances regulated under CERCLA include "hazardous wastes" under Sec. 3001 of the Resource Conservation and Recovery Act, 42 U.S.C. 6921 et seq; "hazardous substances" identified under Section 311 of the Clean Air Act, 33 U.S.C. 1321, "toxic pollutants" designated under Section 307 of the Clean Water Act, 33 U.S.C. 1317, "hazardous air pollutants" designated under Section 112 of the Clean Air Act, 42 U.S.C. 7412; and "imminently hazardous chemical substances or mixtures" on which EPA has taken action under Section 7 of the Toxic Substance Control Act, 15 U.S.C. 2606; these do not include petroleum or natural gas unless already included in the above categories. (See 42 U.S.C. 9601(14).)

The concentration at which the presence of a hazardous substance in the soil or groundwater would render that media as HTRW is not specifically defined in ER 1165-2-132. On a previous project (Indian River Lagoon South – C-44 Component), USACE acknowledged that the presence of hazardous substances at concentrations below all regulatory criteria did not constitute HTRW.

Therefore, for the purposes of this document PSI has considered HTRW soils to be any soils at point source locations exhibiting concentrations of target analytes exceeding any of the following criteria:

- FDEP Soil Cleanup Target Levels
- SQAG-PEC criteria
- USFWS Interim Screening Criteria for Copper (85 mg/kg)
- USFWS Interim Screening Criteria for Selenium (2 mg/kg)

PSI has considered HTRW groundwater to include any groundwater associated with a point source release exhibiting concentrations of target analytes exceeding the FDEP Chapter 62-

777, FAC Groundwater Cleanup Target Levels or Federal Maximum Concentration Levels (MCLs) for drinking water.

It should be noted that it is the District's position that the residual agrochemicals that are not associated with a spill, but are associated with purposeful application of these chemicals. These agrochemicals are not CERCLA regulated substances, and therefore are not subject to the USACE HTRW policy because:

- 1. Historical evidence shows long-term agricultural production on the site,
- 2. The chemicals found on site are active ingredients found in commercially available products registered under the 1947 Federal Insecticide, Fungicide and Rodenticide Act (FIFRA),
- 3. The concentrations of these chemicals found on site are within a range reflecting longterm application of chemicals on the cultivated lands in a customary manner, and
- 4. The site specific research has revealed no evidence of illegal activities causing the presence of these chemicals on site,

Therefore, it is reasonable to surmise that these chemicals were legally applied as part of farming activities for their intended purpose and that they were not the result of a spill or waste management action.

2.2.9 Hazardous Waste Criteria

While none of the media within the project footprint are considered to be hazardous wastes under the Resource Conservation and Recovery Act (RCRA), the hazardous waste rules under 40 CFR 260-265, and Chapter 62-730, FAC were considered applicable and were considered in our evaluation of the data.

As discussed below, none of the residual agricultural chemicals on the project site exhibit any of the hazardous waste characteristics even though none of the residual agricultural chemicals on site are considered a solid waste (chemicals were lawfully applied for their intended purpose and not discarded). For soil or groundwater to be considered a RCRA hazardous waste, it would first need to be classified as a solid waste.

Per Subpart C (40 CFR 261.20 et seq.) the four (4) RCRA characteristics of hazardous waste are: ignitability, corrosivity, reactivity, and toxicity. Ignitable wastes readily catch fire, sustain combustion, and when ignited, burn so vigorously and persistently that it creates a hazard. Corrosive wastes are a liquid and are acidic or alkaline wastes that readily corrode or dissolve flesh, metal, or other materials. Reactive wastes are unstable, readily explode or undergo violent reactions.

The fourth characteristic is toxicity. Toxic wastes leach toxic compounds or elements into underlying soils or groundwater supplies. For a toxic constituent in 40 CFR 261, Subpart C, demonstration of the RCRA toxicity characteristics can be determined by utilizing the Toxicity Characteristics Leachate Procedure (TCLP) test or by analyzing for total constituent concentration and applying the "Rule of 20" to infer whether the RCRA Toxicity Characteristics regulatory limits would be exceeded. The "Rule of 20" allows a toxicity determination to be made by comparing the total concentration analysis (dry weight) to the TCLP regulatory concentration (wet weight). The rule is used by multiplying the RCRA TCLP limit (mg/l) by 20 and then comparing this value to the measured total constituent concentration multiplied by 20, the

material cannot be a RCRA characteristic waste based on toxicity as determined by analytical procedures. Additionally, if the constituent is not listed in Table 1 of Subpart C, the material is not a RCRA characteristic waste based on toxicity.

Based on the "Rule of 20" none of the soil or groundwater containing residual agricultural chemicals on the project site are classified as a RCRA toxic hazardous waste. Therefore, the remaining residual agricultural chemical soils on site are not hazardous waste under RCRA.

None of the soils or groundwater within the project boundary exhibit any of the hazardous waste characteristics. The concentrations of the remaining residual agricultural chemicals are not sufficient to render the soil or groundwater toxic, corrosive, ignitable or reactive. Therefore, testing for these characteristics is not necessary.

3. SUMMARY OF PREVIOUS REPORTS

All of the properties within the A-2 Reservoir project area have been previously investigated through a series of environmental investigations. The primary parcel (Tract D7100-104) was initially investigated as a part of the Talisman Ranch, which was acquired by SFWMD in 1999. It should be noted that the Talisman reports include a far greater area than is contained within the current reservoir footprint. Only those portions of the Talisman Ranch within the current A-2 Reservoir project footprint are discussed below.

At the time of the initial investigation, several point source areas of concern were identified, and these areas were deferred from the transfer in 1999. These areas were surveyed and legal descriptions were created. SFWMD has assigned tract numbers D7100-044, D7100-047, D7100-066, D7100-139, and D7200-005 to these deferred parcels. Each of these areas was separately investigated and remediated and closure obtained from FDEP. These parcels were transferred to SFWMD in 2009. It should also be noted that the 10-acre Weinlan property, Tract D7100-141 was also included within the Talisman investigations as this parcel is completely surrounded by the Talisman Ranch, and was being leased by Talisman at the time that the initial investigations were completed. The deferred parcel locations are shown on **Figure 3-1.**

3.1 Former Talisman South Ranch

The Talisman South Ranch property consists of approximately 20,525 acres that has been used for the cultivation of sugar cane since the mid-1960s. Prior to that it was undeveloped wetlands. The property was continually operated by Talisman from the 1960's until 1999 when the property was acquired by SFWMD. Subsequent to the SFWMD acquisition the section of the property within the A-2 Reservoir footprint has been operated under a lease agreement by New Hope Sugar Corporation from 1999 to present. Tract # D7100-104 lies within portions of Sections 4, 5, and 6, Township 45 South Range 37 East, a portion of Section 13, Township 46 South, Range 35 East, Sections 15-36, Township 46 South, Range 36 East, Sections 5-9, 16-22, 26-30, and portions of Sections 4, 10, 14, 23-25, 31-36, Township 46 South, Range 37 East, and a portion of Section 31, Township 46 South, Range 38 East.

A summary of assessment and corrective actions performed on the Former Talisman South Ranch is provided in **Table 1**. A summary of previous environmental reports prepared for the subject property is provided in **Table 2**, and each of these reports is further described in the following sections.

3.1.1 Summary of Phase I/II ESA

Environmental Concerns Summary Report, 1996, (Dames & Moore)

Dames & Moore conducted a preliminary site assessment of the Talisman Sugar Corporation farm (Tract D7100-104) and sugar mill (Tract D7100-029) in 1996. The sugar mill parcel is outside the current project footprint and is not discussed herein. Additionally, only the western portion of Tract D7100-104 is within the project footprint and only this section of the parcel is discussed herein.

PSI was unable to obtain a copy of this report; however, the report was summarized in the Phase II Environmental Site Assessment described below, which was also prepared by Dames

and Moore. The scope of work for the Environmental Concerns Summary Report was similar in nature to a Phase I Environmental Site Assessment (ESA) and included site reconnaissance, interviews with the property owner and government officials, review of governmental databases for regulated facilities and spill sites, and a review of available historical resources. The Phase I ESA identified the following areas of concern on Tract D7100-104, which are within the A-2 Reservoir Footprint:

- A solid waste disposal area within a former borrow pit
- Seven point source areas within a former labor camp
- Three diesel powered pump stations
- An electric pump station
- A pesticide mix/load area

The areas of concern are summarized in **Table 1**. Dames and Moore identified each area of concern with a unique identification number, which included the farm name code, followed by a numeric id number. For example, the Talisman Farm labor camp was designated as T-3, and smaller areas of concern within the labor camp were designated as T-3.1-Pesticide Mix-Load Area, T-3.2-Burn Area, etc.

These areas of concern, shown on were all investigated during the Phase II ESA discussed below.

<u>Volume 1 – Acquisition Properties Phase II Environmental Site Assessment Talisman Sugar Corporation Properties, Palm Beach and Hendry Counties, for South Florida Water Management District, November 9, 1998, (Dames & Moore).</u> (See Appendix A-1)

Dames & Moore (D&M) conducted a Phase II Environmental Site Assessment (ESA) in 1998 at the Talisman Farm. This assessment included the entirety of Tracts D7100-104 and D7100-029 (sugar mill), as well as multiple tracts that are outside the project footprint. Only results from investigation conducted within Tract D7100-104 are discussed herein.

D&M conducted an extensive Phase II investigation to evaluate all of the areas of concern listed in **Table 1**. These areas included:

- T-2 Borrow Pit Landfill
- T-3 Labor Camp
 - T-3.1 Pesticide mix/load area
 - T-3.2 Aircraft Refueling Area/Runway
 - T-3.3 Burn Pit
 - T-3.4 Drum Storage Area
 - T-3.5 Aircraft Maintenance Building
 - T-3.6 Water Treatment Plant
 - T-3.7 Miscellaneous Area
- T-6 Electric Pump Station
- T-7 Diesel Pump Station
- T-8 Diesel Pump Station
- T-21 Pesticide mix/load area
- T-24 Diesel Pump Station

The Phase II ESA included the collection of soil and groundwater samples from each of the areas of concern. Test trenching was also completed in a number of areas where suspect buried debris was identified. D&M conducted a comprehensive evaluation of current and historical agrochemical use on the property in order to determine the list of chemicals of potential concern. The analytical testing methods varied between locations, depending upon the specific concern. For example, analysis for total petroleum hydrocarbons (TPH) was conducted for pump stations, but more extensive analysis, including RCRA metals, copper, chlorinated pesticides and herbicides, triazine herbicides, and organophosphorus pesticides were conducted at pesticide mix load areas, equipment staging areas, and burn pits. The analyses did not include selenium, as this metal was not yet identified as a potential concern in 1998.

Based on the Phase II investigation, D&M eliminated T-3.5, T-3.6, T-3.7, and T-24 as concerns. The remaining areas where impacts were detected are discussed below.

D&M conducted an electromagnetic survey and test trenching to determine the extent and type of waste disposal in this area. The extent of the former borrow pit was defined, and D&M determined that the pit had been backfilled with agricultural wastes (e.g., bagasse) and agricultural equipment parts. Some oil containing equipment, hydraulic hoses, etc. were identified in the test trenches. Five soil samples and twelve groundwater samples were collected from the solid waste borrow pit area. The soil analytical results reported detectable concentrations of TRPH while the groundwater analytical results detected m&p cresol and phenol above the Groundwater Cleanup Target Levels (GCTLs). D&M recommended further assessment of the groundwater and removal of the solid waste from the pit.

Eighteen soil samples and sixteen groundwater samples were collected from the Talisman labor camp. The soil analytical results indicated elevated levels of TRPH at the burn pit and drum storage area. Elevated levels of atrazine were detected in groundwater samples collected from the pesticide storage / mix & load area and the airplane refueling area / runway. The groundwater analytical results also indicated concentrations of PAHs above the GCTLs. Further investigations were recommended at the pesticide storage / mix & load area and refueling area / runway, burn pit, and the drum storage area.

D&M obtained one soil sample and installed two groundwater monitoring wells at T-21 Pesticide Mix/Load Area. The soil and groundwater results indicated the presence of arsenic at concentrations above the applicable regulatory standards. The arsenic concentration detected in Soil Sample, T-21SC-1 was reported at 100 mg/kg. Monitoring Well T-21-MW-45 had a reported arsenic concentration of 448 micrograms per liter (μ g/L), while T-21-MW-52 had a reported arsenic concentration level of 122 μ g/L. Both analytical results are above regulatory guidelines. Further site assessment was recommended to delineate the impacted soil and groundwater.

D&M conducted visual observations at T-7 and excavated one test trench on the southwest side of the pump station. The test trench log indicated the presence of stained soils, but no Organic Vapor Analyzer (OVA) measurements were recorded. No laboratory testing of soil or groundwater was performed at this pump station and it was included as an Exclusion Area based on visual evidence only.

D&M conducted visual observation and exploratory trenching around the pump station at T-8. D&M excavated two test trenches along the east and west sides of the AST; no staining or evidence of environmental concerns were noted in the trench log. D&M did not conduct

laboratory analysis of soil or groundwater at this location; however, T-8 was included as an Exclusion Area.

Soil analytical results revealed elevated concentrations of chlorinated pesticides at concentrations exceeding the SQAG-TEC criteria at electric pump station T-6. No groundwater samples were collected from this location. Further site assessment was recommended to determine the extent of pesticide impacts in soil.

Six areas of concern (T-2, T-3, T-6, T-7, T-8, and T-21) were identified as "Exclusion Areas" with known impacts in the D&M Phase II ESA. These exclusion areas are shown on **Figure 3-1**. D&M defined a buffer area around each area of concern, and legal descriptions were created for these areas. The Exclusion Areas were deferred during the land transfer from Talisman to SFWMD until such time as Talisman obtained SRCOs on these Exclusion Areas from FDEP. Talisman was required to assess and remediate these areas to the lower of the SCTL criteria or the SQAG-TEC criteria, whichever was lower. The assessment and remediation activities performed on these Exclusion Areas is described below in Section 3.1.2. Talisman did obtain SRCO's for all of these Exclusion Areas and they were eventually transferred to SFWMD.

<u>Site Inspections/Environmental Assessment Deferred Parcels – Former Talisman Property, Palm Beach County, Florida, dated July 17, 2007 (URS Corporation).</u> (See Appendix A-2)

The deferred parcels were conveyed to the District as part of the purchase and exchange agreement between the District and U.S. Sugar Corporation. URS reviewed regulatory files to confirm that the deferred parcels had received regulatory closures from the State and conducted site inspections of each parcel. URS concluded that each parcel had received either a No Further Action or a Site Rehabilitation Completion Order and that no obvious impacts had occurred at the parcels since 1999.

<u>Final Site Inspections/Environmental Assessment Deferred Parcels – Former Talisman Ranch Report, Palm Beach County, Florida, January 21, 2009 (URS Corporation).</u> (See Appendix A-3)

Final inspections were conducted of the deferred parcels that were conveyed to the District as part of the purchase and exchange agreement between the District and U.S. Sugar Corporation. URS conducted site inspections of each parcel and concluded that no obvious impacts had occurred at the deferred parcels since 1999.

<u>Everglades Agricultural Area Basin Reservoir – Phase I Environmental Assessment Summary Document, March 18, 2003 (URS Corporation).</u> (See Appendix A-4)

URS summarized all of the historical assessments and corrective actions on the Talisman Sugar Corporation Farm conducted as of 2002. This summary report was developed as part of the EAA Basin Reservoir – Phase I for the Project Delivery Team (PDT). One comment was received from the PDT and subsequently addressed.

3.1.2 Summary of Corrective Actions

A Corrective Actions Location Map is included as **Figure 3-2.** A summary of the corrective actions performed is included in **Table 1**. More detailed information regarding the corrective actions performed on this tract is summarized below:

<u>Site Rehabilitation Completion Report – Talisman Sugar Corporation T-2 (Borrow Pit), February 2002 (PSI)</u> (See Appendix A-5)

The Talisman Borrow Pit was a former rock quarry that was filled with vegetative matter, debris, tires, and equipment from farm and sugar mill operations. The former Borrow Pit is located within the former Talisman South Ranch property. More specifically it is located six miles west of US Highway 27 and approximately 16 miles south of the City of South Bay. The pit lies within Section 28, Township 46 South, Range 36 East, as referenced on the USGS "Everglades NW, Florida" Topographic Map. The location of the former Borrow Pit is shown of **Figure 3-2**. A summary table of the range of detected concentrations, after any corrective actions, is provided in **Table 3**.

During PSI's initial assessment of the Borrow Pit, twelve soil samples were collected from the Pit and a test pit was excavated on the southern portion of the Pit. Low levels of TPH and various PAHs were detected in all of the samples. Several metals were also detected in the soil samples, but were below their respective regulatory criteria. Metal debris was encountered in the test pit and was hauled off-site.

PSI conducted a source removal to remove the metal debris and petroleum contaminated soil from the pit. Based on an agreement with FDEP, the bagasse was allowed to remain in the pit. Prior to excavation activities, PSI constructed haul roads, soil and debris staging areas, an infiltration pond, a water treatment system, and excavated a de-watering trench. During the excavation of the Pit, debris was separated from the soil using various forms of heavy equipment. The miscellaneous debris was hauled off-site to a land fill or recycling center. The remaining soil was transported to a soil stockpile staging area. Clean soil, which was defined as all contaminants of potential concern (COPCs) were below the soil cleanup target levels for leaching to groundwater (SCTL-LGW) criteria, was set aside to be used as backfill upon completion of the excavation. The SCTL-LGW criteria was used as the determining factor for clean vs. dirty soil, due to the fact that the excavation area was going to be covered with at least 2 ft. of clean fill.

As a result of the excavation activities, approximately 1,009 tons of steel, 473 tons of tires, 3,895 tons of construction and demolition (C&D) debris, and 3,735 tons of soil which did not meet the clean soil criteria was transported off-site to a disposal facility. In addition to the excavation activities, PSI installed a groundwater treatment system. Due to the inability of the system to filter out lead from the groundwater, the treatment system operation was abandoned after several trials.

Once excavation activities were complete, PSI removed the equipment staging areas, the impoundment berm, decommissioned the soil stockpile staging area and backfilled the Borrow Pit. As previously mentioned, almost all of the soil removed from the borrow pit was transported off-site for disposal. Only a small amount of soil met clean soil standards which allowed for use as backfill. This small amount of soil was returned to the southeast corner of the former borrow bit and covered with at least 2 ft. of clean, overburden soils. After completion of the backfilling and grading, two small ponds remained in the south and northwest portions of the Pit.

Surface water samples were collected from varying depths from the two remaining ponds. The samples were analyzed for TPH and total lead, as those were the only analytes detected in the soil or groundwater. Several sampling events occurred from June 2000 to October 2001, and the final results indicated the water in both ponds was below the groundwater and surface water standard for lead.

Lead was identified as the only COPC in the groundwater and surface water at the site. The removal of significant quantities of metal waste and lead-impacted soil has effectively removed the source of this contamination. The most recent surface water sampling results indicate that lead concentrations in the surface water in both the north and south ponds are below the Chapter 62-777, FAC groundwater and surface water criteria for lead.

PSI recommended that FDEP issue a Site Rehabilitation Completion Order (SRCO) with a non-residential use deed restriction for this exclusion area. As part of the deed restriction, the engineered cover over the site must remain in place. The FDEP issued an SCRO with conditions on July 21, 2006. A copy of the SRCO is included in **Appendix B-1**.

<u>Site Rehabilitation Completion Report – Talisman Sugar Corporation T-3 (Labor Camp), March 2003 (PSI)</u> (See Appendix A-6)

The former Labor Camp is located within the former Talisman South Ranch property. More specifically it is located approximately seven (7) miles west of US Highway 27 and approximately 16 miles south of the City of South Bay. The camp lies within Section 20, Township 46 South, Range 36 East, as referenced on the USGS "East of Little Cypress, Florida" Topographic Map. The location of the former Labor Camp is shown of **Figure 3-2**. A summary table of the range of detected concentrations, after any corrective actions, is provided in **Table 4**.

The T-3 exclusion area encompasses 10 acres and formerly operated as residential housing for farm workers (aka a labor camp). The labor camp ceased operation in about 1971 and the property was then utilized by a crop-dusting operation until 1999. The exclusion area includes four former concrete buildings used as residential quarters, an aircraft landing strip, and a pesticide mixing/loading area for loading agrichemicals into aircraft. All of the buildings were demolished down to the slab by PSI. Fueling and minor maintenance of single engine aircraft was also performed at the site. Four ASTs were also located within the exclusion area. Other areas of interest on the site included a wastewater treatment plant for domestic wastes associated with the former labor camp and a concrete burn pit for burning of empty agrichemical containers. All of the site features are shown on Figure 2 of the SRCR for the T-3 Labor Camp found in **Appendix A-6**.

All of the structures on the property were demolished in 2000. The fuel ASTs were removed and PSI submitted a Storage Tank Closure Report, dated April 9, 2001, which is discussed separately below. All of the drums and containers were removed from the buildings and disposed off-site under manifest. The concrete sump and trench drain in the pesticide mix/load area were cleaned and demolished. The trailers used for agrichemical storage were demolished or sold for use elsewhere. The concrete buildings were demolished down to the slab and the concrete rubble was crushed and used off-site for road base. Currently the concrete slabs and foundations are the only structures remaining in place.

The Dames and Moore Phase I/II identified seven (7) areas of potential concern. These areas are shown on Figure 2 of the SRCR and listed below:

- Runway Area
- Re-Fueling Area
- Pesticide Mix/Load Area
- Burn Pit Area

- Drum Storage Area
- Aircraft Maintenance Area
- Wastewater Treatment Plant

Dames and Moore conducted Phase II activities at each of these locations. The scope of work varied between each location, but generally consisted of exploratory test pits, soil sampling, and groundwater sampling. Based on the results of these investigations, PSI established the following list of COPC for the former Labor Camp:

- Organophosphorus pesticides (including atrazine)
- Organochlorine pesticides
- RCRA Metals (including arsenic, cadmium, and lead)
- VOCs (Re-Fueling Area only)
- Dioxins and furans (Burn Pit only)

Based on the results from the Dames and Moore investigation only five (5) areas (mix/load, burn pit, drum storage, aircraft maintenance, and wastewater treatment plant) required additional soil investigation and only two (2) areas (re-fueling, and mix/load) required additional groundwater investigation. The additional investigation generally consisted of additional soil samples to delineate soil impacts and the installation of an additional monitoring well to delineate groundwater impacts.

Based on the site characterization data collected by both PSI and D&M, PSI determined that remediation of five areas would be required. These areas are listed below and shown on Figure 5 of the SRCR for the T-3 Labor Camp found in **Appendix A-6**.

Area #1: Pesticide and metals impacted soils in the pesticide mix/load area centered around soil sample location SS-18;

Area #2: Atrazine-impacted soils in the pesticide mix/load area centered around SS-17;

Area #3: Atrazine-impacted soils in the pesticide mix/load area centered around D&M sample T-3.2SC-7.

Area #4: Pesticide and metals impacted soils in the drum storage area (Building D) centered around SS-5 and SS-27; and,

Area #5: Lower concentration pesticide and metals impacted soils around the north and east sides of Building C extending east of SB-4.

The extent of excavation for each of these areas is shown on Figures 5 and 6 of the SRCR for the T-3 Labor Camp found in **Appendix A-6**. Soils were excavated using a trackhoe and temporarily stockpiled on plastic sheeting adjacent to the excavation area pending laboratory analysis and disposal facility acceptance. The excavation and post-excavation confirmation soil sampling strategy for each of these areas varied according to the amount of site characterization data available. A total of 1038.5 tons of pesticide and metal impacted soils were excavated and disposed off-site at WMI-Okeechobee. An additional 1,890 cubic yards of impacted soil was excavated and transported to the Talisman Sugar Mill Ash Pit for disposal. Upon completion of the excavations, PSI collected confirmation soil samples from the sidewalls and base of each excavation. The confirmation soil sampling results indicated that no soils exceeding either the SQAG-TEC or applicable SCTL criteria for any COPC remained on site, except for a single soil sample in Area #1 which contained an atrazine concentration (93 µg/kg), which slightly

exceeded the SCTL-LGW criteria of 60 μ g/kg. However, PSI did not believe this single detection warranted further excavation given the high organic content of the soils and the fact that the concentration only slightly exceeded the SCTL-LGW criterion in the upper 1 foot of soil column. Atrazine concentrations were shown in the site characterization phase to attenuate rapidly with depth.

The D&M Phase II ESA identified only three monitoring wells on the site which were impacted by petroleum hydrocarbon constituents and/or atrazine. The impacts were defined by the remaining wells installed by D&M and PSI, in which no COPC were detected. PSI conducted several rounds of monitoring at the affected wells and found that both the atrazine and the petroleum constituent concentrations attenuated rapidly over time. The petroleum constituents attenuated to below the GCTLs without the need for any remediation. The atrazine concentrations were significantly reduced, but a source removal was required to further reduce the concentrations to below the GCTL at MW-51. Upon completion of the excavation around MW-51, PSI installed and sampled a replacement well MW-51R and the results indicated that the source removal was sufficient to remediate the atrazine concentrations in the groundwater to below the GCTL.

Based on this information, PSI recommended that FDEP issue a Site Rehabilitation Completion Order (SRCO) with a non-residential use deed restriction for this exclusion area. The FDEP issued an SCRO with conditions on July 21, 2006. A copy of the SRCO is included in **Appendix B-2**.

<u>Tank Closure Report – Talisman Sugar Corporation – Talisman Labor Camp (Abel's Flying Service), April 2001 (PSI)</u> (See Appendix A-7)

This report was prepared to document tank closure activities associated with two 4,000-gallon steel aviation gasoline (AV-Gas) aboveground storage tanks (ASTs) located within the former Labor Camp described above. The ASTs were mounted on concrete saddles within secondary containment and located in the northeast quadrant of the Labor Camp.

The ASTs and containment basin were inspected and were deemed to be in good condition with no holes, cracks or leaks. PSI excavated two test trenches adjacent to each side of the secondary containment basin. Six soil samples were collected from the sides of the test trenches for field screening using an OVA and no readings were above 10 ppm. PSI collected two confirmation soil samples for laboratory analysis for PAHs and VOAs.

A groundwater monitoring well was previously installed as part of the site wide assessment performed by D&M in 1998. The well was installed approximately 18 feet southeast of the ASTs containment basin and was deemed suitable for the tank closure assessment. The well was sampled in 1999 for OPPs, VOAs, and TPH.

PSI concluded that no contaminated soil was detected within the excavation around the secondary containment basin either visually or by the OVA. Confirmation laboratory analyses indicated no concentrations above detection limits. Groundwater samples were collected from the well located 18 feet southeast of the containment basin and indicated no analytes were detected above GCTLs. Based on this data PSI recommended the FDEP grant No Further Action status for the tank. FDEP accepted the closure report in a letter dated May 23, 2001; a copy of the FDEP letter is provided in **Appendix B-3**.

<u>Limited Contamination Assessment Report/No Further Action Request - Talisman Sugar Corporation - Talisman Sugar Farm - T-6 (Electric Pump Station), August 1999 (PSI)</u> (See Appendix A-8)

This Electric Pump Station (T-6) was part of the former Talisman Sugar Corporation property. The site lies within Section 25, Township 46 South, Range 36 East, as referenced on the United States Geological Survey (USGS) "South of Okeelanta", Florida" 7.5 minute quadrangle map. A Site Location Map is included as **Figure 3-2**. This site consists of an electric pump station that includes two electric pumps, two breaker boxes on a concrete slab, a valve platform, valve pipes, and various drainage pipes. A Site Map is included as Figure 2 of the LCAR/NFA Request for the T-6 Pump Station found in **Appendix A-8**. The property was utilized by Talisman as an electric pump station to maintain the water level in the adjacent canal. The pump station is located on fill material which bridges the canal and serves as a canal crossing for vehicles and equipment.

While D&M did not note any potential environmental concerns at this pump station, they did collect a soil sample from the T-6 area for the intended purpose of obtaining background levels for the Talisman Sugar Farm. The sample was analyzed for RCRA Metals, OCPs, OPPs, and chlorinated herbicides. DDE, DDT, and dieldrin were detected at concentrations exceeding the SQAG-TEC criteria. Arsenic was also detected at a concentration slightly exceeding the SCTL-RDE criteria. However, since the site is scheduled for flooding and residential use of the property will not be permitted, PSI determined that the Soil Cleanup Goal for direct residential exposure is not an Applicable or Relevant and Appropriate Requirement (ARAR) for this site. Therefore, arsenic was not further considered as a COC at this site. PSI did not conduct any testing for arsenic at T-6.

In February and May 199, PSI performed a soil investigation at this site consisting of collecting 20 soil samples from various locations and depths. The soil samples were analyzed for organochlorine pesticides by USEPA Method 8081. The initial analytical results were below the laboratory detection limits for all of the constituents included in USEPA Method 8081. However, the laboratory detection limits were above the SQAG-TEC criteria for a number of the COC. A second set of soil samples was collected from approximately the same locations as the original data points. All of the EPA Method 8081 analytes were below the laboratory detection limits. Although the laboratory detection limits were above the SQAG-TEC criteria for a few of the COC, the detection limits represent the best available technology.

Based on the site characterization soil analytical results, it appears that no soils exceeding the SQAG-TEC and/or SCTL-IDE or SCTL-LGW criteria are present at this site. No groundwater sampling was conducted at the site by either D&M or PSI. However, groundwater sampling did not appear warranted at this site given the absence of COC in soil at concentrations exceeding the SCTL-LGW criteria.

PSI believed that the information contained within the report was sufficient to conclude that no further action is required for the subject site. Therefore, on behalf of Talisman, PSI recommended that the FDEP issue a "No Further Action" letter for the subject site. The FDEP issued a No Further Action for this site on December 21, 1999; a copy of the letter is included in **Appendix B-4**.

<u>Limited Contamination Assessment Report/No Further Action Request – Talisman Sugar</u> Corporation – Talisman Farm – T-7 (Pump Station), September 1999 (PSI) (See Appendix A-9) This Pump Station (T-7) was part of the Talisman Sugar Corporation property. This site lies within Section 27, Township 46 South, Range 36 East, as referenced on the United States Geological Survey (USGS) "Everglades 1 NW", Florida" 7.5 minute quadrangle map. A Site Location Map is included as **Figure 3-2**.

This site consists of an agricultural pump station which is used to maintain water levels in an adjacent irrigation canal. The pump station was identified by Talisman personnel as Pump Station PS-4. The pump station includes a 500-gallon capacity diesel fuel AST inside a concrete containment basin, a diesel-powered pump engine, and a vertical shaft turbine pump. The storage capacity of the AST at this pump station is less than 550 gallons and is therefore not regulated under Chapter 62-761, FAC. The pump station is located by the side of the canal and is fully enclosed (AST and motor) in a concrete containment basin with a roof. Fuel is transferred from the tank to the motor via above-ground, one inch diameter steel-mesh rubber coated diesel supply and return lines. An on-demand vacuum system is used to transfer fuel to the pump engine. There was no obvious staining around the outside of the containment basin. However, there were small stains located inside the containment area. Figure 2 of the LCAR/NFA Request for the T-7 Pump Station found in **Appendix A-9** illustrates the site layout.

In April 1999, PSI personnel conducted preliminary site characterization activities at T-7. PSI did not note any evidence of soil staining or petroleum odors during our site investigation. Fourteen surficial soil samples were collected from around the pump station for OVA-FID screening. No OVA-FID readings in excess of 10 ppm were recorded. Therefore, PSI selected four surficial soil samples for laboratory analysis by laboratory method FL-PRO for TPH and EPA Method 8100 for PAHs. No PAHs were detected in these soil samples and the highest measured TPH concentration was 15 mg/kg. This TPH concentration is well below the SCTL-residential direct exposure I and SCTL-leachability criteria. No SQAG-TEC criteria has been established for TPH. Additionally, PAHs were not detected above the LMDLs (5 ug/kg) in the second set of soil samples collected on July 1, 1999.

Based on the soil screening and analytical results, it appears that no soils exceeding the SQAG-TEC criteria or SCTL criteria are present. Based on the lack of COCs in the soil at T-7, PSI did not believe that installation of a monitoring well for the purpose of groundwater sampling was warranted at this location.

PSI recommended that the FDEP issue a "No Further Action" letter for the subject site. The FDEP issued a No Further Action for this site on December 21, 1999; a copy of the letter is included in **Appendix B-5**.

<u>Site Rehabilitation Completion Report – Talisman Sugar Corporation – Talisman Farm – T-8 (Pump Station), September 1999 (PSI)</u> (See Appendix A-10)

This Pump Station (T-8) was part of the Talisman Sugar Corporation property. This site lies within Section 27, Township 46 South, Range 36 East, as referenced on the United States Geological Survey (USGS) "South of Okeelanta, Florida" 7.5 minute quadrangle map. A Site Location Map is included as **Figure 3-2**.

This site consists of an agricultural pump station which is used to maintain water levels in an adjacent irrigation canal. The pump station was identified by Talisman personnel as Pump Station PS-5. The pump station includes an approximately 500-gallon capacity, AST inside a steel containment basin, a diesel-powered pump engine, and a vertical shaft turbine pump. The storage capacity of the AST at this pump station is less than 550 gallons and is therefore not

regulated under Chapter 62-761, FAC. The AST and its steel containment structure are located on a concrete slab with the pump engine and turbine pump. Flexible 1" diameter steel-mesh rubber coated diesel supply and return lines run above-grade between the AST and pump engine. An on-demand vacuum system is used to transfer fuel to the pump engine. The containment basin also has a metal corrugated roof structure. The pump engine for the station rests on a concrete slab, which extends over the northeast edge of the canal. The concrete slab was covered by a metal corrugated roof structure, but is not surrounded by a berm to prevent run-off. Figure 2 of the SRCR for the T-8 Pump Station found in **Appendix A-10** illustrates the site layout.

PSI conducted site characterization soil sampling around the concrete pad containing the AST containment and the pump engine. Soil samples collected from all sides of the pump station indicated no OVA-FID readings in excess of 5 PPM and no surficial staining or petroleum odors were noted by PSI. However, laboratory analysis of soil samples collected from a depth of 0-2 feet BLS on all sides of the pump station indicated the presence of several PAH compounds at concentrations exceeding the SQAG-TEL criteria, but significantly below the SCTL-leachability criteria. As stated in the SRA, the SQAG-TEL criteria apply only to the upper 6 inches of soil column within the proposed reservoir area.

In order to remove soils containing PAH concentrations exceeding the SQAG-TEL criteria within the upper six inches of soil column, PSI conducted excavation around the north, east, and west sides of the pump station to a depth of at least 6 inches BLS. A total of 6.36 tons of petroleum impacted soil was removed. Upon completion of the excavation, four soil confirmation samples were collected. The laboratory results did not indicate the presence of any PAH compounds at concentrations exceeding the SQAG-TEL criteria. Based on the lack of soils containing TPH or PAH concentrations exceeding the SCTL-leachability criteria, PSI did not believe investigation of the groundwater was warranted at this location.

PSI recommended that the FDEP issue a SRCO for the subject site. The FDEP issued a SRCO for this site on December 21, 1999; a copy of the SRCO is included in **Appendix B-6**.

<u>Site Rehabilitation Completion Report – Talisman Sugar Corporation – Talisman Farm – T-21 (Pesticide Mix/Load Area), May 2002 (PSI) (See Appendix A-11)</u>

This Pesticide Mix/Load area (T-21) was part of the Talisman Sugar Corporation property. This site lies within Section 17, Township 46 South, Range 36 East, as referenced on the United States Geological Survey (USGS) "East of Little Cypress Swamp" 7.5 minute quadrangle map. A Site Location Map is included as **Figure 3-2**. A summary table of the range of detected concentrations, after any corrective actions, is provided in **Table 5**.

This site consists of a pesticide mixing and loading area also utilized for storing and staging of farm equipment. The site is developed with a small corrugated metal shed, approximately 30 feet by 12 feet, with an overhang. The interior of the storage shed was concrete floored. The shed appeared to have been utilized for storing pesticides in the dry granular form. However, it is possible that liquid pesticides may have been stored there as well. A Site Map is included as Figure 2 of the SRCR for the T-21 Pesticide Mix / Load Area in **Appendix A-11**. The property was utilized by Talisman for mixing and loading of pesticides in addition to storing farm equipment. It was also used as a collection point for sugar cane during harvest activities. No significant staining was noted during this fieldwork; however, pesticide odors were detected. The pesticides appeared to have been used in ground application. No water wells, restroom facilities, septic systems or fueling facilities were located on-site.

Potential constituents of concern (COC) at the subject site which were identified in the D&M Phase II ESA, included arsenic in soil and groundwater. At the request of the FDEP, groundwater analytical testing was performed for dioxins.

PSI collected 49 surface soil samples (0-2 feet bls) and nine deep soil samples (two to four feet bls) on a grid basis across the site. The highest arsenic concentration detected was 48.0 mg/kg. Four separate arsenic impacted areas were defined encompassing a total of approximately 13,500 square feet. Soils within these areas were excavated to a depth of six inches below original grade and transported to Magnum Environmental Services, Inc. for thermal treatment and incorporation into asphalt products. A total of 686.25 tons of arsenic-impacted soil was excavated on May 3 through 7, 1999 for treatment by Magnum.

Following excavation activities, 24 confirmation soil samples (T-21SS-50 – T-21SS-73) were collected from the base of the excavation on a grid basis. Based upon the results, concentrations of arsenic above the SCTL-LGW screening criteria of 10 mg/kg were detected in five of the samples. These samples were analyzed by EPA Method 1312/6010 for SPLP arsenic. The results indicated that an SPLP arsenic concentration exceeding the GCTL was detected in one of the samples (T-21-SS-52).

Based on the SPLP arsenic concentration detected in confirmation sample T-21SS-52, PSI excavated an additional 6.35 tons of soil from around this location on July 1, 1999. The excavation was continued vertically to a depth of about 2 feet bls. After completion of the excavation, three additional confirmation soil samples (T-21SS-74 – T-21SS-76) were collected from the base of the excavation for arsenic analysis. The measured arsenic concentrations in these samples were below all regulatory criteria. Following this excavation, the area was backfilled to grade.

PSI also installed five additional monitoring wells and collected groundwater samples for analyses for arsenic. Groundwater samples were also collected from D&M wells T-21-MW-45 and T-21-MW-52 on two separate dates for analysis for arsenic. In addition, groundwater samples from D&M well T-21-MW-45 were analyzed for dioxins/furans, TPH, PAHs and VOAs. The results indicated that arsenic concentrations above GCTLs were detected in T-21MW-45, T-21MW-52, and T-21-MW-3. The highest arsenic concentration detected was 120 μ g/L in the groundwater sample collected from T-21-MW-52. All other parameters were either below detection limits or below applicable GCTLs.

Based upon the groundwater analytical results, PSI installed and operated a groundwater pump and treat remediation system in order to reduce the arsenic concentrations in the groundwater. The treatment system consisted of two recovery wells, tray stripper aeration and filtering with granular aluminum oxide. Following treatment, the water was sprayed over the northwestern portion of the site via low flow sprinkler heads mounted on five-feet tall poles. The treatment system was operated for a period of about 3 months and was shut down when arsenic concentrations in the influent were consistently below the GCTL for four consecutive sampling events.

Following system operation, groundwater samples were collected on multiple occasions from previously impacted monitoring wells and analyzed for arsenic. Results of the last sampling event indicate that the groundwater meets the GCTL for arsenic concentrations.

PSI requested a SRCO with non-residential deed restrictions for this site; The FDEP issued a SRCO for this site on July 21, 2006; a copy of the SRCO is included in **Appendix B-7**.

<u>Site Rehabilitation Completion Report – Talisman Sugar Corporation – Talisman Farm – T-24 (Pump Station), October 1999 (PSI)</u> (See Appendix A-12)

Pump Station T-24 was part of the Talisman Sugar Corporation property. This site lies within Section 26, Township 46 South, Range 36 East, as referenced on the United States Geological Survey (USGS) "South of Okeelanta, Florida" 7.5 minute quadrangle map. A Site Location Map is included as **Figure 3-2**. A summary table of the range of detected concentrations, after any corrective actions, is provided in **Table 6**.

This site consists of an agricultural pump station which is used to maintain water levels in an adjacent irrigation canal. The pump station was identified by Talisman personnel as Pump Station IPS-3. The pump station includes a 3,000-gallon capacity diesel fuel AST inside a concrete containment basin, a diesel-powered pump engine, and a vertical shaft turbine pump. The storage capacity of the AST at this pump station is greater than 550 gallons and is therefore regulated under Chapter 62-761 FAC. The AST is registered under facility I.D. # 8623252. The pump station is situated on a fill material dike or plug which bridges the main east-west canal on the lower Talisman Farm. The dike is approximately 25 feet wide and includes the pump station and a gravel canal crossing access road. The AST is located on an approximate 8 inch thick concrete slab surrounded with a 2.5 feet high masonry block wall and is covered with a corrugated metal roof. The pump engine is located on an approximate eight (8) inch thick concrete pad. Figure 2 of the SRCR for the T-24 Pump Station found in **Appendix A-12** illustrates the site layout.

During the Phase II ESA investigation activities, D&M conducted visual reconnaissance and soil sampling at T-24. No evidence of soil staining was noted, but one soil sample was collected for laboratory analysis for TPH, which was not detected in the soil sample. Therefore, T-24 was not identified as an Exclusion Area in the Phase II ESA. However, a follow-up investigation performed by D&M and SFWMD in March, 1999 identified stained soil around the west side of the pump station due to a recent discharge. No soil samples were collected during this investigation.

Based upon visual observation and OVA-FID screening, a small amount of soil (0.68 tons) was excavated and removed from the site. A total of eight confirmatory soil samples were collected following excavation activities. The highest reported TPH concentration was 290 mg/kg. While, no SQAG-TEC has been established for TPH, the reported TPH concentration is well below the SCTL-LGW and SCTL-RDE criteria. PAH concentrations within the upper 6 inches of soil (the depth defined as "sediment") were below laboratory detection limits. PAH concentrations in the soil below 6 inches BLS are below the SCTL-LGW and SCTL-RDE criteria. The SQAG-TEC criteria does not apply to the soils below 6 inches bls.

Based upon the limited impact to the soil at the site no groundwater samples were collected. It does not appear that the referenced petroleum release could have affected groundwater at the subject site.

PSI recommended that the FDEP issue a SRCO for the subject site. The FDEP issued a SRCO for this site on December 24, 1999; a copy of the SRCO is included in **Appendix B-8**.

3.2 Summary of Restrictive Covenants

Restrictive covenants or deed restrictions exist on several of the parcels within the footprint of Talisman South Ranch (D7100-104), as shown on **Figure 3-3.** Tract D7100-066 (Former Borrow Pit - T-3), Tract D7100-047 (Talisman Labor Camp - T-2), and Tract D7100-044 (Pesticide Mix/Load Area - T-21) are all protected by deed restrictions preventing use of the property for residential or other sensitive purposes. Additionally the deed restrictions all include prohibitions on use of groundwater within the restricted areas. The deed restriction for the labor camp also includes provisions preventing excavation or disturbance of a clean soil cap that was placed over portions of the borrow pit.

Copies of all of the deed restrictions are provided in **Appendix C**.

3.3 Summary of Remaining HTRW Areas

The known HTRW soil areas remaining within the project footprint are located within the T-2 (D7100-047), T-3 (D7100-066) and T-21 (D7100-044) exclusion areas. These areas consist of point source areas where cleanup was completed and a conditional SRCO was issued, but contaminant concentrations remain at concentrations exceeding the SCTL-RDE criteria. Arsenic is the predominant COPC which is present at concentrations exceeding the SCTLs in these areas.

4. GEOLOGY/HYDROGEOLOGY

4.1 Regional Geology

The region is overlain by layers of Peat known locally as "muck". Muck is an organically rich soil that forms when the rate of accumulation of organic matter exceeds the rate of decay. The accumulation rate can vary, but can be as much as 10 centimeters per 100 years. Much of the muck has been subjected to subaerial exposure since the dewatering of large areas of marshland through water drainage canals. This exposure has had the effect of causing the muck volume to steadily decrease through biochemical oxidation, compaction, erosion, and fire. It is estimated that the muck soil in these dewatered areas diminishes by as much as 1 inch per year.

Underlying the muck is the Fort Thompson Formation, which is locally referred to as the "cap rock" and is primarily dense, fossiliferous limestone. The Fort Thompson Formation is considered to be Pleistocene in age.

The Caloosahatchee Formation underlies the Fort Thompson Formation. The Caloosahatchee Formation is a marl that is composed of a sequence of sandy limestone lenses that are interbedded with layers of calcareous clays and sands. The Caloosahatchee Formation appears to straddle the Pliocene/Pleistocene boundary.

Underlying the Caloosahatchee Formation, the Tamiami Formation is a complex Pliocene age unit of sand, clay, and reef facies, all of which contain at least small amounts of phosphate. The Tamiami Formation occurs over much of southern Florida and is unconformably overlain by the Caloosahatchee and Fort Thompson Formations, which consist of highly fossiliferous carbonates and siliclastic sediments.

Underlying the Tamiami Formation is the Miocene-age Hawthorn Group, which is composed of a variety of sediments including carbonates, quartz sands, clay, and phosphate. The Hawthorn Group has been subdivided into two formations; the Peace River Formation forming the upper Hawthorn siliclastic section and the Arcadia Formation, which forms the lower Hawthorn carbonate section.

The Hawthorn Group is underlain by a 3000-feet thick carbonate sequence consisting of Oligocene and Eocene aged sediments. The Suwannee Limestone, the Ocala Limestone, and the Avon Park Formation comprise the Oligocene sediments. The Eocene sediments are made up of the Oldsmar Formation.

4.2 Regional Hydrologeology

The underlying hydrogeologic formations of the area may best be categorized as two aquifers separated by an impermeable confining zone.

The shallow, nonartesian aquifer system extends to a depth of approximately 150 feet BLS and is recognized as the northernmost extension of the Biscayne Aquifer. It consists primarily of the Fort Thompson, Caloosahatchee, and Tamiami Formations. The base of the shallow aquifer is marked by the top of the Hawthorn Group, which is the intermediate confining unit for the underlying Floridan aquifer.

The deep, artesian aquifer is known as the Floridan Aquifer and is the most productive aquifer in the area, with permeable zones as deep as 1,200 feet BLS. The Floridan Aquifer consists of the lower units of the Hawthorn Group, the Suwannee Limestone, the Ocala Group, and the Avon Park Limestone.

Groundwater levels throughout the area vary from one to six feet BLS. Groundwater flow in the surficial aquifer is generally to the south-southeast; however, flow direction is strongly influenced by the system of canals and pumping stations present throughout the area. When the canals are pumped and water levels in the canals are lowered, shallow groundwater tends to flow toward the canals.

4.3 Site Specific Geology

Based on the lithology encountered during installation of monitoring wells and excavation of impacted soils, the soil profile across the project area varies between locations. In general, the near-surface geology consists of a 3-5 foot layer of organic muck soils, overlying a dense sandy limestone (cap rock) of 1-2 feet in thickness. The cap rock is underlain by a light tan limestone unit which extends to a depth of at least 13 feet bls. The near surface geology has been altered significantly in areas that have been developed, such as the Talisman Sugar Mill. In most of the developed areas, the muck layer has been removed and replaced with crushed limerock. Within the cooling canal system, infiltration ponds and waste lake areas at the Talisman Sugar Mill, the muck layer was partially removed to create the berms to contain the water. In these areas a thin muck layer is present overlying the cap rock. The deeper canals across the property were created by blasting away the cap rock and excavating the underlying limestone to the desired depth.

4.4 Site Specific Hydrogeology

Groundwater is encountered across the project area at depths ranging from about 1-6 feet BLS, depending upon the surface elevation. The project area is sub-divided and surrounded by a series of drainage canals, which control the water level within the area to prevent flooding. The groundwater flow direction was not calculated. However, it is likely that groundwater flow in the vicinity of the subject site is largely controlled by the water level in the adjacent canals. During periods of pumping (when the water level in the canals is mechanically lowered), groundwater flow is likely toward the canals.

5. GOVERNMENTAL DATABASE REVIEW

PSI reviewed an environmental database report, provided by Environmental Data Resources, Inc. (EDR) to determine whether any open regulatory enforcement cases (e.g., leaking tanks, spills, etc.) were present on the subject property. The EDR report can be found in **Appendix D**. Some of the sites listed in the EDR report are discussed in previous sections of this report (e.g., Talisman Sugar Corporation – Abel's Flying Service); therefore they are not mentioned in this section. All of the other sites listed in the EDR are outside the boundary of the A-2 Reservoir and will also not be discussed in further detail as they do not represent an environmental concern to the future construction of the reservoir.

No sites were listed in the EDR Report within the A-2 Reservoir boundary that have not been previously addressed.

6. OVERVIEW OF ASSESSMENT AND REMEDIATION

The A-2 Reservoir project area is made up of 8 individual tracts of land comprising approximately 14,408 acres, located within the south portion of the Everglades Agricultural Area (EAA). The EAA has a long history of farming dating back to the early 1960's for most of the project area. Most of the property has been in use primarily for the cultivation of sugar cane, and occasional rotational crops such as corn and rice. Phase I-II ESAs have been performed on all of the tracts according to the protocols that were in place that the time that each of the parcels were acquired. Additional investigations have been performed to define the extent of contaminants within point source areas, and corrective actions have been performed to address point sources where necessary. No significant sampling of the cultivated area has been performed to date.

6.1 Point Source Areas

The Phase I ESAs performed on the project parcels identified the presence of seven separate potential source areas, including pump stations, pesticide mix load areas, storage tanks, a former borrow pit, a crop-dusting operation and landing strip. **Table 1** summarizes the disposition of all of the point source areas on the subject property. Based on PSI's review of the reports, all of these point sources have been investigated and corrective actions have been performed as necessary to remediate these areas to the required levels for project construction. In a few areas, deed restrictions were utilized to allow levels exceeding the SCTL-RDE to remain in place. All of the assessment and remediation work for the point sources was conducted under oversight from FDEP and the Department has granted unconditional or conditional SRCOs for all of the point sources.

There are no known point sources on the subject property that remain open with FDEP. PSI also researched governmental records for open enforcement cases, and there are no open cases with FDEP within the project area.

6.2 Regional Evaluation of Cultivated Areas

Since much of the assessment of the project area was performed before the development of the ERA Protocol, the level of assessment of cultivated areas is not consistent with current requirements. No significant sampling of cultivated areas was performed within the A-2 Reservoir Footprint.

6.3 Outstanding Corrective Actions

The following corrective actions have been proposed but not completed:

None

6.4 Outstanding Regulatory Issues

Since no cultivated area sampling has been performed on the A-2 Reservoir footprint, the USFWS and FDEP have not provided any input on potential residual agrochemicals in cultivated areas.

7. REFERENCES

- Protocol for Assessment, Remediation and Post-Remediation Monitoring for Environmental Contaminants for Everglades Restoration Projects, 13 March 2008, SFWMD, FWS, and FDEP
- 2. Phase I and Phase II Environmental Risk Assessment for the Stormwater Treatment Areas Tract Nos. 100-009, 100-020, and 103-108, Palm Beach County, Florida 1995 and 1996 Ayres Associates
- 3. Phase I Phase II Environmental Site Assessment, Florida Crystals Corporation, Palm Beach County, March 30, 1999, Dames & Moore
- 4. Everglades Agricultural Area Basin Reservoir Phase I Environmental Assessment Summary Document, March 18, 2003, URS Corporation
- 5. Volume 1 Acquisition Properties, Phase II Environmental Site Assessment, Talisman Sugar Corporation Properties, Palm Beach and Hendry Counties, for South Florida Water Management District, November 9, 1998, Dames & Moore
- 6. Site Inspections/Environmental Assessment Deferred Parcels Former Talisman Property, Palm Beach County, Florida, July 17, 2007, URS Corporation
- 7. Final Site Inspections/Environmental Assessment 8 Deferred Parcels Former Talisman Ranch Report, Palm Beach County, Florida, January 21, 2009, URS Corporation
- 8. Site Rehabilitation Completion Report, Talisman Sugar Corporation T-2 (Borrow Pit), Palm Beach County, Florida, 4 February 2002, PSI
 - a. 7-21-06 DEP issued CSRCO
- 9. Site Rehabilitation Completion Report, Talisman Sugar Corporation T-3 (Labor Camp), Palm Beach County, Florida, 25 March 2003, PSI
 - a. 7-21-06 DEP issued CSRCO
- 10. Tank Closure Report, Talisman Sugar Corporation, Talisman Labor Camp (Abel's Flying Service), Palm Beach County, Florida, 9 April 2001, PSI
- 11. Limited Contamination Assessment Report / No Further Action Request, Talisman Sugar Corporation, Talisman Sugar Farm, T-6 (Electric Pump Station), Palm Beach County, Florida, 27 August 1999, PSI
 - a. 5-30-99 PSI Response to Comments
 - b. 12-21-99 DEP issued SRCO

- 12. Limited Contamination Assessment Report / No Further Action Request, Talisman Sugar Corporation, Talisman Farm T-7 (Pump Station), Palm Beach County, Florida, 28 September 1999, PSI
 - a. 12-21-99 DEP issued SRCO
- 13. Site Rehabilitation Completion Report, Talisman Sugar Corporation, Talisman Farm T-8 (Pump Station), Palm Beach County, Florida, 28 September 1999, PSI
 - a. 12-21-99 DEP issued SRCO
- 14. Site Rehabilitation Completion Report, Talisman Sugar Corporation, Talisman Farm T-21 (Pesticide Mix/Load Area), Palm Beach County, Florida, 20 May 2002, PSI
 - a. 7-21-06 DEP issued CSRCO
- 15. Site Rehabilitation Completion Report, Talisman Sugar Corporation, Talisman Farm T-24 (Pump Station), Palm Beach County, 15 Florida, October 1999, PSI
 - a. 12-29-99 DEP issued SRCO

8. WARRANTY

PSI warrants that the findings and conclusions reported herein were conducted in general accordance with good commercial and customary practice for conducting a Phase II Environmental Site Assessment. However, these findings and conclusions contain all of the limitations inherent in these methodologies.

This summary report has been developed to provide the client with information regarding apparent indications of chemical impacts to the subject property. It is necessarily limited to the conditions observed and to the information available at the time of the work. The assessment and conclusions presented herein were based upon the subjective evaluation of limited data. They may not represent all conditions at the subject site as they reflect the information gathered from specific locations. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental investigation methodology and only for the site described in this report.

Due to the limited nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of report preparation. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods. The description, type, and composition of what are commonly referred to as "hazardous materials or conditions" can also change over time. PSI does not accept responsibility for changes in the state of the art, nor for changes in the scope of various lists of hazardous materials or conditions. PSI believes that the findings and conclusions provided in this report are reasonable. However, no other warranties are implied or expressed.

TABLES

Table 1 Summary of Assessment and Corrective Actions
A-2 Reservoir Project
Palm Beach County, Florida

Tract Nos.	Previous Name(s)	Acreage	Reports	Phase I Summary	Phase II Summary	Corrective Action Summary	Regulatory Concurrence	HTRW	Restrictive Covenant	Exit Assessment Results	Recent Spills
				Point source RECs identified at eight (B) areas within these parcels, listed below:	Soil and / or groundwater exceedances were identified, in the following areas:	Corrective Action Activities, included the following:					
D7100-104,				Borrow Pit (T-2)	Arsenic and petroleum hydrocarbons detected above SCTLs, phenois and m & p cresol detected above GCTLs	Excavated: 1,009 tons of steel, 473 tons of tires, 3,895 tons of C & D debris, 3,735 tons of soil. Also installed GW treatment system (operation was abandoned due to inability to filter out lead)	CSRCO, 7-21-06 Soll above SCTL	Non-residential Deed Restriction	The labor camp, borrow pit, pesticide mix and load area, and four pump stations were visually inspected in 2007 and		
D7100-044, D7100-047, D7100-066,	Talisman South		see Table 2 for list of	Labor Camp (T-3)	Arsenic and petroleum hydrocarbons detected above SCTLs at burn pit area and drum storage area within labor camp. Petroleum hydrocarbons / solvents and atrazine detected in GW above GCTLs at pesticide mix / load area and refueling area / runway within labor camp.	Excavated approximately 3,590 tons of soil from 5 areas within labor camp. Petroleum impacts in GW naturally attenuated below GCTLs. Source removal reduced atrazine GW concentrations below GCTL	CSRCO, 7-21-06	Soil above SCTL	Non-residential Deed Restriction	2009. No stained soils, stressed vegetation or other	No
D7100-067, D7100-139,		± 1,100	these parcels	Pump Station (T-6)	OCPs detected above SQAGs	20 soil samples collected around pump station; no OCPs detected above SQAGs of SCTLs	SRCO, 12-21-99	No	No		
D7100-141,	Ranch			Pump Station (T-7)	No soll or groundwater samples collected; Visual evidence of soil staining	14 surficial soil samples collected around pump station; no exceedances above SQAGs or SCTLs	SRCO, 12-21-99	No	No		
D7200-005					Pump Station (T-B) No soil or groundwater samples collected; No visual evidence of soil Excavated approximately 6.36 to	Excavated approximately 6.36 tons of petroleum impacted soil	SRCO, 12-21-99	No	No		
					Pump Station (T-24)	No soil or groundwater samples collected; No visual evidence of soil staining; Still included as Exclusion Area	Excavated approximately 0.68 tons of soil	SRCO, 12-29-99	No	No	
				Pesticide Mix/Load Area (T-21)	Arsenic detected above SCTL and GCTL	Excavated approximately 692 tons of arsenic impacted soil. Installed GW pump and treat system, operated for 3 mths., effectively lowered the arsenic concentrations below the GCTL	CSRCO, 7-21-06	Soil above SCTL	Non-residential Deed Restriction		

Table 2. Summary of Environmental Reports
A-2 Reservoir
Palm Beach County, FL

Consultant	Report Type	Report Title	Report Date	Tract Nos.	Previous Name(s)
URS/Dames & Moore	Phase I / II	Talisman Sugar Corp Vol. 1 - Acquisition Properties	November-98	100-104*	Talisman South Ranch
PSI	SRCR	Talisman Sugar Corp T-2 Borrow Pit	February-02	100-104*	Talisman South Ranch
PSI	Tank Closure Report	Talisman Sugar Corp Labor Camp (Abel's Flying Service	April-01	100-104*	Talisman South Ranch
PSI	SRCR	Talisman Sugar Corp T-3 (Labor Camp	March-03	100-104*	Talisman South Ranch
PSI	LCAR / NFA Request	Talisman Sugar Corp T-6 (Electric Pump Station)	August-99	100-104*	Talisman South Ranch
PSI	LCAR / NFA Request	Talisman Sugar Corp T-7 (Pump Station)	September-99	100-104*	Talisman South Ranch
PSI	SRCR	Talisman Sugar Corp T-8 (Pump Station)	September-99	100-104*	Talisman South Ranch
PSI	SRCR	Talisman Sugar Corp T-24 (Pump Station)	October-99	100-104*	Talisman South Ranch
PSI	SRCR	Talisman Sugar Corp T-21 Pesticide Mix/Load Area	May-02	100-104*	Talisman South Ranch
URS	Site Inspections/Environmental Assessment	Deferred Parcels - Former Talisman Property	July-07	100-104*	Talisman South Ranch
URS	Final Site Inspections/Environmental Assessment	Eight Deferred Parcels - Former Talisman Ranch Property	January-09	100-104*	Talisman South Ranch
URS	Environmental Assessment Summary Document	Everglades Agricultural Area Basin Reservoir Project	March-03	4	Talisman South Ranch

SRCR = Site Rehabilitation Completion Report

LCAR = Limited Contamination Assessment Report

^{* =} Tract Nos. 100-149, 100-044, 100-047, 100-066, 100-067, 100-139, 100-141, 200-005, 100-143

Table 3.

Range of Concentrations Measured vs. Regulatory Requirements T-2 Exclusion Area (Former Borrow Pit) Former Talisman South Ranch Tract No. D7100-066 A-2 Reservoir

Palm Beach County, FL

			Range ³ Observed (mg/Kg)	EPA Regulatory Limits ⁴ (mg/Kg)	State Regulatory Limits (mg/Kg)			
Parameter	CAS #'s ¹	CERCLA ² Regulated (Y/N)			SCTL- CDE ⁵	SCTL- RDE ⁶	SQAG- PEC ⁷	SQAG- TEC ⁸
Arsenic	7440-38-2	Y	<0.5 - 5.3	1.6	12	2.1	33	9.8
Barium	7440-39-3	Y	24 - 37	190,000	130,000	120	60	20
Cadmium	7440-43-9	Y	0.83 - 6.2	800	1,700	82	5.0	1.0
Chromium	7440-47-3	Y	1.1 - 24.0	NG	470	210	110	43
Lead	7439-92-1	Y	1.3 - 93	800	1,400	400	130	36
Mercury	7439-97-6	Υ	0.011 - 0.034	43	17	3	1,1	0.18
Benzo(a)anthracene	56-55-3	γ	0.028 - 0,042	2.1	#	#	1,1	0.11
Benzo(ghi)perylene	191-24-2	Υ	0.032 - 0.050	NG	52,000	2,500	NG	NG
Chrysene	218-01-9	Y	0.032 -0.064	210	#	#	1.3	0.17
Dibenzofuran	132-64-9	Y	0.033 - 0.097	1,000	6,300	320	NG	NG
Fluoranthene	206-44-0	Υ	0.065 - 1.250	22,000	59,000	3,200	2,2	0.42
Naphthalene	91-20-3	Y	0.065 - 3.0	18	300	55	0.56	0.18
Phenanthrene	85-01-8	Y	0.066 - 1.6	NG	36,000	2,200	1.2	0.2
Pyrene	129-00-0	Y	0.050 - 1.160	17,000	45,000	2,400	1.5	0.2
TPH	NO CAS	N	43.0 - 305	NG	2,700	460	NG	NG

Notes:

mg/Kg - milligrams per Kilogram NG - No guideline

- Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.'
*CAS Registry Number (CAS#'s) - unique numeric identifier which designates one substance and has no chemical significance

²40 Code of Federal Regulations (CFR) 302.4, Designation of Hazardous Substances - Comprehensive Environmental Response, Compensation, Liability Act

³Range of chemical concentrations observed in all the samples collected within the T-2 Exclusion Area (Former Borrow Pit)

*USEPA - Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites - Industrial Soil

SChapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Commercial / Industrial

⁶Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Residential

⁷Development and Evatuation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Probable Effects Concentration

Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Threshold Effects Concentration

Table 4. Range of Concentrations Measured vs. Regulatory Requirements T-3 Exclusion Area (Former Labor Camp) Former Talisman South Ranch Tract No. D7100-047

A-2 Reservoir Palm Beach County, FL

					State Regulatory Limits (mg/Kg)				
Parameter	CAS #'s ¹	CERCLA ² Regulated (Y/N)	Range ³ Observed (mg/Kg)	EPA Regulatory Limits ⁴ (mg/Kg)	SCTL- CDE ⁵	SCTL- RDE ⁶	SQAG- PEC ⁷	SQAG- TEC ⁸	
Arsenic	7440-38-2	Y	0.95 - 18.5	1.6	12	2.1	33	9.8	
Barium	7440-39-3	Y	13.9 - 66.9	190,000	130,000	120	60	20	
Chromium	7440-47-3	Υ	1.5 - 22.3	NG	470	210	110	43	
Lead	7439-92-1	Υ	0.76 - 82.0	800	1,400	400	130	36	
Mercury	7439-97-6	Υ	<0.010 - 0.032	43	17	3	1.1	0.18	
Selenium	7782-49-2	Υ	<0.030 - 1.2	5,100	11,000	440	N/A	N/A	
4,4-DDE	72-55-9	Y	<0.00025 - 0.0021	5.1	15	2.9	0.031	0.0032	
Atrazine	1912-24-9	Y	<0.017 - 0.093	7.5	19	4	NG	0.0003	
Dieldrin	60-57-1	Υ	<0.00036 - 0.0016	0.11	0.3	0.06	0.062	0.0019	
Endrin	72-20-8	Υ	<0.00050 - 0.017	180	510	25	0.210	0.0022	
Endrin Aldehyde	7421-93-4	Y	<0.00037 - 0.00220	NG	NG	NG	NG	NG	

Notes:

mg/Kg - milligrams per Kilogram

NG - No guideline

¹CAS Registry Number (CAS#'s) - unique numeric identifier which designates one substance and has no chemical significance

²40 Code of Federal Regulations (CFR) 302.4, Designation of Hazardous Substances - Comprehensive Environmental Response, Compensation, Liability Act

³Range of chemical concentrations observed in all the samples collected within the T-3 Exclusion Area (Former Labor Camp)

⁴USEPA - Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites - Industrial Soil ⁵Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Commercial / Industrial

⁶Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Residential

⁷Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Probable Effects Concentration

^aDevelopment and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Threshold Effects Concentration

Table 5. Range of Concentrations Measured vs. Regulatory Requirements

T-21 Exclusion Area (Mix/Load Area)
Former Talisman South Ranch
Tract No. D7100-044
A-2 Reservoir

Palm Beach County, FL

					State Regulatory Limits (mg/Kg)				
Parameter	CAS #'s	CERCLA ² Regulated (Y/N)	Range ³ Observed (mg/Kg)	EPA Regulatory Limits ⁴ (mg/Kg)	SCTL- CDE ⁵	SCTL- RDE ⁶	SQAG- PEC ⁷	SQAG- TEC ⁸	
Arsenic	7440-38-2	Y	<0.5 - 7.0	1.6	12	2.1	33	9.8	

Notes:

mg/Kg - milligrams per Kilogram

NG - No guideline

¹CAS Registry Number (CAS#'s) - unique numeric identifier which designates one substance and has no chemical significance

²40 Code of Federal Regulations (CFR) 302.4, Designation of Hazardous Substances - Comprehensive Environmental Response, Compensation, Liability Act

³Range of chemical concentrations observed in all the samples collected within the T-21 Exclusion Area (Mix/Load Area)

^{*}USEPA - Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites - Industrial Soil

⁵Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Commercial / Industrial

^{*}Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Residential

^{&#}x27;Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Probable Effects Concentration

Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Threshold Effects Concentration

Table 6.

Range of Concentrations Measured vs. Regulatory Requirements T-24 Exclusion Area (Pump Station) Former Talisman South Ranch Tract No. 100-104

A-2 Reservoir Palm Beach County, FL

					State Regulatory Limits (mg/Kg)				
Parameter	CAS #'s1	CERCLA ² Regulated (Y/N)	Range ³ Observed (mg/Kg)	EPA Regulatory Limits ⁴ (mg/Kg)	SCTL- CDE ⁵	SCTL- RDE ⁶	SQAG- PEC ⁷	SQAG- TEC ⁸	
Acenaphthene	83-32-9	Y	<0.0050 - 0.155	33,000	20,000	2,400	0.089	0.0067	
Acenaphthylene	208-96-8	Y	<0.0050 - 0.048	NG	20,000	1,800	0.130	0.0059	
Benzo(a)anthracene	56-55-3	Y	<0.0050 - 1.650	2.1	#	#	1.1	0,11	
Benzo(a)pyrene	50-32-8	Y	<0.0050 - 0.250	0.21	0.7	0.1	1.5	0.15	
Benzo(ghi)perylene	191-24-2	Y	<0.0050 - 1.430	NG	52,000	2,500	NG	NG	
Chrysene	218-01-9	Υ	<0.0050 - 1.480	210	#	#	1.3	0.17	
Fluoranthene	206-44-0	Y	<0.0050 - 0.086	22,000	59,000	3,200	2.2	0.42	
Fluorene	86-73-7	Υ	<0.0050 - 0.320	22,000	33,000	2,600	0.54	0.077	
Indeno(123-cd)pyrene	193-39-5	Υ	<0.0050 - 0.830	2,1	#	#	NG	NG	
Phenanthrene	85-01-8	Υ	<0.0050 - 0.185	NG	36,000	2,200	1.2	0.2	
TPH	NO CAS	N	<15.3 - 290	NG	2,700	460	NG	NG	

Notes:

mg/Kg - milligrams per Kilogram

NG - No guidline

- Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 'Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777, F.A.C.' 'CAS Registry Number (CAS#'s) - unique numeric identifier which designates one substance and has no chemical significance

40 Code of Federal Regulations (CFR) 302.4, Designation of Hazardous Substances - Comprehensive Environmental Response, Compensation, Liability Act

³Range of chemical concentrations observed in all the samples collected within the T-24 Exclusion Area (Pump Station)

*USEPA - Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Siles - Industrial Soil

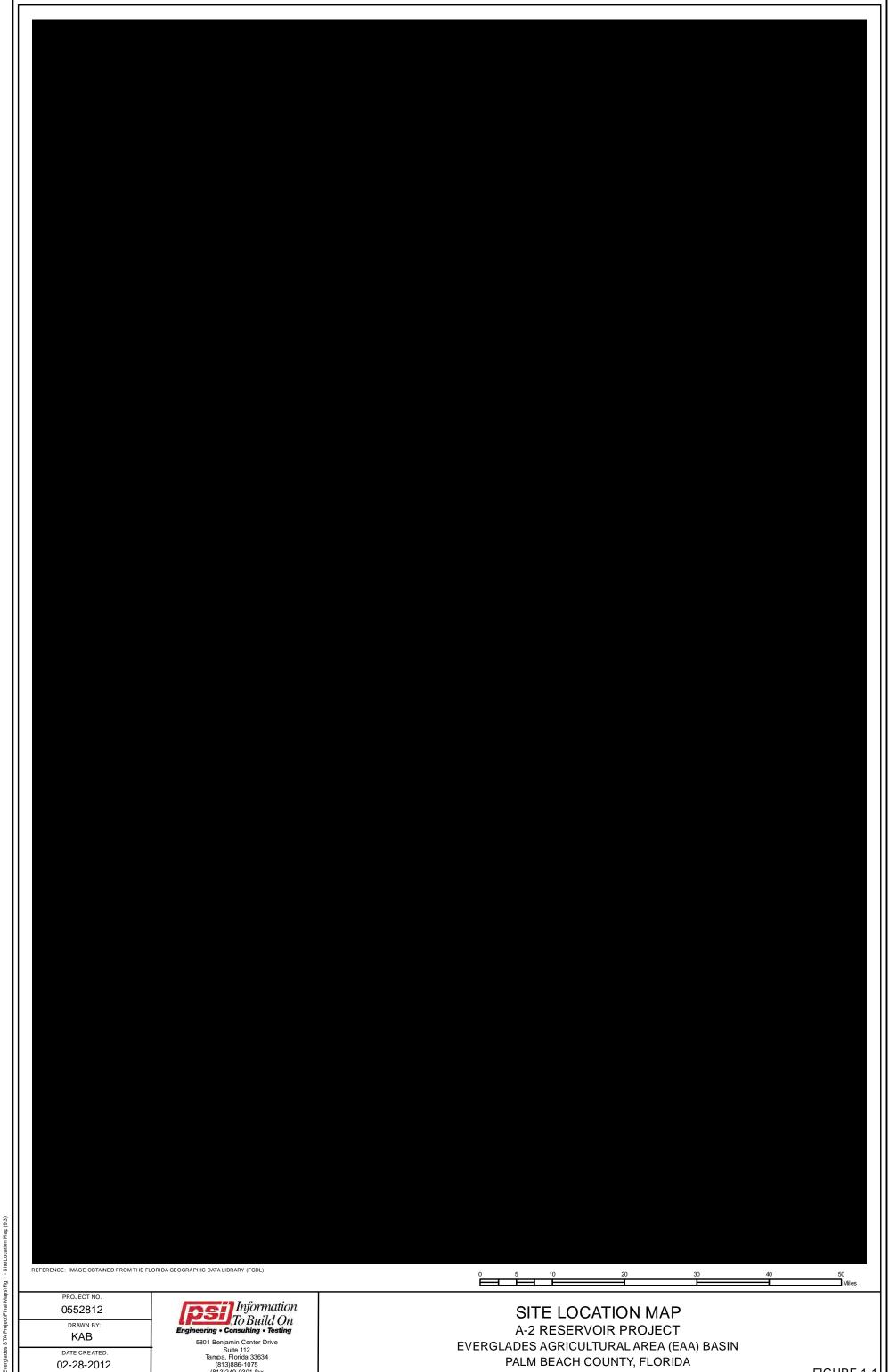
Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Commercial / Industrial

Chapter 62-777, FAC, Table 2 - Technical Background Document, SCTLs, Direct Exposure - Residential

Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Probable Effects Concentration

Development and Evaluation of Sediment Quality Assessment Guidelines, Volumes 1-4 (MacDonald, 2000), Sediment Quality Assessment Guidelines-Threshold Effects Concentration

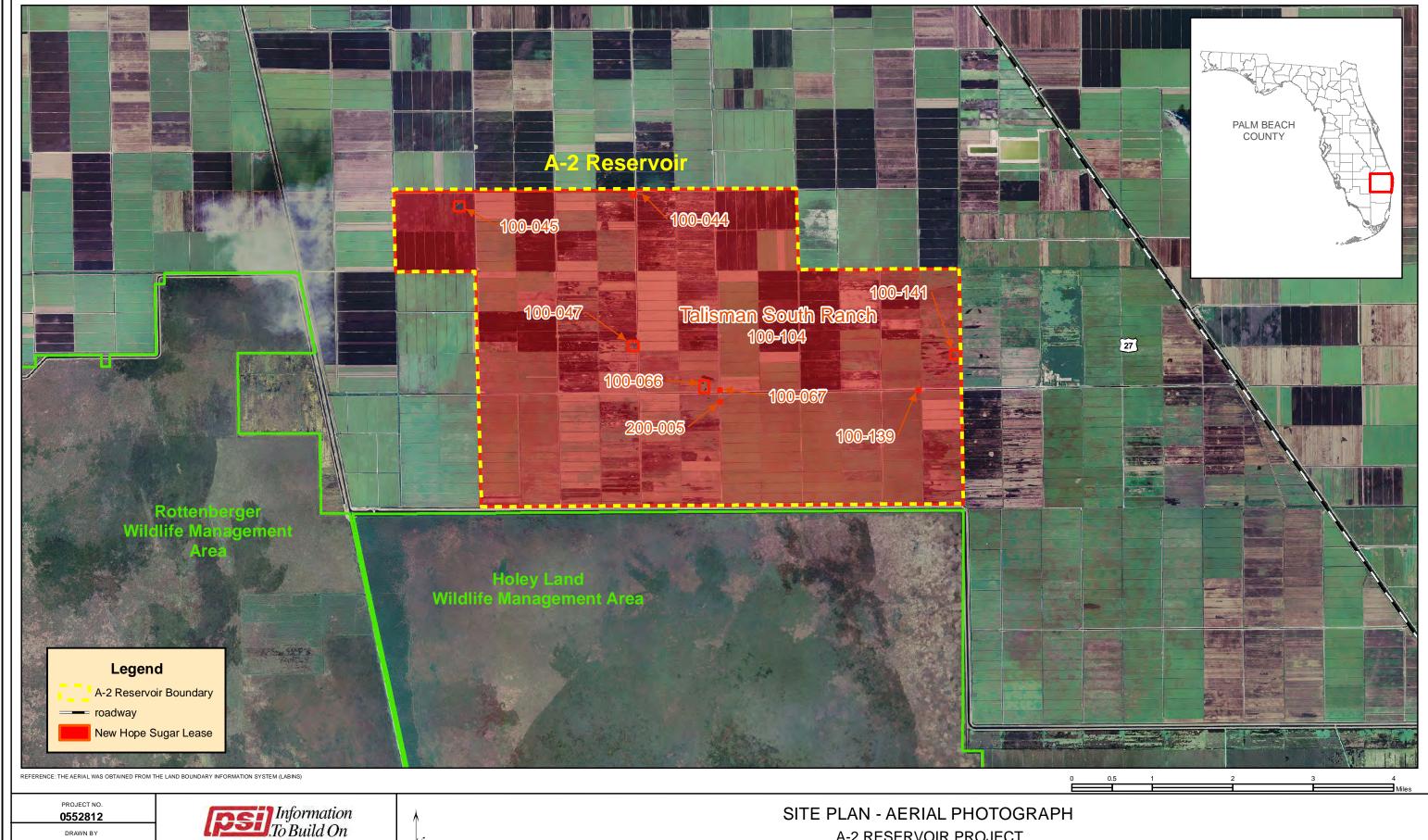
FIGURES



SCALE: 1:750,000

5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax

PALM BEACH COUNTY, FLORIDA



A-2 RESERVOIR PROJECT

EVERGLADES AGRICULTURAL AREA (EAA) BASIN

PALM BEACH COUNTY, FLORIDA

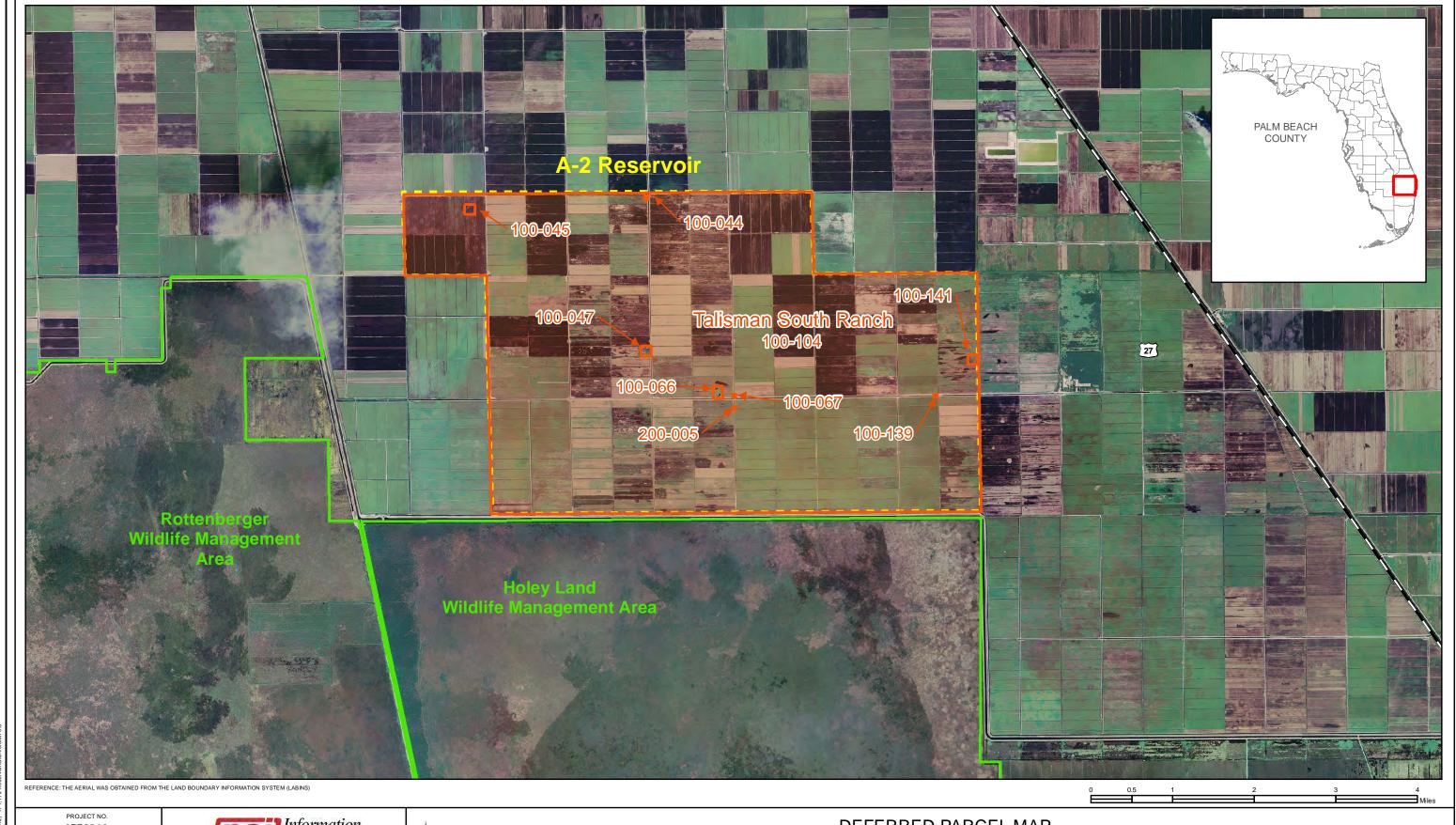
FIGURE 1-2

KAB

DATE CREATED

8/17/2012

5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax



0552812

KAB

DATE CREATED 8/17/2012

SCALE: 1:70,000

Information To Build On

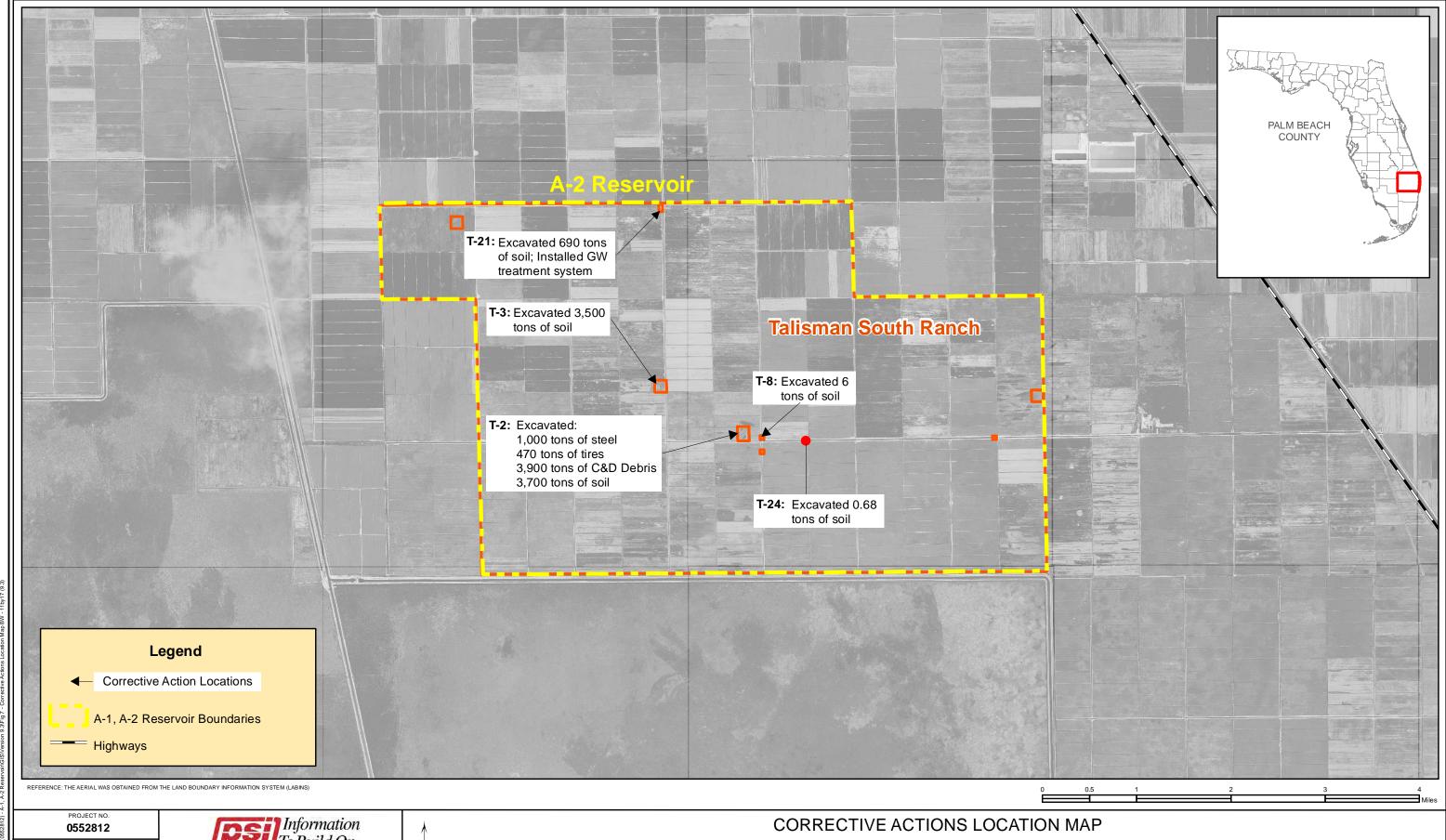
5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax



DEFERRED PARCEL MAP

A-2 RESERVOIR PROJECT EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA

FIGURE 3-1



KAB DATE CREATED

02-28-2012

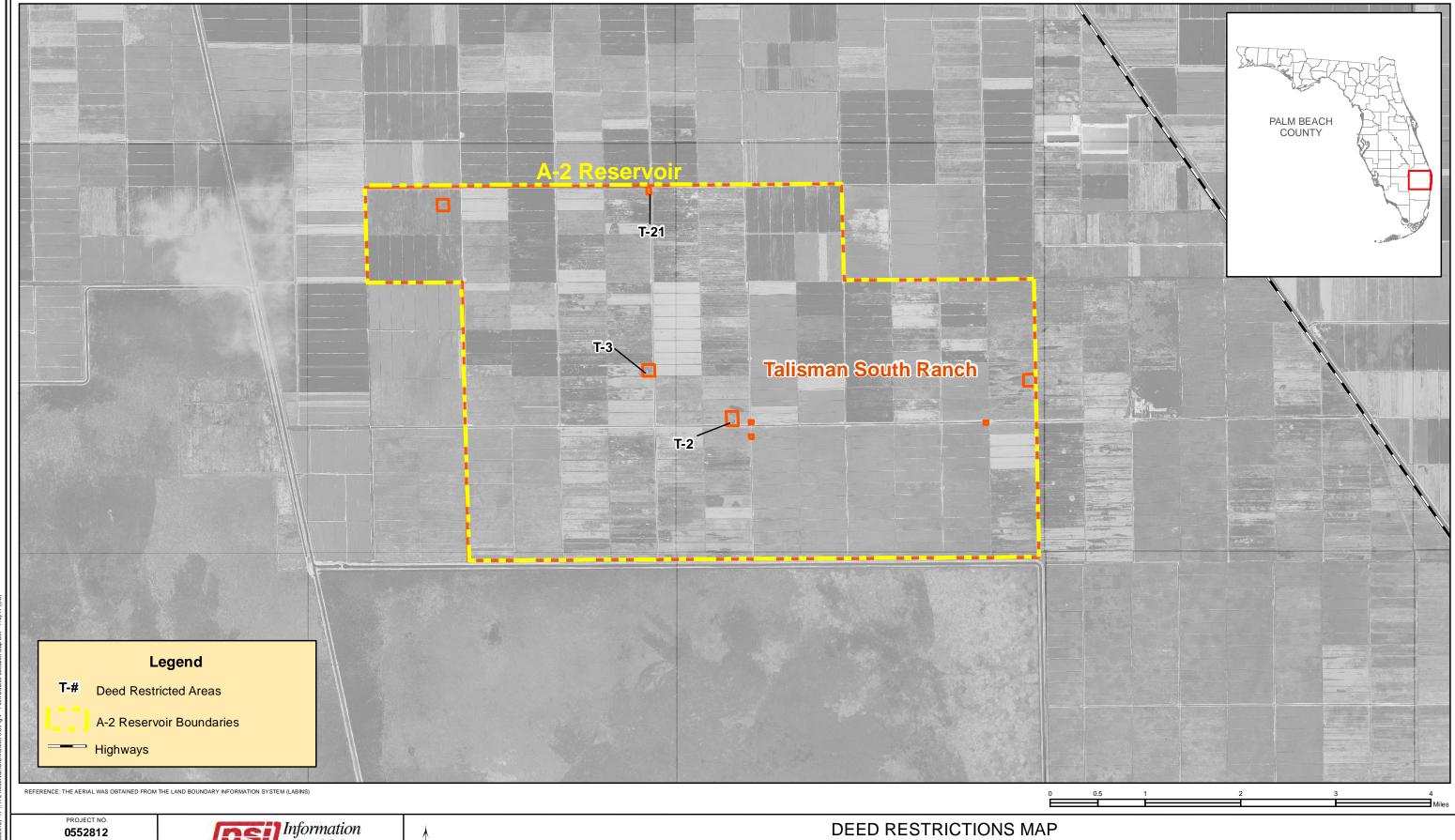
SCALE: 1:60,000

To Build On

5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax



A-2 RESERVOIR PROJECT EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA



KAB DATE CREATED

02-28-2012

SCALE: 1 : 60,000

Information To Build On

5801 Benjamin Center Drive Suite 112 Tampa, Florida 33634 (813)886-1075 (813)249-0301 fax



A-2 RESERVOIR PROJECT EVERGLADES AGRICULTURAL AREA (EAA) BASIN PALM BEACH COUNTY, FLORIDA



May 3, 2013

South Florida Water Management District

3301 Gun Club Road West Palm Beach, Florida 33406

Attn: Mr. Robert Kukleski

Lead Environmental Engineer

Re: Phase II Environmental Site Assessment (ESA) – Addendum #1

A-2 Flow Equalization Basin (FEB) Project

Palm Beach County, Florida

Work Order #13

Dear Mr. Kukleski:

Professional Service Industries, Inc. (PSI) is pleased to submit this addendum to the Phase II Environmental Site Assessment (ESA) for the A-2 Flow Equalization Basin (FEB) dated March 25, 2013. This addendum is intended to address comments/requests for clarification that were received from the United States Army Corps of Engineers (USACE). PSI received comments from USACE via e-mail from Mark Shafer on April 2, 2013 and from Lisa Gued on April 11, 2013. We have provided each of the USACE comments below, followed by PSI's response:

Mark Shafer Comments

Provide documentation of:

- a. FWS review of A2 sampling results.
- b. Documentation of FDEP review of A2 Sampling results.
- c. Letter from SFWMD to USACE requesting application of Sep 2011 AG-Chem policy to this project.

PSI Response: Concurrence letters from USFWS and FDEP are provided in **Attachment A** herein. SFWMD will separately provide a letter to USACE requesting application of the September 2011 USACE Ag-Chem Policy to this project.

In addition to USFWS review, this report must be reviewed by FDEP to satisfy USACE Ag-Chem policy.

PSI Response: FDEP has reviewed the Phase II ESA for the A-2 FEB and provided a concurrence letter, which is included in **Attachment A**.

Page 1. In reviewing the A2 Phase II report of March 25th, 2012, it references on page 1 the draft Summary Env. Report for the A-2 FEB, dated September 17, 2012. I have a copy of that report and it does not include much of the information that was originally included in the August 21st, 2012 version. I believe that the WMD solution to USACE concerns about the Sep 17 version was to revert back to the August 21st, 2012 version. I will be referencing the August 21st 2012 version in the CEPP PIR. To do this, page 1 of the March 25 report should be changed to reference the August 21st Summary report and the August 21st report should be provided with a signature from Steve Long.

PSI Response: A signed copy of the August 21, 2012 version of the Summary Environmental Report (SER) is included in **Attachment B**. Please note that PSI provided draft versions of the report on August 21, 2012 and September 17, 2012; however, we had not received previous instruction from SFWMD to finalize the report. Based on your comment and discussion with the District, the August 21 version of the report will be considered as the final version.

Page 6. Section 3.1. Should provide statement that USFWS and USACE reviewed the sampling scope of work and approved the sampling plan. Provide copy of USFWS review letter in appendix.

PSI Response: USFWS and FDEP were both provided with the scope of work and sampling plan. We received concurrence on the proposed plan from USFWS in a letter dated January 8, 2013. A copy of the USFWS concurrence is provided in **Attachment C**. We did not receive any written response from FDEP on the proposed sampling plan, but did receive a concurrence letter from FDEP on the Phase II ESA.

Page 4.1.1 Soil, 4th bullet. Second sentence says SCTL-LSW is appropriate. Third sentence essentially says SCTL-LSW not relevant. Please confirm with FDEP that FEB would not be a class III water though since the FEB eventually discharges to Class III water body don't know of relevance. Also, a discussion that FEB will discharge to STA34 or STA2B before being discharged to a Class III water.

PSI Response: Based on further discussions with SFWMD management, the District does not intend to pursue classification of the FEB as a treatment works as they have done for previous STA projects. The District intends to permit the FEB as a Class III surface water body; however, the FEB will discharge into either STA-3/4 or STA-2B, which are both classified as treatment works. In any case, it appears that the SCTL-LWS is an applicable and relevant and appropriate screening standard for the A-2 FEB project.

Page 12. Metals Results. Chromium exceeded the SCTL-LSW in all samples. Add discussion of why was this analyte not tested using SPLP protocol.

PSI Response: Chromium did exceed the SCTL-LSW of 4.2 milligrams per kilogram (mg/kg) in all of the composite soil samples, with concentrations ranging from 5.6 mg/kg to 28 mg/kg. The detected chromium concentrations appear to be representative of background soil conditions within the EAA and do not exceed any other ecological or



human health screening criteria. Given the high organic content of the soils, PSI does not expect the chromium to leach into surface water to a significant degree. However, based on your comment, PSI subsequently analyzed two samples containing the highest chromium concentrations by the SPLP method to evaluate the potential for leaching. These results are tabulated and discussed on page 4 of this addendum. The SPLP analysis indicates only limited potential for leaching of chromium to surface water, and we do not believe that chromium would exceed the Class III surface water standards in the water impounded within the A-2 FEB due to extensive dilution and other factors. In any case, PSI recommended sampling of the surface water for chromium at start-up as a precaution. This recommendation was accepted by both USFWS and FDEP in lieu of further pre-construction studies.

Page 21. Arsenic: Concentrations do exceed the residential exposure criteria. The FEB may be open to the public for recreation. Some discussion of risks associated with public access should be provided in text. Perhaps a reference to other sites where FDEP has developed a "recreational" exposure criteria (Lake Okeechobee Scenic Trail for instance.)

PSI Response: Arsenic concentrations exceeded the Soil Cleanup Target Level for Residential Direct Exposure (SCTL-RDE) in all of the composite soil samples, and ranged from 3.1 mg/kg to 6.8 mg/kg. The mean arsenic concentration is 4.6 mg/kg. PSI utilized EPA ProUCL to calculate the 95% upper confidence limit (UCL) for the data set. The software package recommends a 95% UCL value of 4.895 mg/kg. A copy of the 95% UCL calculation sheet is provided in **Attachment D**.

While the FDEP does not have a promulgated SCTL for arsenic in a recreational setting, the Department has utilized 5.5 mg/kg as an appropriate SCTL for a number of other recreational projects across the state, including active parks with a significantly higher public exposure frequency than is likely for the FEB. Human health risks for arsenic exposure are primarily driven by ingestion of arsenic in the soil, and children are the most sensitive receptors. For the FEB, any direct contact with arsenic contaminated soils is likely to occur only on the bermed surfaces, where the muck soils may be used for surface dressing. Contact frequency for the general public or workers is likely to be minimal, in comparison to the frequency of use assumed by FDEP in the active park scenario which was used to develop the alternate SCTL for recreational use. PSI believes this alternate recreational SCTL is appropriate for this project and that no protections are necessary for protection of the public related to exposure to arsenic impacted soils in the FEB project.

Page 21. Chromium. Not sure that it is relevant that the planned FEB will or will not be classified as a Class III water body. The FEB will discharge to the STAs and eventually a class III water body. By the way, this paragraph on the SCTL-LSW exceedances is in direct contrast to the discussion that begins in the next paragraph that follows which begins "Class III surface water criteria".

PSI Response: The classification of the FEB as a Class III water body is relevant because since the Class III surface water standards will apply to the water body, then



the SCTL-LSW criteria also apply to the soils within the A-2 FEB footprint. This discussion is now not relevant because the District has elected to permit the A-2 FEB as a Class III surface water.

Page 21. Bullet on Chromium, mercury, and selenium were.... Actual testing of these analytes using the SPLP test procedure would have been useful so you could say for sure if these "leach to a significant degree". This lack of testing should be further justified or corrected by additional testing.

PSI Response: Since the chromium, mercury and selenium concentrations in the soil appeared to be consistent with background conditions in the EAA, and the leaching potential of the highly organic soils was not considered to be high, PSI did not initially elect to perform SPLP analysis on any of the soil samples. However, pursuant to your request we analyzed two samples representing the highest range of these three metals by the SPLP method to evaluate leaching potential. The SPLP results are provided in **Attachment E** and are tabulated below.

Sample ID	Date Collected	Chromium	Mercury	Selenium
SPLP Leachate/163830 (Comp-7)	4/5/2013	3.5 U	0.062 U	2.3 U
SPLP Leachate/163832 (Comp-12)	4/5/2013	18	0.062 U	2.3 U

The results indicate limited potential for leaching of any of these three metals. It is acknowledged that the chromium concentration detected in Comp-12 slightly exceeds the Class III surface water standard of 11 ug/L and that while mercury was not detected in the samples, the method detection limits for mercury are higher than the Class III surface water standard. However, the SPLP results do not account for the extensive dilution that will occur in the FEB as fresh water enters the system. The results indicate that the underlying soils are not likely to leach to the overlying surface water to a degree that would cause an exceedence of the Class III surface water criteria. In any case, PSI has recommended surface water sampling for these metals at start-up to verify this conclusion. Both FDEP and USFWS have accepted the start-up sampling in lieu of conducting further pre-construction studies.

Page 22. Arsenic: The recommendation should indicate whether the results for Arsenic should warrant measures taken in the soil management plan to reduce possible human exposure due to potential for arsenic on levee soils. (Blending or capping with low-arsenic soils, for instance.)

PSI Response: Because the 95% UCL arsenic concentrations in the site soil are below the alternate SCTL for recreational use that has been used by FDEP on similar projects, PSI does not believe that any additional protective measures, such as blending or capping of arsenic impacted soils is warranted to reduce possible exposure to arsenic in the soil.



Lisa Gued Comments on Phase II ESA

Page 2: 1st bullet: How were ND values incorporated in the statistical analyses?

PSI Response: One-half of the detection limit was used to represent non-detect values in the data set.

Page 2: 1st bullet: A table listing the mean and the standard deviation of detected compounds would be useful.

PSI Response: A table showing the mean concentrations and standard deviations for detected compounds that exceeded screening criteria is provided in **Attachment F**.

Page 7: 2nd paragraph: Which chemicals were recently applied?

PSI Response: PSI was informed that Atrazine, 2, 4, D, Dimetric, Calisto, Thimet, and Asolan were in use on the property and had been recently applied. We did not obtain a specific field by field application schedule for these chemicals. Through coordination with Florida Crystals Corporation, we did ensure that we did not sample any fields where chemicals had been applied within the last two weeks.

Page 8: 2nd bullet: Split samples were not accomplished with OP pesticides and herbicides because the primary split laboratory subcontracted these analyses to Sunlabs. Sunlabs was the primary laboratory.

PSI Response: Primary and split samples for organophosphorous pesticides and herbicides were inadvertently run by the same laboratory on this project. The A-2 FEB was the first project where Sun Labs served as a primary laboratory. We were aware that the secondary laboratory, ALS had previously subcontracted these analyses to SunLabs and we would have been better served to select a different secondary laboratory and this issue will be corrected for the next project. The split samples do serve a function in evaluating the precision of the primary laboratory, as the split samples were analyzed on a different day and in a different batch than the original samples. Split samples were analyzed for OCPs and metals by separate laboratories.

Page 10: 3rd paragraph: FWS protocols recommend consideration of ESV established by EPA Region IV when Florida SQAGs are not available. Were these values considered in this assessment?

PSI Response: This statement is correct; however, in this case no ESVs were published for any of the chemicals which were detected that do not have SQAGs. Atrazine, 2,4-D, metribuzin, phorate and selenium do not have either SQAGs or ESVs.

Pages 11-13: In the discussion of the results, the mean and the standard deviation should be reported.



PSI Response: Mean chemical concentrations and standard deviations are reported in the table provided in **Attachment F.**

Pages 11-13: For compounds where the detection limit was higher than the criteria, this should be reported.

PSI Response: A data table showing all target analytes, the method detection limits and all of the regulatory criteria is provided in **Attachment G**.

Page 11: Last paragraph. The MDL that the laboratory reported is approximately 100 times the SQAG-TEC for atrazine.

PSI Response: PSI acknowledges that the MDLs reported for atrazine, which generally ranged from 24-30 ug/kg, are higher than the SQAG-TEC, but are below all other regulatory criteria. The method detection limits reported by SunLabs are consistent with those reported for other labs that are listed on the District's approved list for this contract and meet the MDLs outlined in the SFWMD standard ADaPT library. For example, E-Labs (Pace) reported an MDL for atrazine using EPA Method 8141 of 33 ug/kg and Jupiter Environmental Laboratories reported an MDL of 25 ug/kg using EPA method 8141.

Page 12: 2nd paragraph: The text fails to state that the holding times for SPLP analyses per method EPA 1312 were exceeded. This makes the data questionable.

PSI Response: PSI agrees that the holding times for atrazine and dieldrin were exceeded for the SPLP analyses; however, we do not agree with the assertion that the data is questionable due to the exceedence of hold times. We typically run SPLP analyses as a follow-up when analytes are detected in the composite soil samples at concentrations exceeding the leaching to groundwater or leaching to surface water criteria. By necessity, these samples are not analyzed until the initial results are reported and we determine the specific analytes of concern and the samples with the highest range of these chemicals. It would be cost prohibitive to run all of the samples for SPLP analyses for all analytes or to run all of the composite samples on a rush basis in order to be able to run the SPLP analyses within hold times. Additionally, it would be prohibitive to the schedule and budget to return to the field to re-collect samples for SPLP analysis. In the past, both FDEP and USFWS have accepted that the SPLP results would be slightly beyond hold time for organic analytes and we do not believe that the analysis of these samples a few days beyond the hold time would significantly impact the results.

Page 13: 4.3 Data validation: ADaPT data validation forms were not provided with the laboratory reports in Appendix A.

PSI Response: The ADaPT data validation forms are provided herein in **Attachment H**.



Page 13: 4th paragraph: Does USFWS concur with the value used of 4.2 mg/kg selenium?

PSI Response: Yes.

Page 14: 4th bullet: A spot check of the data indicate that this statement is inaccurate. The method blank run 1/30/13 by CAS has barium, cadmium, copper, mercury in it.

PSI Response: The statement should read that no target analytes were detected in the laboratory method blanks which caused the sample data to be qualified. PSI acknowledges that estimated concentrations ("I" qualified) of barium, cadmium, copper, and mercury were detected in the method blank for the secondary laboratory. The sample data were not qualified as the samples contained concentrations of these metals in excess of 10 times the blank contamination.

Page 14: Bullets 6&7: There are a wide variety of MDLs being reported by commercial laboratories. Were the labs told which criteria the data was going to be compared to? Were different labs contacted?

PSI Response: PSI is aware that individual laboratories may have different method detection limits for any given chemical. The District has established a list of subcontract laboratories that are acceptable for use under the Ecological Risk Assessment contract. Each of these laboratories has been provided with a standard ADAPT library stating the required method detection limits and quality control requirements for each analyte/method/media. The method detection limit requirements listed in the ADAPT library were developed by HSW Engineers based on performance capabilities, regulatory guidance concentrations, and the FDEP Practical Quantitation Limits Guidance.

Page 14: It should be noted that the laboratory did not achieve the SQAGs TEC concentrations for any of the organophosphate pesticides (OPP), the triazine herbicides (including atrazine) or toxaphene. The SOW that this assessment was supposed to follow named EPA 8140 as the method for OPP. The chain of custody from the field requested EPA 8141 + atrazine for the split samples; the chain of custody between ALS and their subcontractor, Sunlabs was changed to EPA 8270. The chain of custody from the field produced to Sunlabs (the primary laboratory) requested EPA 8141. The data was reported out from EPA 8270 which did not conform to the scope. Typically, EPA 8140 provides lower detection limits than EPA 8270 due to use of a more selective detector.

PSI Response: EPA Method 8140 was not specified in the SOW and is no longer included in SW-846. None of the laboratories that are in use by the District are certified by the Florida Department of Health for this method. EPA Method 8141 was specified in the proposal SOW; however, after preparation of the SOW we began experiencing difficulty with the primary laboratory (Jupiter Environmental Laboratory) that we had proposed to use on the project, and we elected to utilize SunLabs as the primary laboratory. SunLabs does not utilize EPA Method 8141, but instead runs the analysis



for OPPs by EPA method 8270. We believe that EPA method 8270 is preferable to EPA method 8141 because it offers mass spec confirmation of identified compounds. PSI has reviewed the MDLs for these compounds using the 8270 method vs. the MDLs reported by the other District-approved laboratories running EPA method 8141 and we found that the MDLs using EPA method 8270 are generally equivalent or better than those identified by the laboratories running EPA 8141. PSI did approve the use of EPA 8270 for OPP analysis, and the method should have been reflected on the chain of custody.

PSI acknowledges that the MDLs for diazinon, azinphos atrazine, simazine, and toxaphene exceed the SQAG TECs. It should be noted that the SQAG-TECs were calculated by an extrapolation of available toxicity data without reference to whether these calculated values were technically achievable by commercial laboratories using available equipment and methods. However, the MDLs reported by SunLabs using EPA 8270 are generally consistent or lower than those reported by other District laboratories using EPA Method 8141. Additionally, practical quantitation limits (PQLs) for a number of these compounds are included in the FDEP Guidance for the Selection of Analytical Methods and Evaluation of Practical Quantitation Limits (FDEP 2004) and the MDLs reported by SunLabs were lower than the FDEP PQLs in most instances. A comparison of the SQAG-TEC criteria, FDEP recommended PQLs, and the SunLabs average MDLs is presented below.

Analyte	SQAG-TEC (ug/kg)	Adapt Library MDL (ug/kg)	FDEP PQL (ug/kg)	SunLabs MDL (ug/kg)
Azinphos, ethyl	0.018	25	No goal	44
azinphos, methyl	0.062	50	7	29
chlorpyriphos	No standard	50	20	40
cuomaphos	No standard	30	40	38
diazinon	0.38	30	50	31
dimethoate	No standard	50	70	20
ethion	No standard	30	7	29
ethoprop	No standard	30	20	22
EPN	No standard	30	40	24
fensulfothion	No standard	30	50	27
fonofos	No standard	30	20	22
methyl parathion	No standard	100	20	16
mevinphos	No standard	30	30	22
naled	No standard	50	300	27
parathion	No standard	100	50	18
phorate	No standard	30	7	4.4
terbufos	No standard	30	7	4.4



Analyte	SQAG-TEC (ug/kg)	Adapt Library MDL (ug/kg)	FDEP PQL (ug/kg)	SunLabs MDL (ug/kg)	
atrazine	0.3	No goal	10	25	
simazine	0.34	No goal	20	24	
toxaphene	0.1	30	100	57	

Page 17: 1st bullet: Please confirm that the 95% UCL of dieldrin exceeds the SQAGTEC.

PSI Response: The calculated 95% UCL for dieldrin is 2.15 ug/kg, which does slightly exceed the SQAG-TEC of 1.9 ug/kg.

Page 17: 2nd bullet: Does the FWS concur with no risk for barium?

PSI Response: Yes.

Page 17: 2nd bullet: The range of barium concentration defined by FDEP (Carvalho and Schropp, 2002) in the Florida DEPs Interpretive Tool for Assessment of Metal Enrichment in Florida Freshwater Sediment warns of the limitation that "the majority of the freshwater sediment systems used to build the sediment metals database from which this tool was developed came from central peninsular and north Florida. Therefore, this tool should be used to evaluate sediments from the same region". It goes on to say in the Recommendations: "... the interpretive tool should be used with a cautionary note outside of central peninsular and north Florida."

PSI Response: Comment noted. The Interpretive Tool was not used per se for the assessment. Rather, the concentrations of barium observed in the reference locations used in the Interpretive Tool were used to indicate that the barium concentrations observed at A-2 were not likely to be toxic to benthic invertebrates.

Table 1: SPLP should have a footnote.

PSI Response: This comment does not appear to be complete. Please indicate what the footnote should document.

Tables: A complete table listing the criteria and the found value and or detection limit would be useful to see at a glance the detection limit vs the criteria.

PSI Response: We do not typically provide tables showing all analytes, as USFWS and FDEP have indicated a preference to see only detected analytes. The method detection limits for all analytes are shown in the laboratory reports, which were included in Appendix A of the Phase II ESA. At your request, we have provided a table showing all analytes, the detection limits and the applicable regulatory criteria in **Attachment G**.



<u>Lisa Gued Comments re: Appendix B Screening Level Ecological Risk</u> Assessment

Page 3: 4th paragraph I have been unable to locate the full dataset.

PSI Response: The full dataset (i.e., all of the laboratory reports) was included on a CD ROM in Appendix A of the Phase II ESA Report.

Page 3: 5th paragraph: Which samples are discrete?

PSI Response: Only composite samples were collected for this assessment.

Page 4: 3.1.1 Does USFWS concur with this?

PSI Response: Yes.

Page 4: 3.1.1 The range of barium concentration defined by FDEP (Carvalho and Schropp, 2002) in the Florida DEPs Interpretive Tool for Assessment of Metal Enrichment in Florida Freshwater Sediment warns of the limitation that "the majority of the freshwater sediment systems used to build the sediment metals database from which this tool was developed came from central peninsular and north Florida. Therefore, this tool should be used to evaluate sediments from the same region". It goes on to say in the Recommendations: "... the interpretive tool should be used with a cautionary note outside of central peninsular and north Florida."

PSI Response: Comment noted. The Interpretive Tool was not used per se for the assessment. Rather, the concentrations of barium observed in the reference locations used in the Interpretive Tool were used to indicate that the barium concentrations observed at A-2 were not likely to be toxic to benthic invertebrates.

Page 5: 1st paragraph: Does the USFWS concur with the barium concentrations are not likely to cause effects?

PSI Response: Yes.

Page 5: 4th paragraph: Does the USFWS concur with the lack of PEC exceedance in any sample and the unique properties of muck soils with the A-2 cultivated area suggest that the potential for toxic effects would be lower than predicted by SQAGs?

PSI Response: Yes.

Page 5: 4th paragraph: Define unique properties.

PSI Response: The unique properties of muck soils are associated with the exceptionally high organic carbon content of the soils (20 - 50%) which is expected to reduce the bioavailability of copper once flooded versus soils containing lower amounts of organic material.



Page 6: 3.1.3: The information is in conflict with the ESA assertion on page 13. The recommended value for selenium should be inserted in to the detected table 1 and footnoted.

PSI Response: The USFWS has recommended a screening benchmark equal to 2 mg/kg for use in SFWMD SLERAs. The value is not experimentally derived and is not equivalent to a SQAG, so it is not appropriate for inclusion on Table 1. The 4.2 mg/kg value cited in the Phase II ESA is not a screening benchmark recommended by USFWS, but is rather an experimentally derived benchmark that may be applicable for use in South Florida in certain situations where selenium is present at concentrations greater than the 2.0 mg/kg screening benchmark in highly organic soils such as those found at this Site.

Page 6: 3.1.4 I am unable to identify a Figure 2 in the hard copy report.

PSI Response: Figure 2 was included in the SLERA; however, we have included a copy for your use in **Attachment I**.

Page 6: Does USFWS concur with the recalculation of the 0.0003 ug/kg TEC value for atrazine to 587 ug/kg TEC for atrazine?

PSI Response: Yes.

Page 6: 3.1.5 What is the half-life for 2,4-D?

PSI Response: According to EXTOXNET (http://extoxnet.orst.edu/pips/24-D.htm) the average half-life of 2,4-D in soils is less than 7 days.

Page 6: 3.1.5: Does USFWS concur with the calculation of the site-specific SQAGs for 2,4-D?

PSI Response: Yes.

Table 1: comp-10 should be shaded for dieldrin concentration

PSI Response: A corrected version of Table 1 reflecting dieldrin concentrations exceeding the SQAG by shading is provided in **Attachment J**.

Page 8: 2nd paragraph Does USFWS concur?

PSI Response: Yes.

Page 8:5th paragraph: Was metribuzin applied recently or not?

PSI Response: Yes.



Page 8:6th paragraph: Was phorate applied recently or not?

PSI Response: Yes.

Page 9: 3.2 The cumulative risk did not include the data for barium. Barium data were not used because it was considered background. It those data were left in the average PEC-HQ would be greater than 0.5. Does USFWS concur with deletion of barium data? Table 2: The value for SQAG PEC for dieldrin is incorrect in this table. The correct value is 0.062 mg/kg.

PSI Response: Barium was not included in the cumulative risk calculations because the PEC for barium is not based on the proper type of benchmark for average PEC calculation as discussed on Page 9 of the SLERA: "In order to calculate the potential for cumulative risk, MacDonald et al. (2003) recommends the use of the average PEC quotient (PEC-HQ) which represents the average ratio of the site chemical concentration to the PEC SQAG. This measure is only meant for use for those chemicals that have consensus-based SQAGs derived in the SQAG guidance document."

Review of the SQAG guidance document provides no information regarding the derivation of the TEC and PEC benchmarks for barium. The barium SQAGs are not representative of the typical consensus-based benchmarks provided for most of the metal contaminants in the guidance and no discussion regarding the underlying assumptions behind the benchmark is provided. A review of the referenced source for the benchmarks indicates that the author of the benchmark guidance obtained the benchmarks from a secondary source which was itself a draft document (SAIC 1991). Neither the secondary nor the primary source (USEPA 1977) were located after an extensive search for both documents. Some information on the barium benchmarks was located in the Washington State Sediment Quality Guidelines document (WADOE 1997). The Washington document indicated that the benchmarks cited in the USEPA (1977) guidance developed by USEPA Region V in order to classify Great Lakes harbor sediments. The document notes that the values are 'somewhat arbitrary and are not well founded scientifically' and that they were only adequate for 'determining the suitability of dredged material for open water disposal'. The barium benchmarks appear to be based not on benthic toxicity but on an unknown general 'contamination classification' scheme. As a result, their use in calculation of average PEC-HQs meant for consensus-based benchmarks would be inappropriate.

MacDonald, D.D., C.G. Ingersoll, D.E. Smorong, R.A. Lindskoog, G. Sloane, and T. Biernacki. 2003. Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters. Florida Department of Environmental Protection, Tallahassee, FL.



- SAIC (Science Application International Corporation). 1991. Draft compilation of sediment quality guidelines for EPA Region 5 inventory of contaminated sediment sites. Prepared by Science Application International Corporation. Chicago, Illinois. 48 pp.
- USEPA (United States Environmental Protection Agency). 1977. Guidelines for the pollution classification of Great Lakes Harbor sediments. United States Environmental Protection Agency. Region V. Chicago, Illinois. (As cited in SAIC 1991).
- Washington State Department of Ecology. 1997. Creation and Analysis of Freshwater Sediment Quality Values in Washington. Publication Number 97-323a. July 1997.

Page 10: 2nd paragraph: The text says that "a screening-level approach was used to identify COPCs by using the maximum composite sample concentration from the discrete sediment samples..." This does not make sense. There were no discrete samples.

PSI Response: The comment is correct, discrete samples were not available and the sentence should read: ...a screening-level approach was used to identify COPCs by using the maximum composite sample concentration from the discrete sediment samples..."

Page 10: 3rd paragraph: Treatment of barium is inconsistent through this report. It was not used in Table 2 to calculate PECs-HQ but it was used in Table 3 to calculate HQs for aguatic – feeding birds.

PSI Response: The treatment of barium is consistent throughout the document according to the Protocol.

Calculation of the average PEC-HQ (Table 2) was conducted using those COPCs whose concentration exceeded a consensus-based PEC from the MacDonald et al. (2003) document as previously discussed. This calculation is used to assess the potential to the benthic invertebrate community only and has no bearing on or relationship to the HQs calculated for aquatic-feeding birds.

HQs calculated for aquatic-feeding birds use a food web model as described in the Protocol that estimates the daily intake of COPCs, including barium. The estimated intake is then compared to laboratory-derived toxicity reference values (TRVs) to calculate the HQs shown in Table 3.

Page 10: 3rd paragraph: The text says that atrazine is a chemical with low toxicity. How do the authors reconcile the 0.0003 mg/kg SQAG-TEC values; it is the lowest concentration of TEC for the compounds detected.

PSI Response: SQAGs are screening-level benchmarks for predicting the potential for toxicity to benthic invertebrates and the comment is correct in that atrazine can be toxic to aquatic life. As a result, the potential for risk to benthic invertebrates was discussed in Section 3.1.4. However, Section 3.3 in which the quoted text is found discusses risk to aquatic-feeding birds. Atrazine is described by EXTOXNET



(http://extoxnet.orst.edu/pips/atrazine.htm) as "practically nontoxic to birds" as indicated in the referenced text.

Page 11: 3.3.1 Does USFWS concur with this position?

PSI Response: Yes.

 $\infty \infty \infty$

We trust that these responses will be satisfactory to address the USACE's concerns regarding the report. If you have any additional questions, please do not hesitate to contact me at 303-424-5578.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Stephen P. Long, PE, PG

Chief Engineer

Michael Rothenburg, PE Env. Dept. Manager

Attachments:

- A- USFWS and FDEP Concurrence Letters for Phase II ESA
- B- Final Summary Environmental Report for A-2 FEB, dated 8/21/12
- C- USFWS Concurrence Letter for Phase II ESA SOW
- D- 95% UCL Calculations
- E- SPLP Results
- F- Mean analyte concentrations and standard deviations
- G- Laboratory Analytical Data Table for Soil
- H- ADaPT Data Validation Forms
- I- SLERA Figure 2
- J- SLERA Table 1(rev.)

C:\Documents and Settings\766107\My Documents\SFWMD\A-1 and A-2 Reservoir\A-2 Phase II ESA\Phase II ESA Addendum #1 - 4-22-13.doc



ATTACHMENT A



United States Department of the Interior

FISH AND WILDLIFE SERVICE South Florida Ecological Services Office 1339 20th Street Vero Beach, Florida 32960



April 17, 2013

Robert Kukleski South Florida Water Management District 3301 Gun Club Road West Palm Beach, Florida 33406

Dear Mr. Kukleski:

The U.S. Fish and Wildlife Service (Service) has reviewed the document entitled "Phase II Environmental Site Assessment for the A-2 Flow Equalization Basin, Palm Beach County, Florida," prepared by Professional Service Industries, Incorporated (PSI). This report summarizes sampling results for the approximately 14,408 acre Talisman property.

Previous due diligence assessments were performed on the A-2 Flow Equalization Basin (FEB) parcels prior to the creation of the current "Protocol for Assessment, Remediation, and Post-Remediation. Monitoring for Environmental Contaminants on Everglades Restoration Projects", therefore a reduced sampling density of 10 percent was agreed to prior to the current assessment of previously cultivated areas in the project footprint. All point source concerns within the A-2 FEB were previously assessed and remediated as necessary. A total of 30, fifty acre grids were sampled using composite samples. Analytical results were compared to the Florida Department of Environmental Protection Sediment Quality Assessment Guidelines (SQAG) and the Florida Administrative Code Soil Cleanup Target Levels (SCTL).

Results

Barium concentrations (69 to 118 mg/kg) exceeded the SQAG threshold effect concentration (20 mg/kg) and probable effect concentration (PEC) (60 mg/kg) in all of the samples. Copper (53 to 110 mg/kg) was detected at concentrations that exceeded the recommended interim screening level for protection of the Everglade snail kite (*Rostrhamus sociabilis plumbeus*) (85 mg/kg) in eight of the samples collected. The calculated 95 percent upper confidence level (UCL) of the mean copper concentrations (83.1 mg/kg) was below 85 mg/kg. The metals chromium, mercury, and selenium exceeded the SCTL for leaching to surface water in several of the sample locations. The herbicides 2,4-D, metribuzin, phorate, and atrazine were detected at some locations with concentrations above the SCTL for leaching to surface water or ground water. Atrazine (27 to 3,500 μ g/kg) was relatively widespread, with detections at 16 of the sampling locations above the SQAG threshold effect concentration (TEC) (0.30 μ g/kg). The pesticide dieldrin was detected above the SQAG TEC (1.9 μ g/kg) in four samples, ranging from 2.7 to 5.1 μ g/kg. Atrazine and dieldrin were also analyzed with the synthetic precipitation leaching procedure (SPLP). Atrazine was detected in SPLP extract at concentrations above the Florida Administrative Code (FAC) groundwater cleanup target level (GCTL) and the FAC

Robert Kukleski Page 2

Surface water Cleanup Target Level (SwCTL). The detection limits for the dieldrin SPLP extracts were above the SwCTL.

Copper concentrations within the A-2 FEB did show some exceedances above the recommended interim screening level, but sitewide they are calculated to be below 85 mg/kg. In addition, the total organic carbon (TOC) content of the soils at the proposed A-2 FEB are high (20-50 percent) and will act to decrease the bioavailability of copper. The recommended interim screening level was generally established for sandy soils with roughly 1 percent TOC. To verify that copper does not present a risk to snail kites, PSI recommended a sampling program at the start-up of the A-2 FEB to monitor copper concentrations in surface water, periphyton, and any apple snails that may establish onsite. To address the exceedances of 2,4-D, atrazine, metribuzin, phorate, dieldrin, chromium, mercury, and selenium above the SCTL for leaching to surface water PSI recommended sampling surface water after start-up operations at the A-2 FEB.

Summary and Recommendations

After reviewing the analytical data, the Service concurs that the detected contaminant concentrations are unlikely to pose risk to Service trust resources at the proposed A-2 FEB. We agree that the proposed monitoring for copper is necessary to verify predictions of reduced copper bioavailability due to the high TOC. While the detected levels of barium could potentially impact the benthic community, it is unlikely that they would pose risk to federally listed species.

The Service agrees that an agrochemical best management practices (BMP) plan is appropriate to address the use of agrochemicals, if the property is used for agricultural purposes prior to project construction. We strongly recommend restricting any further use of copper and discontinuing use of atrazine a minimum of one year prior to project construction. If agrochemicals are applied during the interim use, then further sampling may be necessary to ensure that agrochemical concentrations are below thresholds for ecological risk.

Thank you for the opportunity to provide comments regarding the assessment in the A-2 FEB project area. If you have any questions, please contact Emily Bauer at 772-469-4335.

Sincerely yours,

for Larry Williams

Field Supervisor

South Florida Ecological Services Office

cc: electronic only

Robert Kukleski Page 3

Corps, West Palm Beach, Florida (Tori White) Service, Vero Beach, Florida (Sharon Kocis, Steve Mortellaro) PSI, Tampa, Florida (Stephen Long)



DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

TO: Joe Lurix, Air/Waste/WF Program Administrator ^N/₋

FROM: William Rueckert, Environmental Manager, Waste Compliance Assistance

& Enforcement Section WAR

DATE: April 4, 2013

SUBJECT: Phase II Environmental Site Assessment, A-2 Flow Equalization Basin, Palm

Beach County; Site No. COM_157258 (Talisman); Tract Numbers: D7100-044;

-047; -066; -067; -104; -139; -141; and D7200-005.

As requested by the Department's Office of Ecosystem Projects in Tallahassee, I have reviewed the document prepared for the South Florida Water Management District (District) by Professional Service Industries, Inc. (PSI) dated March 25, 2013 (received April 1, 2013) *Phase II Environmental Site Assessment, A-2 Flow Equalization Basin (Report), Palm Beach County, Florida.* The Department's review was performed following the "Protocol for Assessment, Remediation and Post Remediation Monitoring for Environmental Contaminants on Everglades Restoration Projects" known as the White Paper. The Waste Compliance Assistance & Enforcement Section has the following comments:

- 1. Based on the information and representations as presented, this Report adequately addresses the concerns of the Department's Waste Compliance Assistance & Enforcement Section with further discussion below. Therefore, the property addressed in this Report should be capable of being utilized for the intended end use as a flow equalization basin.
- 2. Start Up Operations the Department concurs that during the start up operation a one-time surface water and sediment sampling event should be performed. This sampling event should be performed at the 30- or 60-day period from inundation. **In addition,** after one year of operations, an additional surface water sampling event should be performed. Sample location, minimum of three, determinations should be based upon the highest concentrations of the listed parameters presented in this Report. The Department suggests three locations with the highest copper concentrations for the metals analyses. For example, sample collection should be in the vicinity of Comp-1, Comp-16, and Comp-30.

Phase II Environmental Site Assessment dated March 25, 2013 A-2 Flow Equalization Basin Page 2 of 2

Sample locations, minimum of three, for the pesticide and herbicide analyses should be in the areas of Comp-9, Comp-18, and Comp-28. The following parameters should be laboratory analyzed: pesticides and herbicides (2,4-D; atrazine; metribuzin; phorate) and metals (barium, chromium, copper, mercury and selenium).

- 3. Arsenic is not suggested for additional analyses but these soils should not be transported off site for uncontrolled disposal. As presented in Section 6.2, Recommendations, a soil management plan should be developed for project construction to ensure proper handling and disposal of the soils.
- 4. Also as presented in Section 6.2 of the Report, an agrochemical best management practices plan should be instituted during the continued use of agrochemicals on the property.

If you have any questions, feel free to contact William Rueckert at (561) 681-6679 or at William.Rueckert@dep.state.fl.us.

cc: (RPPS_Comp@dep.state.fl.us)

130267

ATTACHMENT B

Note: Attachment B is too large to include in electronic file. A hard copy of this report is being separately transmitted.

ATTACHMENT C



United States Department of the Interior

FISH AND WILDLIFE SERVICE South Florida Ecological Services Office

1339 20th Street Vero Beach, Florida 32960

January 8, 2013

Robert Kukleski South Florida Water Management District 3301 Gun Club Road West Palm Beach, Florida 33406

Dear Mr. Kukleski:

The U.S. Fish and Wildlife Service (Service) has reviewed the document entitled "Proposal for Phase II Environmental Site Assessment, A-2 Flow Equalization Basin (FEB) Project, Palm Beach County, Florida, Proposal No. 552-80246," prepared by Professional Service Industries, Incorporated (PSI). This proposal summarizes planned sampling for the 14,408-acre property located between US Highway 27 and the Miami Canal in southern Palm Beach County.

Due diligence assessments were performed on the A-2 FEB parcels prior to the creation of the current "Protocol for Assessment, Remediation, and Post-Remediation, Monitoring for Environmental Contamination of Everglades Restoration Projects", so reduced sampling density is satisfactory for providing a general indication of large scale concerns in the project area. Approximately 10% of the formerly cultivated sugarcane area will be sampled using composite samples from 50-acre grids. It is agreed that if exceedances based on ecological screening criteria are identified, then additional investigation will be required.

The Service concurs with the proposed sampling plan for the A-2 FEB project area. We look forward to reviewing sampling results once they become available.

Thank you for the opportunity to provide comments regarding this sampling proposal for the A-2 FEB project. If you have any questions, please contact Emily Bauer at 772-469-4335.

Sincerely yours,

for

Larry Williams Field Supervisor

South Florida Ecological Services Office

cc: electronic only Corps, West Palm Beach, Florida (Tori White) Service, Vero Beach, Florida (Kevin Palmer) PSI, Tampa, Florida (Stephen Long)



ATTACHMENT D

	General UCL Statistics	for Full Data	Sets	
User Selected Options				
From File	WorkSheet.wst			
Full Precision	OFF			
Confidence Coefficient	95%			
mber of Bootstrap Operations	2000			
		General St	atistics	
Number	r of Valid Observations	36	Number of Distinct Observation	ns 24
Number	or valid observations	00	Hamber of Distinct Observation	13 24
Raw Stz	atistics		Log-transformed Statistics	
naw ou	Minimum	3.1	Minimum of Log Da	ta 1.131
	Maximum	6.8	Maximum of Log Da	
	Mean	4.593	Mean of log Da	
	Geometric Mean	4.484	SD of log Da	
		4.464	3D of log Da	ta 0.221
	Median	1.036		
	SD Std Francis Manage	10,775,70		
	Std. Error of Mean	0.173		
	Coefficient of Variation	0.226		
	Skewness	0.556		
	F	Relevant UCL	Statistics	
Normal Distr	ibution Test		Lognormal Distribution Test	
Sha	piro Wilk Test Statistic	0.93	Shapiro Wilk Test Statis	tic 0.952
Sha	piro Wilk Critical Value	0.935	Shapiro Wilk Critical Val	ue 0.935
Data not Normal at 59	% Significance Level		Data appear Lognormal at 5% Significance L	evel
Assuming Norm	nal Distribution		Assuming Lognormal Distribution	
	95% Student's-t UCL	4.885	95% H-U	CL 4.90
95% UCLs (Adjus	sted for Skewness)		95% Chebyshev (MVUE) U	CL 5.33
95% Adjusted-	CLT UCL (Chen-1995)	4.894	97.5% Chebyshev (MVUE) U	CL 5.650
95% Modified	-t UCL (Johnson-1978)	4.888	99% Chebyshev (MVUE) U	CL 6.28
Gamma Distr	ribution Test		Data Distribution	
	k star (bias corrected)	19.29	Data appear Gamma Distributed at 5% Significan	ce Level
	Theta Star	0.238		
	MLE of Mean	4.593		
MLE	of Standard Deviation	1.046		
	nu star	1389		
Approximate	Chi Square Value (.05)	1303	Nonparametric Statistics	
Adjuste	ed Level of Significance	0.0428	95% CLT U	CL 4.87
	sted Chi Square Value	1299	95% Jackknife U	
			95% Standard Bootstrap U	
Anderso	n-Darling Test Statistic	0.537	95% Bootstrap-t U	
	arling 5% Critical Value	0.747	95% Hall's Bootstrap U	
	-Smirnov Test Statistic	0.117	95% Percentile Bootstrap U	
	irnov 5% Critical Value	0.147	95% BCA Bootstrap U	
Data appear Gamma Distribu	ited at 5% Significance	Level	95% Chebyshev(Mean, Sd) U	CL 5.34

Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL	6.311
95% Approximate Gamma UCL (Use when n >= 40)	4.895		
95% Adjusted Gamma UCL (Use when n < 40)	4.909		
Potential UCL to Use		Use 95% Approximate Gamma UCL	4.895

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and laci (2002) and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

ATTACHMENT E



April 11, 2013

Phone: (813) 881-9401

Email: Info@SunLabsInc.com

Website: www.SunLabsInc.com

Andrew Cadle PSI 5801 Benjamin Center Dr, #112 Tampa, FL 33634

Re: SunLabs Project Number: 130404.09
Client Project Description: A-2 FEB SPLP

Dear Mr. Cadle:

Enclosed is the report of laboratory analysis for the following samples:

Sa	mple Number	Sample Description	Date Col	lected	Date Received
	163830	Comp-7 012313	01/23/13	15:30	01/28/13
	163831	SPLP Leachate/163830 (Comp-7)	04/05/13	9:00	
	163832	Comp-12 012513	01/25/13	13:20	01/28/13
	163833	SPLP Leachate/163832 (Comp-12)	04/05/13	9:00	

Narrative:

Unless otherwise noted below or in the report and where applicable:

- Samples were received at the proper temperature and analyzed as received.
- Sample condition upon receipt is recorded on the chain-of-custody attached to this report.
- Results for all solid matrices are reported on a dry weight basis.
- Appropriate calibration and QC criteria were satisfactorily met.
- All applicable holding times for analytes have been met.
- Copies of the chains-of-custody, if received, are attached to this report.

Samples 163830 (Comp-7 012313) and 163832 (Comp-12 012513) were leached outside of hold time for Mercury. All other metals were leached within holding times.

If you have any questions or comments concerning this report, please do not hesitate to contact us.

Sincerely,

Michael W. Palmer

Vice President, Laboratory Operations

Enclosures

Unless Otherwise Noted and Where Applicable:

The results herein relate only to the items tested or to the samples as received by the laboratory • This report shall not be reproduced except in full, without the written approval of SunLabs • All samples will be disposed of within 60 days of the date of receipt of the samples • All results meet the requirements of the NELAC standards • Uncertainty values are available upon request



SunLabs Project Number

130404.09

PSI

Project Description
A-2 FEB SPLP

April 11, 2013

SunLabs Sample Number Sample Designation

163830

Comp-7 012313

Matrix

Soil

Date Collected

01/23/13 15:30

Date Received 01/28/13 13:20

Parameters	Method	Units	Results	Dil MD Factor	_ PQL	CAS Number	Date/Time Analyzed	Date/Time Prep	Analyst
Synthetic Precipitation Leaching F SPLP - Date Leached	Procedure 1312		04/05/13	1			04/05/13	04/05/13	REB



SunLabs Project Number

130404.09

PSI

Project Description

A-2 FEB SPLP

April 11, 2013

SunLabs Sample Number Sample Designation

163831

SPLP Leachate/163830 (Comp-7)

Matrix Date Collected SPLP Leachate 04/05/13 09:00

Date Received

Parameters	Method	Units	Results	Dil Fact	MDL or	PQL	CAS Number	Date/Time Analyzed	Date/Time A Prep	nalyst
Mercury										
Date Digested	7470		04/10/13						04/10/13 12:20	CLG
Date Analyzed	7470		04/11/13	1				04/11/13 14:27		CLG
Mercury	7470	ug/L	0.062 U	1	0.062	0.25	7439-97-6	04/11/13 14:27	04/10/13 12:20	CLG
RCRA Metals										
Date Digested	3005		04/10/13						04/10/13 14:45	CLG
Date Analyzed	6010		04/10/13	1				04/10/13 23:18		CAM
Chromium	6010	ug/L	3.5 U	1	3.5	14	7440-47-3	04/10/13 23:18	04/10/13 14:45	CAM
Selenium	6010	ug/L	2.3 U	1	2.3	9.2	7782-49-2	04/10/13 23:18	04/10/13 14:45	CAM



SunLabs Project Number 130404.09 PSI
Project Description
A-2 FEB SPLP

April 11, 2013

SunLabs Sample Number 1 Sample Designation C

163832

Comp-12 012513

Matrix

Soil

Date Collected

01/25/13 13:20

Date Received

01/28/13 13:20

Parameters	Method	Units	Results	Dil Factor	 PQL	CAS Number	Date/Time Analyzed	Date/Time Analyst Prep
Synthetic Precipitation Leaching	<u>Procedure</u>							
SPLP - Date Leached	1312		04/05/13	1			04/05/13	REB



SunLabs Project Number

PSI

Project Description

130404.09 A-2 FEB SPLP

April 11, 2013

SunLabs Sample Number Sample Designation

163833

SPLP Leachate/163832 (Comp-12)

Matrix Date Collected

SPLP Leachate 04/05/13 09:00

Date Received

Parameters	Method	Units	Results	Dil Fact	MDL or	. PQL	CAS Number	Date/Time Analyzed	Date/Time A Prep	nalyst
Mercury										
Date Digested	7470		04/10/13						04/10/13 12:20	CLG
Date Analyzed	7470		04/11/13	1				04/11/13 14:29		CLG
Mercury	7470	ug/L	0.062 U	1	0.062	0.25	7439-97-6	04/11/13 14:29	04/10/13 12:20	CLG
RCRA Metals										
Date Digested	3005		04/10/13						04/10/13 14:45	CLG
Date Analyzed	6010		04/10/13	1				04/10/13 23:21		CAM
Chromium	6010	ug/L	18	1	3.5	14	7440-47-3	04/10/13 23:21	04/10/13 14:45	CAM
Selenium	6010	ug/L	2.3 U	1	2.3	9.2	7782-49-2	04/10/13 23:21	04/10/13 14:45	CAM



SunLabs Project Number

130404.09

PSI

Project Description

A-2 FEB SPLP

April 11, 2013

Footnotes

**	SunLabs is not currently NELAC certified for this analyte.
1	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J	The reported value failed to meet the established quality control criteria for either precision or accuracy(see cover letter for explanation)
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MB	Method Blank
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Sample not analyzed at client's request.
Q	Sample held beyond the accepted holding time.
RPD	Relative Percent Difference
U	Compound was analyzed for but not detected.
U,Q	Compound was analyzed for but not detected. Sample was analyzed beyond the accepted holding time.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
Υ	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies were present (TNTC); the numeric value represents the filtration volume.



Quality Control Data

Project Number
PSI

130404.09

Project Description
A-2 FEB SPLP

April 11, 2013

Batch No: Test: TestCode:	F1460 Mercury									ssociateo 63831, 1	d Samples 63833	5				
Compound		Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	QC L RPD	imits LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	QC I RPD	_imits MS	Dup RPD	Qualifiers
Parent Sample Number Date Digested		04/10/13								163831	163831					
Date Analyzed		04/11/13														
Mercury		0.062 U ug/L	5.0	93	97	4	20	80-120	5.0	94	97	3	20	75-125		
Batch No:	F1463									ssociate: 63831, 1	d Samples	S				
Test:	RCRA Met	als								0000171	00000					
TestCode:	RCRA-7-w-ug/L															
Compound		Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	QC L RPD	imits LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	QC I RPD	_imits MS	Dup RPD	Qualifiers
Parent Sample Number										163833	163833					
Chromium		3.5 U ug/L	1000	100	98	2	20	80-120	1000	97	96	1	20	75-125		
Selenium		2.3 U ug/L	1000	95	95	0	20	80-120	1000	97	96	1	20	75-125		

 $^{^{\}star}$ indicates value is outside control limits for %Recovery or greater than acceptance criteria for RPD

Footnotes

Compound was analyzed for but not detected.

													•	Pa	1	3		
			S	SunLat	os, Inc.	. Ch	ain	of	Cus	stod	ly	13	04	for	}	29	Nº	27507
Client Name:	PSI.				Project						ot				. , -	Project Name:	$r \sim \overline{\Lambda}_1$	37587 -€ <i>b</i>
Contact:	Drew Cad	Se	Ī	Bottle Type	e	3	3	5	5	3						Project #:		गाप
Address:				Preservativ		1	7	l	1	7						PO #:		
			Ţ	Matrix		50	50	50	50	50						Alt Bill To:		
Phone / Fax:	- Neve	~ 	Γ	Analysis	/ Method				,	35		1						
E-Mail:	0, 10		1	Requ	ested	808	814	5	20	4 8		8	\$					
						8		815	94	3// 3//		EM 8081,	84		.	Due Date Requ	ested*:	
SunLabs	Sample Description		Samp	oled	# of	£44	\$		30	150		<u>क</u>	#	1	.			
Sample #		D	ate	Time	Bottles	W	<u>u</u>	密	\dot{w}	179		中	T			FDEP Pre	Approval site	
159670	COMD-15 012213	1-2	243	1355	3	X	X	X	X	X						ADaPT ED	D (PGM:)
	COMO 15 SO RF		[I						ليبا		$oxed{oxed}$				Facility/Site ID:		
1501	30mp-2 012213	/-2;	543	1545	3	X	X	X	X	\mathbf{X}						Remarks / Com	ments:	
1072	COMP-27 012213	V-20	73	1710	3	X	$ \mathbf{x} $	X	א	LX.						7 /	lore	
1073	COMP-14 012213	1-2	2/3	1330	3_	X	X	X	X	$ \mathbf{X} $						3 Coo ADap	1613	
1074	Comp-13 012213	/-2:	743	1500	_3_	X	X	X	X	X.						45 ~		
1035	Comp-9 012213	1-2	<u> 43</u>	1700	3	X	X	X	X.	X	Ш					ADay	(EDD	'
1070	COMP-9 DUP OIZE	213 1-2	543	1700	3	X	X	X,	LX.	لكها								
1074	Comp-22 01231	3 1-2	<u>H3</u>	1115	3_	X	X	X	X	X								
1076	Como-28 01231	3 1/-2	3/3	1240	3	X	X	X	X .	X	<u> </u>							
1042	Comp-16 01231	3 <i>1-</i> 2	<u>3-/3</u>	1400	3	X	X.	X	X	X	_							
680	Comp-17 012313	<u>/-2</u>	3/3	1545	3	X	X	X	X	X								
1001	COMO-10 012313	3 /	3-13	1720	-3	X	K	X	X	4	Щ.					Length of Recor		
14801	COMD-3 012313	11-2	3/3	1100	_3	LX_	ĻĂ	X	LX					ليا		other than 5 yea		
Sampler Signature	<i> _ </i>	Printed Name / /	Affiliation	/_				SU								T TO BILL FOR		
Mra tel	6/1-28-13	Ripu L	oth	e//D	SI			_ :				VED S				TO RETURN U	~	
10 7 - 7 - 1		1401		- / 				Relir	teiupr	ed B	y:			Rein	guish	ed To:	Date:	Time:
Bottle Type Codes:		Preservative Codes:						14	1/2	_				01	me.	#115	11-17-13	115.00
GV = Glass Viel	GVS = Low Level Volstile Kit	H = Hydrochloric Acid	a + ice	S = Sulfuric				<u> </u>	VV			~		Dolin.		od To:	'	Time
GA = Glass Amber	T = Tedlar Bag	I = Ice only			04, MeOH, +			Keii!	nguist	100 0	144		-	Kellow L/	quisti •	ed To:	Date:	Time:
P = Plastic	O = Other (Specify)	N = Nitric Acid			thiosulfate +	ice		K	10	~ ヲ		ገ		1/3	L		1-28-13	13.20
S = Soil Jar Matrix Codes:	SO = Soil SOL = Soild	B = Sodium bisulfate Internal Use Only	+ ICE	O = Other (5	opecity)			Refi	// nguist		<u> </u>			Relin	طعني	ed To:	Date:	Time:
A = Air	SO = Soil SOL = Soild SW = Surface Water	Semple Condition Up	on Rece	int:				i veill	441121	100 D	y.			ACIII)	daisi.	eu IV.	Date.	1 # HO.
DW = Drinking Water	WS = Waste WW = Waste Water	Custody Seals prese			Y /(N) NA]	l i
GW = Ground Water	W = Water (Blanks)	Custody Seels intact			Y / (N) / NA	I		Reli	nquisi	ned R	V:			Relin	Quish	ed To:	Date:	Time:
SE = Sediment	O = Other (Specify:)	Shipping Bills attach			Y /(N) NA				. 4 a.a.		•				4	• - •		
Internal Use Only	/ >	Sample containers in			(D) H / NA			l						l				
Temp upon	receipt: 4.0 °C	Samples within holdi	ng times:		9/ N / NA						-			Si	unLs	bs, Inc.	·	
	A	Sufficient volume for	all analy	7000? (9/ N / NA					546	0 Bea			nter B	lvd., :	Suite 520, Tamp		34
Received o	on Ice? Y / N / NA	Are vists head-space	free?	`	Y / N / (PG))		A				Pho	ne: 81	13-881	1-940	1 / Fax: 813-354	-466 1	
	\cup	Proper containers an	d preser		7) N / NA			ll			o- ma	и. нпто	യ്മാവ	ILADS	siric.C	om www.Sun	Lausinc.com	! ,

Pg 2 23 3

		!	SunLal	bs, Inc	Ch	ıain	of Cust	ody	120	400	109	1	Nº :	37586
- 11	091			-		13	YH7	501	10	, -	• -	-	$\sqrt{\Lambda}$	
Client Name:	F31			s Project	*	سد. است	7171	\mathcal{Y}	<u> </u>		Proj	ject Name:		
Contact:	- Drew Cad	<u>ll</u>	Bottle Type		121	121	\$ 	> ┤┼		┝╼┼╴		Project #:	(J)	7111
Address:			Preservati	ive	 	1	11:11	/_ }}	-			PO #:		
			Matrix		150	50	<u> 50 50 5</u>	2		┝╼┼	┥ '	Alt Bill To:		
Phone / Fax:				/ Method		121	-Lad.	žä	1 1]			
E-Mail :			Requ	uested	808	318	Boot	63			<u> </u>			
		·			_	7 . I	0022	24			Due [Date Reque	ested*:	
SunLabs	Sample Description	 	npled	# of	母	杏	ECI2	£2			-			
Sample #	-	Date	Time	Bottles	拉	出	10/3 A	31 -1				-	Approval site	
1591093	COMP-1012313	1-23-13	1340	3	لكبل	١X١	ΧΙζΙ	للك			—4/ `	ADaPT EDI	D (PGM:	
1 604	Comp-7 012313	1-23-13	1530	3	X	الكما	XIX	X			~	ity/Site iD: _		
1 685		313 1-23-13	1530	3	TX.	LX.	XIXL	X		\perp	Rema	arks / Comr	ments:	1
080	COMD-8 012313	1-23-13	1725	13	X	X	XIXI	<u> </u>		$oxed{oxed}$	<u>ا</u> م		1	
1687	COMD-11 012413	1-24-13	1145	3	X	X	XX	\mathbf{X}		$oldsymbol{ol}}}}}}}}}}}}}}}}}}$	山 さ	S Coa	olers	
6801	Como-23 012413	1-24-13	1330	3	$\perp X$	للال	XXX				- 1			
1689	Comp-29 012413	1-74-13	1610	3	X	IX.	XX	X.			A	DaPI	EDA	١
1090	COMP-24 012413	1-24-13	M30	3	X	X	KIKI	X						
691	Como-4 012413	1-24-13	1150	3	X	X	XXX	2	لسلت		12 1 K	PLP (?r.Hq.	se.
692	COMO-4 DUP 0124	413 1-24-13	1150	3	X	X	XX	X				-, -	ر ا ن	41.6/12
643	COMO-20 012413	1-24-13	1400	3	X	X	XX	X						כיודני
694	COMD-26 012413	<i>Ŀ</i> `} <i>H</i> 3'	1630	3	IX	X	XX	X						
1695	COMO-19 012413	5 1-24-13	1800	3	X	X	XX	X			Leng	th of Recon	rd Retention if	
6910	COMO-30 01251	3 12513	1020	3	X	X	XX	X			other	than 5 yea	irs:*	
Sampler Signatur	e / Date:/	Printed Name / Affiliat	tion:	_		7	SUNLABS	S, INC. RE	SERVES	THER	IGHT TO	BILL FOR	DISPOSAL C	F UNUSED/
Dun-	2011-28-13	Ruga Fet	1/ 1/	057	~	1	UI	NRETURN	NED SAME	PLES A	ND TO R	ETURN UN	NUSED SAMP	ŁES.
Carrie 1	my ~ ~ ·	Dyan Her	ter /	سيس	·		Relinquishe	ed By:		Reling	uished To	p: /	Date:	Time:
Bottle Type Codes:		Preservative Codes:					h	-	,	1		H	1-17-13	15:00
GV = Glass Viai	GVS ≈ Low Level Volatile Kit	H = Hydrochloric Acid + Ice	S = Sulfuric	c Acid + loe		- 1	VVV	70	<u> </u>	M	az	<i>100</i>	11 17 17	دا
GA = Gless Amber	T = Tedlar Bag	I = Ice only	VS = NaHS	504, MeOH, +	+ lce		Relinquishe	d By:		Relinq	uished To	رزد	Date:	Time:
P = Plastic	O ≈ Other (Specify)	N = Nitric Acid	T = Sodium	n thiosulfate +	ice		d/a	144	A	19	11		1-27-17	17:20
S≃ SoliJan		B = Sodium bisulfate + Ice	O = Other ((Specify)			UNIT	gu		1/3	· w		1 -13	15.20
Matrix Codes:	SO = Soil SOL = Solid	internal Use Only					Relinquishe	ed By:		Relinq	uished To	o :	Date:	Time:
A = Air	SW = Surface Water	Sample Condition Upon Rec		_			l					1		}
DW = Drinking Water	WS = Waste WW = Waste Water	Custody Seals present?		Y 1(H)1 NA	Ą	-				<u> </u>]		<u>l</u>
GW = Ground Water	W = Water (Blanks)	Custody Seels intact?		Y/N/16	9	,	Relinquishe	ed By:		Relinq	uished To	0:	Date:	Time:
SE = Sediment	O = Other (Specify:)	Shipping Bills attached?		Y /A) M	Ā		ł					ļ		
Internal Use Only	60	Sample containers intact?	(QINIM	A	Ì				<u> </u>				1
Temp upor	n receipt:	Samples within holding times	m? ((Y) / H / NA	A					Su	nLabs, I	Inc.		
	<u>~</u>	Sufficient valume for all anal	Jyses? ((7) N / NA	_		A	5460 Bea					a, Florida 336	34
Received of	on Ice?(´Y)/N/NA	Are vials head-space free?		Y/N (N	•	1	A	e-mai				ax: 813-354 www.Sunt	l-4661 Labsinc.com	Į
		Proper containers and press	arvatives? (MINIE	A		A			11 IEUDO1		www.cum		

													P	9	ろ	9	3		
				;	SunLal	os, Inc	. Ch	ain	of	Cus	tod	y ob	1	3 3)4	04		Nº :	37585
Client Name:	PSI		^		SunLabs	Project	#	1	30	512	25	0.	6				Project Name:	A-a Fe	6
Contact	Dren	Jac	Le		Bottle Typ	е	5	5	5	S	١٤		3A	6 A	GK.	2	Project #.	0552	1114
Address:					Preservati	ve	1			1	\Box						PO#:		
		a ele			Matrix		60	50	50	50	50		W	W	M	W	Aft Bill To:		
Phone / Fax:	-	15			Analysis	/ Method	_	-	7.	1	E		8		77				
E-Mail :					Requ	ested	808	814	815	200	33		8	814	876	0	Due Date Requ	ested*:	
SunLabs	Sa	mple Description		San	pled	# of	17	1 1	7	₩ 8	42	ŀ	X	4	T.	28			l
Sample #		-		Date	Time	Bottles	B	盘	B	4	159		4	B	B	动	FDEP Pre	Approval site	
15969F	COMD-18	0/25/3		1-25-13	1150	3	X	X	X	X	X						ADaPT ED		
1 (098	COMO-12		*	1-25-13	1320	3	X	ズ	X	X	又						Facility/Site ID:		
699	Comp-6			1-25-13	1430	3	X	X	X	X	X						Remarks / Com	ments:	
700	COMO-ZE	012513		1-25-13	1030	3	X	X	X	X	X							1 -	Ì
701	Como-2	012513		1-25-13	1215	3	X	X	X	X	X						3 co	slevs	ļ.
702	Como-=	012513		1-25-13	1330	3	X	X	X	X	X							~ N	
402	Eawo B	lank-1		1-22-13	1130	4							X	X	X	X	3 con ADAP	T EDL	'
704	FCEB -	- ス		1-23-13	1735	4							X	X	X	X	1,101	-	į
V 405	FCEB- !	3		1-2413	1015	4					L		X	Δ	X.	X	SPUP (- 11.	\mathbb{C}_{α} .
															·	/)	\square	-C149,0	2 } (
		·		L													}	0	414113 1
		·					<u> </u>		L			\sqcup							
				ļ			 										Length of Reco		1
				<u></u>			<u> </u>				ليا	ليا		ليا			other than 5 year		
Sampler Signatur			Printed Nar	me / Affiliat	1				SU		•						IT TO BILL FOR		1
Deni-	11-	-28-13	Kyan	^ Let	te//	PSI	-						(ED :				TO RETURN U		
DO TO TO THE TOTAL OF THE TOTAL	100				<u> </u>				Ken	nquisi	ned B	y:			Kell	Jaulsr	ned To:	Date:	Time:
Bottle Type Codes: GV = Glass Vial	CVP - 1 1 -	vel Volstile Kit	Preservative C		C _ C	Anid a tee			11/2	X	W	-			K	ye	fell	11-17-13	15:00
GV = Glass Vier GA = Glass Amber	T = Tedler Bas		H = Hydrochio I = ice only	HIC ACID + ICE	S = Sulfurio	: ACID + ICB O4, MeOH, +	los.		Reli		ned B	, 			Reli	Vilie!	hed To:	Date:	Time:
P = Plastic	O = Other (Sp		N = Nitric Acid	,		thiosulfate +			//	Julio 3	يرد	A		-	- Co	7,			l
S = Soil Jar	o - ouer (ap	· · · · · · · · · · · · · · · · · · ·	B = Sodium bi		O = Other (•	VX	12	40		`			ŊĊ	111	1-28-13	13.20
Metrix Codes:	SO = Soil S	OL = Solid	Internal Use C		C - Outet (Rem	hauisi	hed B	v:			Reli	nauist	hed To:	Date:	Time:
A = Air	SW = Surface W		Semale Condi	tion Upon Rec	eiot:					. 7 5		•		ļ		7			1
DW = Drinking Water		/W = Waste Water	Custody Seals		_	Y / (1) M	ı.											1	
GW = Ground Water	W = Water (Blan		Custody Seals	•		Y / N / W	l		Relin	nquisi	hed B	y:			Reli	nquist	hed To:	Date:	Time:
SE = Sediment	O = Other (Spec	-	Shipping Bills attached? Y / NA						1	•		-						1	
Internal Use Only	ntermal Use Only Sample containers intact?							<u></u>											
Temp upor	n receipt: 💆	. . °C	Semples withi	n holding time	,	9/ H / NA									S	unL	abs, Inc.		
Sufficient volume for all analyses?										546	O Bea			nter E	3lvd.,	Suite 520, Tamp		34	
Received of	on Ice? (Y)	/ N / NA	Are vists heed	l-space free?		YINI	-					e-mai					01 / Fax: 813-35 com www.Sun		
			Proper contain	ners and press	rvatives? (3 N / NA													

ATTACHMENT F

Mean Concentrations and Standard Deviation for Detected Chemicals of Interest

PROJECT NAME: A-2 Flow Equalization Basin

PSI PROJECT NO.: 05521114

	Chlorinated Herbicides (ug/kg)	C	OPPs (ug/kg)	OCPs (ug/kg)				M	etals (mg/k	g)				TOC (mg/kg)
	D, 2-4'	Atrazine	Metribuzin	Phorate	Dieldrin	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Total Organic Carbon
Mean Concentration	30.75	333.2	172.6	7.97	1.53	4.59	95.12	0.00	15.53	77.29	6.24	0.12	2.58	NA	401,056
Standard Deviation	2.48	832.6	366.8	24.48	1.54	1.04	9.20	0.00	5.79	12.47	0.74	0.02	0.40	NA	64,198

ATTACHMENT G

																			5					
							5							u c			ŵ		th,					
						Ρ̈́	eth							Ţ.	٠,		oho		Ž				vo.	
						重	Ĕ						_	ou ou	e,	, g	jn j	fos	fos	E		SOL	phos	
			ပ္	_	Je	Soc	Sot	_	٠.	٨	+	_	μn	bhe	lan	an	en	rpyri	yri	iur	_	apk	кур	
		Ë	en	pod	azi	l du	ld l	. <u>≒</u>	ပိ	ΰ	ن	sta	E E	oq	orc	ord	orf	orp	orp	Jour	edc	Ĕ	ĝ	4,
Sample ID	Date Collected	Ad	Ars	Asp	Atra	Azi	Aziı	Bar	H H	H.	¥	B	Сас	Çar	당	l h	당	당	딩	Chr	ပ်	ပ်	င့်	0,3
SCTL-RDE		0.06	2.1	***	4.3	***	120	120	0.1	0.5	24	***	82	11	2.8	2.8	***	250	***	210	150	21	***	770
SCTL-LGW		0.2	***	***	0.06	***	0.2	1600	0.0003	0.001	0.2	***	7.5	13	9.6	9.6	***	15	***	38	***	0.3	***	0.7
SCTL-LSW		0.01	***	***	0.04	***	0.0002	***	0.0003	0.003	***	***	***	1.5	0.003	0.003	***	0.001	***	4.2	***	0.0007	***	0.9
SQAG-TEC		***	9.8	***	0.0003	0.000018	0.000062	20	***	***	***	***	1	***	0.0032	***	***	***	***	43	85	***	***	***
Comp-1 012313	1/23/2013	0.00014 U	6.8	0.011 U	0.099 I	0.036 U	0.024 U	110	0.00080 U	0.00085 U	0.00064 U	0.022 U	0.11 U	0.011 U	0.0013 U	0.0033 U	0.020 U	0.033 U	0.022 U	19	110	0.031 U	0.031 U	0.058 U
Comp-10 012313	1/23/2013	0.00013 U	4.9	0.011 U	0.025 U	0.036 U	0.023 U	95	0.00079 U	0.00084 U	0.00062 U	0.021 U	0.11 U	0.011 U	0.0012 U	0.0032 U	0.020 U	0.032 U	0.021 U	12	68	0.030 U	0.030 U	0.057 U
Comp-11 012413	1/24/2013	0.00015 U	3.6	0.012 U	0.027 U	0.039 U	0.025 U	98	0.00086 U	0.00092 U	0.00069 U	0.024 U	0.11 U	0.012 U	0.0014 U	0.0035 U	0.022 U	0.035 U	0.024 U	15	79	0.033 U	0.033 U	0.063 U
Comp-12 012513	1/25/2013	0.00015 U	3.8	0.012 U	0.027 U	0.039 U	0.025 U	100	0.00086 U	0.00092 U	0.00069 U	0.024 U	0.11 U	0.012 U	0.0014 U	0.0035 U	0.022 U	0.035 U	0.024 U	13	87	0.033 U	0.033 U	0.063 U
Comp-13 012213	1/22/2013	0.00014 U	6.2	0.011 U	0.110 I	0.037 U	0.024 U	100	0.00081 U	0.00087 U	0.00065 U	0.022 U	0.15 l	0.011 U	0.0013 U	0.0033 U	0.020 U	0.033 U	0.022 U	29	90	0.031 U	0.031 U	0.059 U
Comp-14 012213	1/22/2013	0.00014 U	5.5	0.011 U	0.026 U	0.038 U	0.025 U	80	0.00083 U	0.00089 U	0.00066 U	0.023 U	0.18 I	0.011 U	0.0013 U	0.0034 U	0.021 U	0.034 U	0.023 U	16	68	0.032 U	0.032 U	0.060 U
Comp-15 012213	1/22/2013	0.00016 U	3.4	0.013 U	3.5	0.043 U	0.028 U	87	0.00096 U	0.0010 U	0.00076 U	0.026 U	0.12 l	0.013 U	0.0015 U	0.0039 U	0.024 U	0.039 U	0.026 U	7.8	75	0.037 U	0.037 U	0.29
Comp-16 012313	1/23/2013	0.00012 U	4	0.0098 U	0.33	0.033 U	0.021 U	91	0.00072 U	0.00077 U	0.00057 U		0.096 U	0.0098 U	0.0011 U	0.0030 U	0.018 U	0.030 U	0.020 U	23	96	0.028 U	0.028 U	0.052 U
Comp-17 012313	1/23/2013	0.00014 U	3.8	0.011 U	0.160 I	0.038 U	0.025 U	99	0.00083 U	0.00089 U	0.00066 U	0.023 U	0.12 U	0.011 U	0.0013 U	0.0034 U	0.021 U	0.034 U	0.023 U	17	85	0.032 U	0.032 U	0.060 U
Comp-18 012513	1/25/2013	0.00015 U	3.4	0.012 U	3.3	0.039 U	0.025 U	97			0.00069 U		0.11 U	0.012 U	0.0014 U	0.0035 U	0.022 U	0.035 U	0.024 U	11	88	0.033 U	0.033 U	0.94
Comp-19 012413	1/24/2013	0.00013 U	5.5	0.010 U	0.024 U	0.034 U	0.022 U	88	0.00076 U	0.00081 U	0.00060 U	+	0.11 U	0.010 U	0.0012 U	0.0031 U	0.019 U	0.031 U	0.021 U	17	59	0.029 U	0.029 U	0.055 U
Comp-2 012513	1/25/2013	0.00015 U	5.2	0.012 U	0.029 U	0.041 U	0.027 U	93			0.00071 U	+	0.11 U	0.012 U	0.0014 U	0.0037 U	0.022 U	0.037 U	0.024 U	15	59	0.035 U	0.035 U	0.065 U
Comp-20 012413	1/24/2013	0.00013 U	5	0.011 U	0.025 U	0.036 U	0.023 U	90			0.00062 U	+	0.10 U	0.011 U	0.0012 U	0.0032 U	0.020 U	0.032 U	0.021 U	14	70	0.030 U	0.030 U	0.057 U
Comp-21 012213	1/22/2013	0.00012 U	3.5	0.0097 U	0.055 I	0.032 U	0.021 U	69	0.00071 U		0.00056 U	0.019 U	0.17 I	0.0097 U	0.0011 U	0.0029 U	0.018 U	0.029 U	0.019 U	9.4	79	0.027 U	0.027 U	0.052 U
Comp-22 012313	1/23/2013	0.00015 U	4.3	0.012 U	0.027 U	0.039 U	0.025 U	100	0.00086 U		0.00069 U	0.024 U	0.16 l	0.012 U	0.0014 U	0.0035 U	0.022 U	0.035 U	0.024 U	12	83	0.033 U	0.033 U	0.063 U
Comp-23 012413	1/24/2013	0.00014 U	4.2	0.011 U	0.026 U	0.037 U	0.024 U	82			0.00065 U		0.11 U	0.011 U	0.0013 U	0.0033 U	0.020 U	0.033 U	0.022 U	13	59	0.031 U	0.031 U	0.059 U
Comp-24 012413	1/24/2013	0.00015 U	4.1	0.012 U	0.028 U	0.040 U	0.026 U	99			0.00070 U		0.14	0.012 U	0.0014 U	-	0.022 U	0.036 U	0.024 U	28	82	0.034 U	0.034 U	0.064 U
Comp-25 012513	1/25/2013	0.00014 U	6.4	0.011 U	0.031 I	0.036 U	0.024 U	100			0.00064 U		0.11 U	0.011 U	0.0013 U	0.0033 U	0.020 U	0.033 U	0.022 U	19	67	0.031 U	0.031 U	0.058 U
Comp-26 012413	1/24/2013	0.00013 U	5.5	0.011 U	0.025 U	0.036 U	0.023 U	98	0.00079 U		0.00062 U	0.021 U	0.11 U	0.011 U	0.0012 U	0.0032 U	0.020 U	0.032 U	0.021 U	17	78	0.030 U	0.030 U	0.057 U
Comp-27 012213	1/22/2013	0.00016 U	3.5	0.013 U	0.035 I	0.043 U	0.028 U	89	0.00096 U		0.00076 U		0.12 U	0.013 U	0.0015 U	0.0039 U	0.024 U	0.039 U	0.026 U	9.1	74	0.037 U	0.037 U	0.070 U
Comp-28 012313	1/23/2013	0.00014 U	3.1	0.011 U	0.19	0.036 U	0.024 U	83			0.00064 U		0.14	0.011 U	0.0013 U	0.0033 U	0.020 U	0.033 U	0.022 U	26	69	0.031 U	0.031 U	0.058 U
Comp-29 012413	1/24/2013	0.00017 U	4.3	0.014 U	0.033 U	0.047 U	0.030 U	86	0.0010 U		0.00081 U		0.14 U	0.014 U	0.0016 U		0.026 U	0.042 U	0.028 U	7.2	60	0.040 U	0.040 U	0.074 U
Comp-3 012313	1/23/2013	0.00015 U	4.3	0.012 U	0.029 U	0.041 U	0.027 U	91	0.00090 U		0.00071 U		0.11 U	0.012 U	0.0014 U	0.0037 U	0.022 U	0.037 U	0.024 U	16	82	0.035 U	0.035 U	0.065 U
Comp-30 012513	1/25/2013	0.00015 U	3.2	0.012 U	0.027 I	0.039 U	0.025 U	96	0.00086 U	0.00092 U		0.024 U	0.12 U	0.012 U	0.0014 U	0.0035 U	0.022 U	0.035 U	0.024 U 0.024 U	21	100	0.033 U	0.033 U	0.063 U
Comp-4 012413 Comp-4 DUP 012413	1/24/2013 1/24/2013	0.00015 U	4.7 4.1	0.012 U	0.029 U 0.033 U	0.041 U 0.047 U	0.027 U 0.030 U	95 93	0.00090 U		0.00071 U	+	0.12 U	0.012 U	0.0014 U	0.0037 U	0.022 U	0.037 U 0.042 U	0.024 U	5.6 6.8	91 80	0.035 U	0.035 U 0.040 U	0.065 U 0.074 U
		0.00017 U		0.014 U							0.00081 U		0.14 U	0.014 U	0.0016 U		0.026 U			15	53	0.040 U	0.040 U	
Comp-5 012513 Comp-6 012513	1/25/2013 1/25/2013			0.012 U	0.027 U 0.030 U	0.039 U 0.043 U	0.025 U 0.028 U	94 110	0.00086 U			0.024 U 0.026 U	0.11 U		+	0.0035 U 0.0039 U			0.024 U	18	75	0.033 U 0.037 U		0.063 U
Comp-7 012313	1/23/2013	0.00018 U	6.4	0.013 U	0.030 U	0.043 U	0.028 U	97			0.00076 U		0.12 U			0.0039 U	0.024 U	0.039 U	0.020 U	20	75	0.037 U	0.037 U	
Comp-7 012313	1/23/2013	0.00013 U		0.011 U		0.036 U	0.023 U 0.024 U	97			0.00062 U		0.10 U			0.0032 U		0.032 U	0.021 U	19	74	0.030 U	0.030 U	
Comp-8 012313		0.00014 U	3.8	0.011 U	1.1	0.038 U	0.024 U	96			0.00064 U		0.11 U			0.0035 U		0.035 U	0.022 U	14	87	0.031 U	0.031 U	
Comp-9 012213		0.00014 U		0.012 U		0.038 U		92			0.00067 U		0.12 U			0.0035 U			0.023 U	13	67	0.033 U	0.033 U	
Comp-9 DUP 012213	1/22/2013			0.012 U			0.023 U				<u> </u>	0.024 U				0.0033 U			0.024 U	17	65	0.038 U		0.200 I
00.11p 0 DOI 012210	1,22,2010	3.00017 0	0.0	0.0100	0.77	0.0 ++ 0	0.020 0		3.00000	0.00100	3.55575 0	0.027 0	J. 1 7 J	0.0100	0.00100	0.0040 0	0.02-7-0	0.0400	0.027 0			0.000 0	0.000	3

									_										ate					
						S			jor									_	in in it		yde	Φ		1
			l .						ent	do	တ္သ	sot		Ite		_	an I	au I	an 8		aldehy	tou		1
		4-	4,	4,4	4,4	ton	uou	ppa	ro	rp.	Ž	do	.⊑	hoa	Q	oto	ing griffe	l gil	ng galle	_		ر ke		1 - 1
		, 2,	ρ̈́	Щ,	Ĭ, ,	me	azin	gam) is	jë) ly	rot	声	met	Sou	l	စို	ğ	δορ	dri	drin	dri	z	hior
Sample ID	Date Collected	DB			DC	De	ρί	ă	ĕ	ă	ĕ	ă	ğ	آة	ة ا	ĕ	En	ᇤ	En	Ē	En	Ë	Ш	
SCTL-RDE		***	4.2	2.9	2.9	***	70	2300	***	***	0.3	7.4	0.06	13	65	3.3	***	***	***	25	***	***	0.8	42
SCTL-LGW		***	5.8	18	11	***	0.2	2.6	***	***	0.0006	0.005	0.002	0.006	0.03	0.09	***	***	***	1	***	***	0.02	1.7
SCTL-LSW SQAG-TEC		***	0.01	0.04	0.06 0.0042	***	0.00005 0.00038	2.4	***	***	0.00002	0.1	0.0001 0.0019	0.0004	0.03	0.1	***	***	***	0.001 0.0022	0.0011	***	0.003	0.003
Comp-1 012313	1/23/2013	0.016 U	0.00053 U	0.0032 0.0024 U	0.0093 U	0.040 U	0.0055 U	0.036 U	0.0036 U	0.013 U	0.022 U	0.024 U	0.0013 0.0017 U	0.016 U	0.0042 U	0.038 U	0.0017 U	0.00024 U	0.00069 U	0.00022 0.00062 U	0.0033 U	0.0013 U	0.020 U	0.024 U
Comp-10 012313	1/23/2013	0.016 U	0.00052 U			0.039 U	0.025 U	0.036 U	0.0036 U	0.013 U	0.021 U	0.023 U	0.0045 I	0.016 U	0.0041 U	0.038 U	0.0016 U	+				0.0013 U	0.020 U	0.023 U
Comp-11 012413	1/24/2013	0.017 U	0.00057 U	0.0025 U	0.010 U	0.043 U	0.027 U	0.039 U	0.0039 U	0.014 U	0.024 U	0.025 U	0.0018 U	0.018 U	0.0045 U	0.041 U	0.0018 U	0.00025 U	0.00075 U	0.00067 U	0.0035 U	0.0014 U	0.022 U	0.025 U
Comp-12 012513	1/25/2013	0.017 U	0.00057 U	0.0025 U	0.010 U	0.043 U	0.027 U	0.039 U	0.0039 U	0.014 U	0.024 U	0.025 U	0.0018 U	0.018 U	0.0045 U	0.041 U	0.0018 U	0.00025 U	0.00075 U	0.00067 U	0.0035 U	0.0014 U	0.022 U	0.025 U
Comp-13 012213	1/22/2013	0.016 U	0.00054 U		0.0094 U	0.041 U	0.026 U	0.037 U	0.0037 U	0.013 U	0.022 U	0.024 U	0.0017 U	0.017 U	0.0043 U	0.039 U	0.0017 U			0.00063 U	0.0033 U	0.0013 U	0.020 U	0.024 U
Comp-14 012213	1/22/2013	0.017 U	0.00055 U			0.042 U	0.026 U	0.038 U	0.0038 U	0.013 U	0.023 U	0.025 U	0.0017 U	0.017 U	0.0043 U	0.040 U	0.0017 U	+	0.00072 U			0.0014 U	0.021 U	0.025 U
Comp-15 012213	1/22/2013	0.019 U		0.0028 U	-	0.048 U	0.030 U	0.043 U	0.0043 U	0.015 U	0.026 U	0.028 U	0.0049 I	0.020 U	0.0050 U	0.046 U			0.00083 U			0.0016 U	0.024 U	0.028 U
Comp-16 012313 Comp-17 012313	1/23/2013 1/23/2013	0.014 U 0.017 U	0.00048 U	0.0021 U 0.0025 U	_	0.036 U 0.042 U	0.023 U 0.026 U	0.033 U 0.038 U	0.0033 U 0.0038 U	0.012 U 0.013 U	0.020 U 0.023 U	0.021 U 0.025 U	0.0051 I 0.0017 U	0.015 U 0.017 U	0.0038 U 0.0043 U	0.034 U 0.040 U	0.0015 U 0.0017 U		0.00062 U 0.00072 U			0.0012 U 0.0014 U	0.018 U 0.021 U	0.021 U 0.025 U
Comp-18 012513	1/25/2013	0.017 U		0.0025 U	0.0096 U	0.042 U	0.026 U	0.038 U	0.0038 U	0.013 U	0.023 U	0.025 U	0.0017 U	0.017 U	0.0045 U	0.040 U			0.00072 U			0.0014 U	0.021 U	0.025 U
Comp-19 012413	1/24/2013	0.017 U	0.00050 U			0.038 U	0.024 U	0.034 U	0.0034 U	0.014 U	0.024 U	0.022 U	0.0016 U	0.016 U	0.0040 U	0.036 U			0.00076 U			0.0014 U	0.019 U	0.022 U
Comp-2 012513	1/25/2013	0.018 U		0.0027 U		0.045 U	0.029 U	0.041 U	0.0041 U	0.014 U	0.024 U	0.027 U	0.0019 U	0.018 U	0.0047 U	0.043 U	0.0019 U		0.00078 U			0.0015 U	0.022 U	0.027 U
Comp-20 012413	1/24/2013	0.016 U	0.00052 U	0.0023 U	0.0091 U	0.039 U	0.025 U	0.036 U	0.0036 U	0.013 U	0.021 U	0.023 U	0.0016 U	0.016 U	0.0041 U	0.038 U	0.0016 U	0.00023 U	0.00068 U	0.00061 U	0.0032 U	0.0013 U	0.020 U	0.023 U
Comp-21 012213	1/22/2013	0.014 U	0.00047 U	0.0021 U	0.0082 U	0.035 U	0.023 U	0.032 U	0.0032 U	0.011 U	0.019 U	0.021 U	0.0015 U	0.015 U	0.0037 U	0.034 U	0.0015 U	0.00021 U	0.00061 U	0.00055 U	0.0029 U	0.0012 U	0.018 U	0.021 U
Comp-22 012313	1/23/2013	0.017 U	0.00057 U	0.0025 U	0.010 U	0.043 U	0.027 U	0.039 U	0.0039 U	0.014 U	0.024 U	0.025 U	0.0018 U	0.018 U	0.0045 U	0.041 U	0.0018 U	0.00025 U	0.00075 U	0.00067 U	0.0035 U	0.0014 U	0.022 U	0.025 U
Comp-23 012413	1/24/2013	0.016 U	0.00054 U			0.041 U	0.026 U	0.037 U	0.0037 U	0.013 U	0.022 U	0.024 U	0.0027 I	0.017 U	0.0043 U	0.039 U	0.0017 U		0.00070 U			0.0013 U	0.020 U	0.024 U
Comp-24 012413	1/24/2013	0.018 U		0.0026 U	-	0.044 U	0.028 U	0.040 U	0.0040 U	0.014 U	0.024 U	0.026 U	0.0018 U	0.018 U	0.0046 U	0.042 U		+	0.00076 U			0.0014 U	0.022 U	0.026 U
Comp-25 012513 Comp-26 012413	1/25/2013 1/24/2013	0.016 U 0.016 U	_	0.0024 U 0.0023 U		0.040 U 0.039 U	0.025 U 0.025 U	0.036 U 0.036 U	0.0036 U 0.0036 U	0.013 U 0.013 U	0.022 U 0.021 U	0.024 U 0.023 U	0.0017 U 0.0016 U	0.016 U 0.016 U	0.0042 U 0.0041 U	0.038 U 0.038 U			0.00069 U 0.00068 U			0.0013 U 0.0013 U	0.020 U 0.020 U	0.024 U 0.023 U
Comp-27 012213	1/22/2013	0.016 U	0.00052 U	<u> </u>	0.0091 U	0.039 U 0.048 U	0.025 U	0.036 U	0.0036 U	0.013 U	0.021 U	0.023 U	0.0016 U		0.0041 U	0.036 U	0.0018 U		0.00088 U			0.0013 U	0.020 U	0.023 U
Comp-28 012313	1/23/2013	0.016 U	0.00053 U		0.0093 U	0.040 U	0.025 U	0.036 U	0.0036 U	0.013 U	0.020 U	0.024 U	0.0017 U	0.026 U	0.0042 U	0.038 U	0.0020 U				0.0033 U	0.0013 U	0.024 U	0.024 U
Comp-29 012413	1/24/2013	0.020 U	0.00067 U			0.051 U	0.033 U	0.047 U	0.0047 U	0.017 U	0.028 U	0.030 U	0.0011 U	0.021 U	0.0053 U	0.049 U	0.0021 U		0.00088 U			0.0017 U	0.026 U	0.030 U
Comp-3 012313	1/23/2013	0.018 U	0.00059 U	0.0027 U	0.010 U	0.045 U	0.029 U	0.041 U	0.0041 U	0.014 U	0.024 U	0.027 U	0.0019 U	0.018 U	0.0047 U	0.043 U	0.0019 U	0.00027 U	0.00078 U	0.00069 U	0.0037 U	0.0015 U	0.022 U	0.027 U
Comp-30 012513	1/25/2013	0.017 U	0.00057 U	0.0025 U	0.010 U	0.043 U	0.027 U	0.039 U	0.0039 U	0.014 U	0.024 U	0.025 U	0.0018 U	0.018 U	0.0045 U	0.041 U	0.0018 U	0.00025 U	0.00075 U	0.00067 U	0.0035 U	0.0014 U	0.022 U	0.025 U
Comp-4 012413	1/24/2013	0.018 U	0.00059 U		0.010 U	0.045 U	0.029 U	0.041 U	0.0041 U	0.014 U	0.024 U	0.027 U	0.0019 U	0.018 U	0.0047 U	0.043 U	0.0019 U	0.00027 U	0.00078 U	0.00069 U	0.0037 U	0.0015 U	0.022 U	0.027 U
Comp-4 DUP 012413	1/24/2013	0.020 U		0.0030 U	0.012 U	0.051 U	0.033 U	0.047 U	0.0047 U	0.017 U	0.028 U	0.030 U	0.0011 U	0.021 U	0.0053 U	0.049 U			0.00088 U			0.0017 U	0.026 U	0.030 U
Comp-5 012513	1/25/2013		0.00057 U			0.043 U		0.039 U	-	0.014 U	+								0.00075 U					
Comp-6 012513	1/25/2013		0.00063 U			0.048 U	0.030 U					_						_	0.00083 U					
Comp-7 012313 Comp-7 DUP 012313	1/23/2013 1/23/2013		0.00052 U 0.00053 U			0.039 U 0.040 U	0.025 U 0.025 U	0.036 U 0.036 U	0.0036 U 0.0036 U		0.021 U 0.022 U				0.0041 U				0.00068 U 0.00069 U					
Comp-8 012313	1/23/2013		0.00055 U			0.040 U	0.023 U		0.0038 U		0.022 U	_							0.00003 U					
Comp-9 012213	1/22/2013		0.00057 U			0.043 U		0.039 U		0.014 U									0.00075 U					
Comp-9 DUP 012213	1/22/2013		0.00064 U		+	0.049 U			0.0044 U										0.00084 U					
· ·	1						1	1		1		1							1	-				

									<u>9</u>															
									OXic										e O				တ္	
				ے ا	on				eb									<u>o</u>	th i				phc	
		٥	_	hio	othi	_	so	ō	ō		SO		r c				,,	/ch	ara	zin	soı		oto	
		pro) June	Į	ulfe	hio	hd	ach	ach		ddc	ane	thic	∢	_		ğ	(x)	×	þu	npł	J	ocr	
Sample ID	Date Collected	ţþo	E E	l ii	sue	entl	ouc	ept	ept	ead	epte	nd	ala	CP	S	erc	erp	eth	eth	etri	evi	<u>ë</u>	ouc	ae
	Date Conceted	<u> </u>	***	***	10	***	***	0.2	Ĭ O1	400	***	0.7	∑	25	<u> </u>	2	2.5	∑	20	5	10	***	***	<u>Ž</u>
SCTL-RDE SCTL-LGW		7.4 0.005	***	***	19 0.01	***	***	0.2	0.1	400 ***	***	0.7	1500 4.2	35 0.02	64 0.03	2.1	2.5 0.5	420 160	20 0.06	54 2.2	18 0.01	***	***	150 0.1
SCTL-LSW		0.003	***	***	0.004	***	***	0.01	0.0001	***	***	0.003	0.003	0.02	***	0.01	***	0.1	0.0003	0.8	0.0003	***	***	0.0002
SQAG-TEC		***	***	***	***	***	***	***	0.0025	36	***	0.0024	***	***	***	0.18	***	***	***	***	***	***	***	***
Comp-1 012313	1/23/2013	0.018 U	0.033 U	0.170 U	0.022 U	0.018 U	0.018 U	0.00078 U	0.0010 U	7.8	0.022 U	0.00064 U	0.020 U	0.0053 U	0.016 U	0.1	0.029 U	0.017 U	0.013 U	0.041 I	0.018 U	0.0013 U	0.020 U	0.022 U
Comp-10 012313	1/23/2013	0.018 U	0.032 U	0.170 U	0.021 U	0.018 U	0.018 U	0.00077 U	0.0010 U	5.9	0.021 U	0.00062 U	0.020 U	0.0052 U	0.016 U	0.13	0.029 U	0.017 U	0.012 U	0.018 U	0.018 U	0.0012 U	0.020 U	0.021 U
Comp-11 012413	1/24/2013	0.020 U	0.035 U	0.190 U	0.024 U	0.020 U	0.020 U	0.00084 U	0.0011 U	5.6	0.024 U	0.00069 U	0.022 U	0.0057 U	0.017 U	0.14	0.031 U	0.019 U	0.014 U	0.020 U	0.020 U	0.0014 U	0.022 U	0.024 U
Comp-12 012513	1/25/2013	0.020 U	0.035 U	0.190 U	0.024 U	0.020 U	0.020 U	0.00084 U	0.0011 U	6.8	0.024 U	0.00069 U	0.022 U	0.0057 U	0.017 U	0.14	0.031 U	0.019 U	0.014 U	0.020 U	0.020 U	0.0014 U	0.022 U	0.024 U
Comp-13 012213	1/22/2013	0.019 U	0.033 U	0.180 U	0.022 U	0.019 U	0.019 U	0.00080 U	0.0010 U	6.7	0.022 U	0.00065 U	0.020 U	0.0054 U	0.016 U	0.13	0.030 U	0.018 U	0.013 U	0.019 U	0.019 U	0.0013 U	0.020 U	0.022 U
Comp-14 012213	1/22/2013	0.019 U	0.034 U	0.180 U	0.023 U	0.019 U	0.019 U	0.00081 U	0.0011 U	6.6	0.023 U	0.00066 U	0.021 U	0.0055 U	0.017 U	0.11	0.030 U	0.018 U	0.013 U	0.019 U	0.019 U	0.0013 U	0.021 U	0.023 U
Comp-15 012213	1/22/2013	0.022 U	0.039 U	0.210 U	0.026 U	0.022 U		0.00093 U	+	7	0.026 U	0.00076 U		0.0063 U	0.019 U	0.11	0.035 U	0.021 U	0.015 U	0.73	0.022 U	0.0015 U	0.024 U	0.026 U
Comp-16 012313	1/23/2013	0.016 U	0.030 U	0.160 U	0.020 U	0.016 U		0.00070 U	_	6.1	0.020 U	0.00057 U	0.018 U	0.0048 U	0.015 U	0.13	0.026 U	0.016 U	0.011 U	0.058 I		0.0011 U	0.018 U	0.020 U
Comp-17 012313 Comp-18 012513	1/23/2013 1/25/2013	0.019 U	0.034 U 0.035 U	0.180 U 0.190 U	0.023 U 0.024 U	0.019 U 0.020 U	0.019 U	0.00081 U	_	6.4 4.7	0.023 U 0.024 U	0.00066 U 0.00069 U	0.021 U 0.022 U	0.0055 U 0.0057 U	0.017 U 0.017 U	0.13 0.15	0.030 U 0.031 U	0.018 U 0.019 U	0.013 U 0.014 U	0.6 1.1	0.019 U	0.0013 U 0.0014 U	0.021 U 0.022 U	0.023 U 0.024 U
Comp-19 012413	1/24/2013	0.020 U 0.017 U	0.033 U	0.160 U	0.024 U	0.020 U	0.020 U 0.017 U	0.00084 U	0.00011 U	6.5	0.024 U	0.00069 U	0.022 U	0.0057 U	0.017 U	0.13	0.031 U	0.019 U	0.014 U	0.017 U	0.020 U 0.017 U	0.0014 U	0.022 U	0.024 U
Comp-2 012513	1/25/2013	0.020 U	0.037 U	0.100 U	0.021 U	0.020 U	0.020 U	0.00074 U		6.7	0.021 U	0.00000 U	0.013 U	0.0050 U	0.018 U	0.098	0.020 U	0.010 U	0.012 U	0.017 U	0.020 U	0.0012 U	0.013 U	0.021 U
Comp-20 012413	1/24/2013	0.018 U	0.032 U	0.170 U	0.021 U	0.018 U	0.018 U	0.00077 U		6.3	0.021 U	0.00062 U	0.020 U	0.0052 U	0.016 U	0.11	0.029 U	0.017 U	0.012 U	0.14	0.018 U	0.0012 U	0.020 U	0.021 U
Comp-21 012213	1/22/2013	0.016 U	0.029 U	0.150 U	0.019 U	0.016 U	0.016 U	0.00069 U		8.4	0.019 U	0.00056 U	0.018 U	0.0047 U	0.014 U	0.099	0.026 U	0.015 U	0.011 U	0.2	0.016 U	0.0011 U	0.018 U	0.019 U
Comp-22 012313	1/23/2013	0.020 U	0.035 U	0.190 U	0.024 U	0.020 U	0.020 U	0.00084 U	0.0011 U	6.2	0.024 U	0.00069 U	0.022 U	0.0057 U	0.017 U	0.14	0.031 U	0.019 U	0.014 U	0.020 U	0.020 U	0.0014 U	0.022 U	0.024 U
Comp-23 012413	1/24/2013	0.019 U	0.033 U	0.180 U	0.022 U	0.019 U	0.019 U	0.00080 U	0.0010 U	5.4	0.022 U	0.00065 U	0.020 U	0.0054 U	0.016 U	0.12	0.030 U	0.0018 U	0.013 U	0.019 U	0.019 U	0.0013 U	0.020 U	0.022 U
Comp-24 012413	1/24/2013	0.020 U	0.036 U	0.190 U	0.024 U	0.020 U	0.020 U	0.00086 U	0.0011 U	6.6	0.024 U	0.00070 U	0.022 U	0.0058 U	0.018 U	0.14	0.032 U	0.0019 U	0.014 U	0.020 U	0.020 U	0.0014 U	0.022 U	0.024 U
Comp-25 012513	1/25/2013	0.018 U	0.033 U	0.170 U	0.022 U	0.018 U	0.018 U	0.00078 U		5.6	0.022 U	0.00064 U	0.020 U	0.0053 U	0.016 U	0.11	0.029 U	0.017 U	0.013 U	0.12	0.018 U	0.0013 U	0.020 U	0.022 U
Comp-26 012413	1/24/2013	0.018 U	0.032 U	0.170 U	0.021 U	0.018 U	0.018 U	0.00077 U		6.4	0.021 U	0.00062 U	0.020 U	0.0052 U	0.016 U	0.13	0.029 U	0.017 U	0.012 U	0.018 U	0.018 U	0.0012 U	0.020 U	0.021 U
Comp-27 012213	1/22/2013	0.022 U	0.039 U	0.210 U	0.026 U	0.022 U	0.022 U	0.00093 U	_	5.9	0.026 U	0.00076 U	0.024 U	0.0063 U	0.019 U	0.14	0.035 U	0.021 U	0.015 U	0.022 U	0.022 U	0.0015 U	0.024 U	0.026 U
Comp-28 012313	1/23/2013	0.018 U	0.033 U	0.170 U	0.022 U	0.018 U	0.018 U	0.00078 U		5.8	0.022 U	0.00064 U	0.020 U	0.0053 U	0.016 U	0.13	0.029 U	0.017 U	0.013 U	1.7	0.018 U	0.0013 U	0.020 U	0.022 U
Comp-29 012413 Comp-3 012313	1/24/2013 1/23/2013	0.023 U 0.020 U	0.042 U	0.220 U 0.190 U	0.028 U	0.023 U 0.020 U	0.023 U 0.020 U		0.0013 U	5.2 5.4	0.028 U 0.024 U	0.00081 U	0.026 U	0.0067 U	0.021 U	0.13 0.11	0.037 U 0.033 U	0.0022 U		0.023 U 0.020 U	0.023 U 0.020 U	0.0016 U	0.026 U 0.022 U	0.028 U 0.024 U
Comp-30 012513	1/25/2013	0.020 U	0.037 U 0.035 U	0.190 U	0.024 U 0.024 U	0.020 U	0.020 U	0.00088 U 0.00084 U	+	6.9	0.024 U	0.00071 U 0.00069 U	0.022 U 0.022 U	0.0059 U 0.0057 U	0.018 U 0.017 U	0.11	0.033 U 0.031 U	0.019 U 0.019 U	0.014 U 0.014 U	0.020 U	0.020 U	0.0014 U 0.0014 U	0.022 U	0.024 U
Comp-4 012413	1/24/2013	0.020 U	0.033 U	0.190 U	0.024 U	0.020 U	0.020 U	0.00084 U		5.9	0.024 U	0.00009 U	0.022 U	0.0057 U	0.017 U	0.13	0.031 U	0.019 U	0.014 U	0.020 U	0.020 U	0.0014 U	0.022 U	0.024 U
Comp-4 DUP 012413	1/24/2013	0.020 U	0.037 U	0.130 U	0.024 U	0.023 U	0.023 U		0.0011 U	5.7	0.024 U	0.00071 U		0.0067 U	0.010 U	0.13	0.037 U	0.013 U	0.014 U	0.020 U	0.023 U	0.0014 U	0.022 U	0.024 U
Comp-5 012513	1/25/2013		0.035 U						0.0011 U			0.00069 U				0.12						0.0014 U		
Comp-6 012513	1/25/2013	0.022 U	0.039 U			0.022 U		0.00093 U	+	6.1		0.00076 U				0.12	0.035 U		0.015 U			0.0015 U		
Comp-7 012313	1/23/2013	0.018 U	0.032 U	0.170 U	0.021 U	0.018 U		0.00077 U		6.3	_	0.00062 U				0.11	0.029 U	0.017 U	0.012 U	0.018 U		0.0012 U		
Comp-7 DUP 012313	1/23/2013	0.018 U	0.033 U	0.170 U	0.022 U	0.018 U	0.018 U	0.00078 U	0.0010 U	7.1	0.022 U	0.00064 U	0.020 U	0.0053 U	0.016 U	0.11	0.029 U	0.017 U	0.013 U	0.018 U		0.0013 U		
Comp-8 012313	1/23/2013	0.019 U	0.035 U	0.180 U	0.023 U	0.019 U	0.019 U	0.00083 U	0.0011 U	6.3	0.023 U	0.00067 U	0.021 U	0.0056 U	0.017 U	0.13	0.031 U	0.018 U	0.013 U	0.24	0.019 U	0.0013 U	0.021 U	0.023 U
Comp-9 012213	1/22/2013	0.020 U	0.035 U			0.020 U		0.00084 U		5.3		0.00069 U				0.12	0.031 U			0.28		0.0014 U		
Comp-9 DUP 012213	1/22/2013	0.022 U	0.040 U	0.210 U	0.027 U	0.022 U	0.022 U	0.00096 U	0.0012 U	5.8	0.027 U	0.00078 U	0.024 U	0.0064 U	0.020 U	0.12	0.036 U	0.021 U	0.016 U	0.28	0.022 U	0.0016 U	0.024 U	0.027 U

Sample ID	Date Collected	Parathion	Phorate	Phosmet	Phosphamidon	Ronnel	Selenium	Silver	Silvex	Simazine	Stirofos	Sulfotepp	Т, 2,4,5-	TEPP	Terbufos	Thionazin	Tokuthion	Total Organic Carbon	Toxaphene	Trichloronate
SCTL-RDE		500	16	1600	***	4200	440	410	660	7.8	***	35	690	***	1.9	***	***	***	0.9	***
SCTL-LGW		1	0.3	5	***	1300	5.2	17	5.4	0.08	***	0.1	0.4	***	0.02	***	***	***	31	***
SCTL-LSW		0.01	0.001	0.004	***	0.2	0.5	0.01	***	0.1	***	***	8.0	***	0.001	***	***	***	0.002	***
SQAG-TEC		***	***	***	***	***	***	1	***	0.00034	***	***	***	***	***	***	***	***	***	***
Comp-1 012313	1/23/2013	0.015 U	0.0036 U	0.013 U	0.031 U	0.022 U	1.7 l	0.33 U	0.013 U	0.024 U	0.022 U	0.022 U	0.013 U	0.022 U	0.0036 U	0.022 U	0.024 U	320000	0.053 U	0.022 U
Comp-10 012313	1/23/2013	0.014 U	0.0036 U	0.012 U	0.030 U	0.021 U	1.6 I	0.31 U	0.013 U	0.023 U	0.021 U	0.021 U	0.013 U	0.021 U	0.0036 U	0.021 U	0.023 U	384000	0.052 U	0.021 U
Comp-11 012413	1/24/2013	0.016 U	0.0039 U	0.014 U	0.033 U	0.024 U	0.58 U	0.31 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0039 U	0.024 U	0.025 U	450000	0.057 U	0.024 U
Comp-12 012513	1/25/2013	0.016 U	0.0039 U	0.014 U	0.033 U	0.024 U	3.7	0.32 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0039 U	0.024 U	0.025 U	470000	0.057 U	0.024 U
Comp-13 012213	1/22/2013	0.015 U	0.0037 U	0.013 U	0.031 U	0.022 U	2.3	0.32 U	0.013 U	0.024 U	0.022 U	0.022 U	0.013 U	0.022 U	0.0037 U	0.022 U	0.024 U	400000	0.054 U	0.022 U
Comp-14 012213	1/22/2013	0.015 U	0.0038 U	0.013 U	0.032 U	0.023 U	2.2	0.34 U	0.014 U	0.025 U	0.023 U	0.023 U	0.013 U	0.023 U	0.0038 U	0.023 U	0.025 U	374000	0.055 U	0.023 U
Comp-15 012213	1/22/2013	0.017 U	0.0043 U	0.015 U	0.037 U	0.026 U	2.6	0.35 U	0.016 U	0.028 U	0.026 U	0.026 U	0.015 U	0.026 U	0.0043 U	0.026 U	0.028 U	477000	0.063 U	0.026 U
Comp-16 012313	1/23/2013	0.013 U	0.120 I	0.011 U	0.028 U	0.020 U	2.3	0.29 U	0.012 U	0.021 U	0.020 U	0.020 U	0.012 U	0.020 U	0.0033 U	0.020 U	0.021 U	388000	0.048 U	0.020 U
Comp-17 012313	1/23/2013	0.015 U	0.0038 U	0.013 U	0.032 U	0.023 U	2.6	0.33 U	0.014 U	0.025 U	0.023 U	0.023 U	0.013 U	0.023 U	0.0038 U	0.023 U	0.025 U	409000	0.055 U	0.023 U
Comp-18 012513	1/25/2013	0.016 U	0.0039 U	0.014 U	0.033 U	0.024 U	1.5 l	0.32 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0039 U	0.024 U	0.025 U	450000	0.057 U	0.024 U
Comp-19 012413	1/24/2013	0.014 U	0.0034 U	0.012 U	0.029 U	0.021 U	0.57 U	0.31 U	0.012 U	0.022 U	0.021 U	0.021 U	0.012 U	0.021 U	0.0034 U	0.021 U	0.022 U	198000	0.050 U	0.021 U
Comp-2 012513	1/25/2013	0.016 U	0.0041 U	0.014 U	0.035 U	0.024 U	2.0 l	0.33 U	0.015 U	0.027 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0041 U	0.024 U	0.027 U	383000	0.059 U	0.024 U
Comp-20 012413	1/24/2013	0.014 U	0.0036 U	0.012 U	0.030 U	0.021 U	0.55 U	0.30 U	0.013 U	0.023 U	0.021 U	0.021 U	0.013 U	0.021 U	0.0036 U	0.021 U	0.023 U	361000	0.052 U	0.021 U
Comp-21 012213	1/22/2013	0.013 U	0.093 I	0.011 U	0.027 U	0.019 U	0.47 U	0.26 U	0.012 U	0.021 U	0.019 U	0.019 U	0.011 U	0.019 U	0.0032 U	0.019 U	0.021 U	308000	0.047 U	0.019 U
Comp-22 012313	1/23/2013	0.016 U	0.0039 U	0.014 U	0.033 U	0.024 U	2.5	0.35 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0039 U	0.024 U	0.025 U	448000	0.057 U	0.024 U
Comp-23 012413	1/24/2013	0.015 U	0.0037 U	0.013 U	0.031 U	0.022 U	2.6	0.32 U	0.013 U	0.024 U	0.022 U	0.022 U	0.013 U	0.022 U	0.0037 U	0.022 U	0.024 U	384000	0.054 U	0.022 U
Comp-24 012413	1/24/2013	0.016 U	0.0040 U	0.014 U	0.034 U	0.024 U	2.5	0.35 U	0.014 U	0.026 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0040 U	0.024 U	0.026 U	464000	0.058 U	0.024 U
Comp-25 012513	1/25/2013	0.015 U	0.0036 U	0.013 U	0.031 U	0.022 U	2.5	0.32 U	0.013 U	0.024 U	0.022 U	0.022 U	0.013 U	0.022 U	0.0036 U	0.022 U	0.024 U	392000	0.053 U	0.022 U
Comp-26 012413	1/24/2013	0.014 U	0.0036 U	0.012 U	0.030 U	0.021 U	0.58 U	0.32 U	0.013 U	0.023 U	0.021 U	0.021 U	0.013 U	0.021 U	0.0036 U	0.021 U	0.023 U	355000	0.052 U	0.021 U
Comp-27 012213	1/22/2013	0.017 U	0.0043 U	0.015 U	0.037 U	0.026 U	2.9	0.36 U	0.016 U	0.028 U	0.026 U	0.026 U	0.015 U	0.026 U	0.0043 U	0.026 U	0.028 U	503000	0.063 U	0.026 U
Comp-28 012313	1/23/2013	0.015 U	0.0036 U	0.013 U	0.031 U	0.022 U	1.8 I	0.30 U	0.013 U	0.024 U	0.022 U	0.022 U	0.013 U	0.022 U	0.0036 U	0.022 U	0.024 U	415000	0.053 U	0.022 U
Comp-29 012413	1/24/2013	0.019 U	0.0047 U	0.016 U	0.040 U	0.028 U	2.3	0.42 U	0.017 U	0.030 U	0.028 U	0.028 U	0.017 U	0.028 U	0.0047 U	0.028 U	0.030 U	485000	0.067 U	0.028 U
Comp-3 012313	1/23/2013	0.016 U	0.0041 U	0.014 U	0.035 U	0.024 U	2.5	0.33 U	0.015 U	0.027 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0041 U	0.024 U	0.027 U	440000	0.059 U	0.024 U
Comp-30 012513	1/25/2013	0.016 U	0.0039 U	0.014 U	0.033 U	0.024 U	0.65 U	0.35 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0039 U	0.024 U	0.025 U	424000	0.057 U	0.024 U
Comp-4 012413	1/24/2013	0.016 U	0.0096 I	0.014 U	0.035 U	0.024 U	2.3	0.36 U	0.015 U	0.027 U	0.024 U	0.024 U	0.014 U	0.024 U	0.0041 U	0.024 U	0.027 U	354000	0.059 U	0.024 U
Comp-4 DUP 012413	1/24/2013	0.019 U	0.0047 U	0.016 U	0.040 U	0.028 U	1.8 I	0.42 U	0.017 U	0.030 U	0.028 U	0.028 U	0.017 U	0.028 U	0.0047 U	0.028 U	0.030 U	259000	0.067 U	0.028 U
Comp-5 012513	1/25/2013	0.016 U	0.0039 U		0.033 U	0.024 U	2.1	0.33 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U		0.024 U	0.025 U	423000	0.057 U	0.024 U
Comp-6 012513	1/25/2013	0.017 U	0.0043 U		0.037 U	0.026 U	0.66 U	0.36 U	0.016 U	0.028 U	0.026 U	0.026 U	0.015 U	0.026 U			0.028 U	440000	0.063 U	
Comp-7 012313	1/23/2013	0.014 U	0.0036 U	0.012 U	0.030 U	0.021 U	0.55 U	0.30 U	0.013 U	0.023 U	0.021 U	0.021 U	0.013 U	0.021 U		0.021 U	0.023 U	389000	0.052 U	0.021 U
Comp-7 DUP 012313	1/23/2013	0.015 U	0.0036 U	0.013 U	0.031 U	0.022 U	2.8	0.33 U	0.013 U	0.024 U	0.022 U	0.022 U	0.013 U	0.022 U		0.022 U	0.024 U	329000	0.053 U	0.022 U
Comp-8 012313	1/23/2013	0.015 U	0.0038 U	0.013 U	0.033 U	0.023 U	0.62 U	0.34 U	0.014 U	0.025 U	0.023 U	0.023 U	0.014 U	0.023 U	0.0038 U	0.023 U	0.025 U	358000	0.056 U	0.023 U
Comp-9 012213	1/22/2013	0.016 U	0.0039 U	0.014 U	0.033 U	0.024 U	2.4 I	0.35 U	0.014 U	0.025 U	0.024 U	0.024 U	0.014 U	0.024 U	+	0.024 U	0.025 U	430000	0.057 U	0.024 U
Comp-9 DUP 012213	1/22/2013	0.018 U	0.0044 U	0.016 U	0.038 U	0.027 U	3	0.40 U	0.016 U	0.029 U	0.027 U	0.027 U	0.016 U	0.027 U	0.0044 U	0.027 U	0.029 U	419000	0.064 U	0.027 U

ATTACHMENT H

Field Duplicate Outlier Report* (non-qualifying outliers)

Lab Report Batch: 130128.06 **Lab ID**: E84809

Field Sample: Field Sample Duplicate:	Comp-4 012413 : Comp-4 DUP 012413								
Matrix ID:	SOILS	Total Or		Reporting			Lab		RPD
		Dissolved	Result	Limit	MDL	Units	Qualifier	RPD	Criteria
Analysis Metho	od EPA 8270								
Dharata	Sample result:	N/A	9.6	200	4.1		I		
Phorate	Duplicate result:	N/A	4.7	230	4.7	ug/kg	U	200	50
Dharata	Sample result:	N/A	9.6	200	4.1		I		
Phorate	Duplicate result:	N/A	4.7	230	4.7	ug/kg	U	200	50

^{*}Outlier report also includes analytes detected in the parent sample but not in the duplicate sample or vice versa. In this case, RPD value for the field duplicate defaults to 200. RPD values that exceed project requirements do not qualify samples.

Surrogate Recovery Outlier Report

Lab Report Batch: 130128.06 **Lab ID:** E84809

						Cr	iteria (per	cent)	Associated
Client Sample ID	Lab Sample ID	Analysis Method	Dilution Mat	rix Surrogate	Percent Recovery	Lower Limit	Upper Limit	Reject Point	Target Analytes
Comp-12 012513	159698	EPA 8081	1.00 SO	Tetrachloro-m-xylene	43	50.0	130.0	10.0	All Target
		EPA 8270		p-terphenyl-d14	36	40.0	140.0	10.0	Base/Neutral
Comp-15 012213	159670	EPA 8321		2,4-Dichlorophenylacetic acid	40	50.0	150.0	10.0	Base/Neutral
Comp-16 012313	159679	EPA 8081		Tetrachloro-m-xylene	48	50.0	130.0	10.0	All Target
		EPA 8321		2,4-Dichlorophenylacetic acid	48	50.0	150.0	10.0	Base/Neutral
Comp-18 012513	159697	EPA 8081		Tetrachloro-m-xylene	42	50.0	130.0	10.0	All Target
		EPA 8270		p-terphenyl-d14	36	40.0	140.0	10.0	Base/Neutral
Comp-19 012413	159695	EPA 8081		Tetrachloro-m-xylene	46	50.0	130.0	10.0	All Target
		EPA 8270		p-terphenyl-d14	37	40.0	140.0	10.0	Base/Neutral
		EPA 8321		2,4-Dichlorophenylacetic acid	42	50.0	150.0	10.0	Base/Neutral
Comp-2 012513	159701	EPA 8081		Tetrachloro-m-xylene	48	50.0	130.0	10.0	All Target
Comp-20 012413	159693			Tetrachloro-m-xylene	43	50.0	130.0	10.0	All Target
Comp-22 012313	159677	EPA 8321		2,4-Dichlorophenylacetic acid	38	50.0	150.0	10.0	Base/Neutral
Comp-23 012413	159688			2,4-Dichlorophenylacetic acid	43	50.0	150.0	10.0	Base/Neutral
Comp-24 012413	159690	EPA 8270		p-terphenyl-d14	39	40.0	140.0	10.0	Base/Neutral
Comp-25 012513	159700			p-terphenyl-d14	38	40.0	140.0	10.0	Base/Neutral
Comp-26 012413	159694	EPA 8081		Tetrachloro-m-xylene	46	50.0	130.0	10.0	All Target
Comp-27 012213	159672	EPA 8321		2,4-Dichlorophenylacetic acid	47	50.0	150.0	10.0	Base/Neutral
Comp-28 012313	159678	EPA 8081		Tetrachloro-m-xylene	49	50.0	130.0	10.0	All Target
Comp-30 012513	159696	EPA 8270		p-terphenyl-d14	35	40.0	140.0	10.0	Base/Neutral
Comp-4 012413	159691	EPA 8081		Tetrachloro-m-xylene	43	50.0	130.0	10.0	All Target
		EPA 8321		2,4-Dichlorophenylacetic acid	48	50.0	150.0	10.0	Base/Neutral
Comp-4 DUP 012413	159692	EPA 8081		Tetrachloro-m-xylene	44	50.0	130.0	10.0	All Target
		EPA 8270		p-terphenyl-d14	38	40.0	140.0	10.0	Base/Neutral
Comp-5 012513	159702			p-terphenyl-d14	35	40.0	140.0	10.0	Base/Neutral
Comp-6 012513	159699			2-Fluorobiphenyl	39	40.0	140.0	10.0	Base/Neutral
				p-terphenyl-d14	31	40.0	140.0	10.0	Base/Neutral
Comp-7 DUP 012313	159685	EPA 8321		2,4-Dichlorophenylacetic acid	49	50.0	150.0	10.0	Base/Neutral

Method Batch : E9377Analysis Method : EPA 8321Analysis Date : 01/31/2013Matrix ID : SoilsPreparation Type : 3545Preparation Date : 01/29/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

MS and/or MSD A	nalyte Recovery/I	RPD Outside Project	Limits	Reporte	ed *	Proje	ct Limits	(Percen	t)
Client Sample ID	Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
Comp-21 012213MS	E9377.04	2,4,5-T	N/A	20		10.00	30.00	170.00	35.00
		Dichlorprop	N/A	30		10.00	45.00	96.00	35.00
		MCPA	N/A	25		10.00	31.00	96.00	35.00
Comp-21 012213MSD	E9377.05	2,4,5-T	N/A	25		10.00	30.00	170.00	35.00
		Dichlorprop	N/A	29		10.00	45.00	96.00	35.00
		MCPA	N/A	25		10.00	31.00	96.00	35.00

Associated Samples

All samples in Method Ba	tch
Client Sample ID	Lab Sample ID
Comp-1 012313	159683
Comp-10 012313	159681
Comp-13 012213	159674
Comp-14 012213	159673
Comp-15 012213	159670
Comp-16 012313	159679
Comp-17 012313	159680
Comp-21 012213	159671
Comp-22 012313	159677
Comp-27 012213	159672
Comp-28 012313	159678
Comp-3 012313	159682
Comp-7 012313	159684
Comp-7 DUP 012313	159685
Comp-9 012213	159675
Comp-9 DUP 012213	159676

If the multiplier rule was selected for MS/MSD data review then spike recovery or RPD outliers will not show up on this report if that analyte did not get qualified in any associated samples during automated data review.

^{*} Only those Percent Recovery and/or RPD values outside project limits are listed in this report.

Method Batch : E9383Analysis Method : EPA 8321Analysis Date : 02/04/2013Matrix ID : SoilsPreparation Type : 3545Preparation Date : 01/30/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

MS and/or MSD A	nalyte Recovery/	RPD Outside Project	Limits	Reporte	ed *	Proje	ct Limits	(Percen	t)
Client Sample ID	Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
Comp-11 012413MSD	E9383.05	2,4,5-T	N/A	27		10.00	30.00	170.00	35.00
		Dichlorprop	N/A	44		10.00	45.00	96.00	35.00

Associated Samples

All samples in Method E	Batch
Client Sample ID	Lab Sample ID
Comp-11 012413	159687
Comp-12 012513	159698
Comp-18 012513	159697
Comp-19 012413	159695
Comp-2 012513	159701
Comp-20 012413	159693
Comp-23 012413	159688
Comp-24 012413	159690
Comp-25 012513	159700
Comp-26 012413	159694
Comp-29 012413	159689
Comp-30 012513	159696
Comp-4 012413	159691
Comp-4 DUP 012413	159692
Comp-5 012513	159702
Comp-6 012513	159699
Comp-8 012313	159686

If the multiplier rule was selected for MS/MSD data review then spike recovery or RPD outliers will not show up on this report if that analyte did not get qualified in any associated samples during automated data review.

^{*} Only those Percent Recovery and/or RPD values outside project limits are listed in this report.

Method Batch : E9388Analysis Method : EPA 6010Analysis Date : 02/04/2013Matrix ID : SoilsPreparation Type : 3050BPreparation Date : 01/31/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

MS and/or MSD A	nalyte Recovery/F	RPD Outside Project	Limits	Reporte	ed *	Proje	ct Limits	(Percen	t)
Client Sample ID	Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
Comp-21 012213MS	E9388.04	Barium	N/A	64		10.00	75.00	125.00	25.00
		Copper	N/A	58		10.00	75.00	125.00	25.00
		Lead	N/A	74		10.00	75.00	125.00	25.00
Comp-21 012213MSD	E9388.05	Barium	N/A	72		10.00	75.00	125.00	25.00
		Copper	N/A	71		10.00	75.00	125.00	25.00

Associated Samples

All samples in Method Batch	
Client Sample ID	Lab Sample ID
Comp-21 012213	159671

If the multiplier rule was selected for MS/MSD data review then spike recovery or RPD outliers will not show up on this report if that analyte did not get qualified in any associated samples during automated data review.

Project Number and Name: A-2 FEB - A-2 FEB

4/23/

Florida ADaPT 6.40 Report Date: Page 3 of 4

^{*} Only those Percent Recovery and/or RPD values outside project limits are listed in this report.

Method Batch : E9408Analysis Method : EPA 8270Analysis Date : 02/01/2013Matrix ID : SoilsPreparation Type : 3545Preparation Date : 01/31/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

MS and/or MSD Analyte Recovery/RPD Outside Project Limits			Reported * Project Limits			s (Percent)			
Client Sample ID	Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
Comp-23 012413MSD	E9408.05	Bolstar	N/A	31		10.00	35.00	115.00	64.00
		Demeton-O+S	N/A		52	10.00	0.00	134.00	40.00
		Disulfoton	N/A		49	10.00	8.00	102.00	26.00
		Fenthion	N/A		47	10.00	40.00	126.00	24.00
		Phorate	N/A		50	10.00	6.00	141.00	20.00

Associated Samples

All samples in Method Ba	tch
Client Sample ID	Lab Sample ID
Comp-12 012513	159698
Comp-18 012513	159697
Comp-19 012413	159695
Comp-2 012513	159701
Comp-20 012413	159693
Comp-23 012413	159688
Comp-24 012413	159690
Comp-25 012513	159700
Comp-26 012413	159694
Comp-29 012413	159689
Comp-30 012513	159696
Comp-4 012413	159691
Comp-4 DUP 012413	159692
Comp-5 012513	159702
Comp-6 012513	159699

If the multiplier rule was selected for MS/MSD data review then spike recovery or RPD outliers will not show up on this report if that analyte did not get qualified in any associated samples during automated data review.

^{*} Only those Percent Recovery and/or RPD values outside project limits are listed in this report.

Preparation Batch : E9374Analysis Method : EPA 8270Analysis Date : 01/31/2013MatrixID: SoilsPreparation Type : 3545Preparation Date : 01/29/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

LCS and/or LCSD Spike Recovery/RPD Outside Project Limits		Reported *		Project Limits		(Percent)		
LCS Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
E9374.02	Bolstar	N/A	33		10.00	40.00	111.00	40.00
	Tokuthion	N/A	51		10.00	55.00	104.00	40.00
E9374.03	Bolstar	N/A	34	3	10.00	40.00	111.00	40.00
	Tokuthion	N/A	52	2	10.00	55.00	104.00	40.00

Associated Samples

Client Sample ID	Lab Sample ID	
Comp-1 012313	159683	
Comp-10 012313	159681	
Comp-11 012413	159687	
Comp-13 012213	159674	
Comp-14 012213	159673	
Comp-15 012213	159670	
Comp-16 012313	159679	
Comp-17 012313	159680	
Comp-21 012213	159671	
Comp-22 012313	159677	
Comp-27 012213	159672	
Comp-28 012313	159678	
Comp-3 012313	159682	
Comp-7 012313	159684	
Comp-7 DUP 012313	159685	
Comp-8 012313	159686	
Comp-9 012213	159675	
Comp-9 DUP 012213	159676	

^{*}Only those Percent Recovery and/or RPD values outside project limits are listed in this report
Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Preparation Batch : E9375Analysis Method : EPA 8081Analysis Date : 02/05/2013MatrixID: Aqueous-OtherPreparation Type : 3510Preparation Date : 01/29/2013

ab Banavian Batah : 120129 06 Lab ID: E94900

Lab Reporting Batch: 130128.06 Lab ID: E84809

LCS and/or LCSD Spike Recovery/RPD Outside Project Limits			Report	ed *	Proje	ct Limits	(Perce	nt)
LCS Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
E9375.03	Methoxychlor	Tot	136	8	10.00	50.00	130.00	40.00

Associated Samples

Client Sample ID	Lab Sample ID
Equip Blank-1	159703
FCEB-2	159704
FCEB-3	159705

*Only those Percent Recovery and/or RPD values outside project limits are listed in this report
Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Preparation Batch : E9376Analysis Method : EPA 8270Analysis Date : 01/31/2013MatrixID: Aqueous-OtherPreparation Type : 3510Preparation Date : 01/29/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

LCS and/or LCSD Spike Recovery/RPD Outside Project Limits		Reported *		Project Limits		(Percent)		
LCS Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
E9376.02	Dimethoate	Tot	57		10.00	60.00	140.00	40.00
	Monocrotophos	Tot	8		10.00	60.00	140.00	40.00
	Naled	Tot	12		10.00	60.00	140.00	40.00
E9376.03	Monocrotophos	Tot	8	0	10.00	60.00	140.00	40.00
	Naled	Tot	13	8	10.00	60.00	140.00	40.00

Associated Samples

Client Sample ID	Lab Sample ID
Equip Blank-1	159703
FCEB-2	159704
FCEB-3	159705

*Only those Percent Recovery and/or RPD values outside project limits are listed in this report
Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

Preparation Batch : E9408Analysis Method : EPA 8270Analysis Date : 02/01/2013MatrixID: SoilsPreparation Type : 3545Preparation Date : 01/31/2013

Lab Reporting Batch: 130128.06 Lab ID: E84809

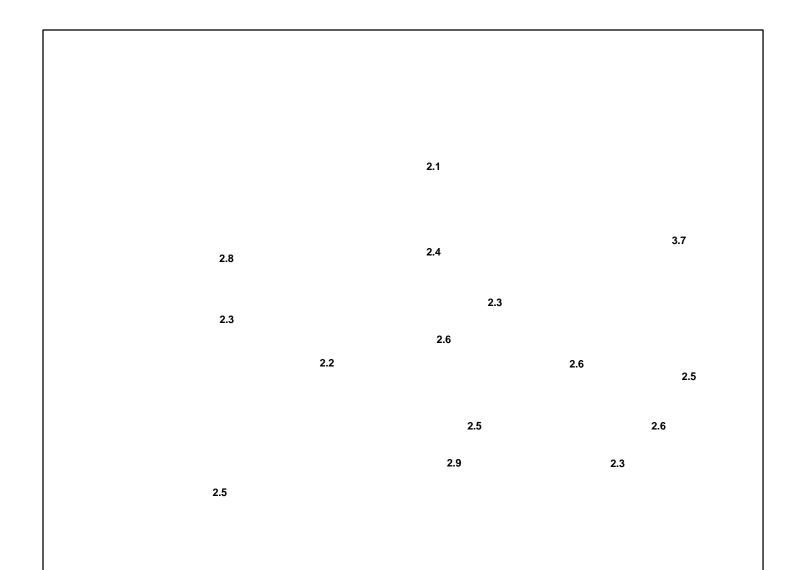
LCS and/or LCSD Spike Recovery/RPD Outside Project Limits			Report	ed *	Proje	ct Limits	(Perce	nt)
LCS Lab Sample ID	Analyte Name	Total or Dissolved	Percent Recovery	RPD	Rejection Point	Lower Limit	Upper Limit	RPD
E9408.03	Phorate	N/A	33	41	10.00	0.00	119.00	40.00

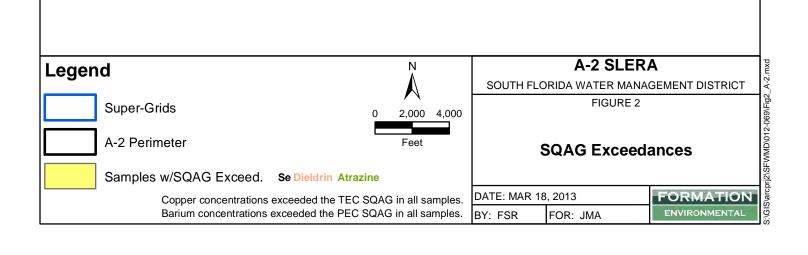
Associated Samples

Client Sample ID	Lab Sample ID	
Comp-12 012513	159698	
Comp-18 012513	159697	
Comp-19 012413	159695	
Comp-2 012513	159701	
Comp-20 012413	159693	
Comp-23 012413	159688	
Comp-24 012413	159690	
Comp-25 012513	159700	
Comp-26 012413	159694	
Comp-29 012413	159689	
Comp-30 012513	159696	
Comp-4 012413	159691	
Comp-4 DUP 012413	159692	
Comp-5 012513	159702	
Comp-6 012513	159699	

^{*}Only those Percent Recovery and/or RPD values outside project limits are listed in this report
Scope of Data Qualification: The outlier in the LCS qualifies that analyte in all samples with the same Preparation Batch ID as the LCS

ATTACHMENT I





ATTACHMENT J

SunLabs Summary Sample Report

Table 1
Summary of COIs Detected in Composite Soil Samples
A-2 Flow Equalization Basin

	.														Total
Comple ID	Date Collected	A	A4===i==	Danisson	C- d:	Charamium	C	D 0.4	Dieldein		Manarimi	Matriburia	Dhausta	Calaminum	Organic
Sample ID	Collected					Chromium		D, 2,4-	Dieldrin			Metribuzin			
SQAG -TEC		9.8	0.0003	20	1	43	32	N/A	0.0019	36	0.18	N/A	N/A	N/A	N/A
SQAG - PEC		33	N/A	60	5	110	150	N/A	0.062	130	1.1	N/A	N/A	N/A	N/A
Comp-1 012313	1/23/2013	6.8	0.099 I	110	0.11 U	19	110	0.058 U	0.0017 U	7.8	0.1	0.041 I	0.0036 U	1.7 l	320000
Comp-10 012313	1/23/2013	4.9	0.025 U	95	0.11 U	12	68	0.057 U	0.0045 I	5.9	0.13		0.0036 U	1.6 l	384000
Comp-11 012413	1/24/2013	3.6	0.027 U	98	0.11 U	15	79	0.063 U	0.0018 U	5.6	0.14		0.0039 U	0.58 U	450000
Comp-12 012513	1/25/2013	3.8	0.027 U	100	0.11 U	13	87	0.063 U		6.8	0.14		0.0039 U	3.7	470000
Comp-13 012213	1/22/2013	6.2	0.110 I	100	0.15 I	29	90	0.059 U	0.0017 U	6.7	0.13		0.0037 U	2.3	400000
Comp-14 012213	1/22/2013	5.5	0.026 U	80	0.18 I	16	68	0.060 U	0.0017 U	6.6	0.11		0.0038 U	2.2	374000
Comp-15 012213	1/22/2013	3.4	3.5	87	0.12 I	7.8	75	0.29	0.0049 I	7	0.11	0.73	0.0043 U	2.6	477000
Comp-16 012313	1/23/2013	4	0.33	91	0.096 U	23	96	0.052 U	0.0051 I	6.1	0.13	0.058 I	0.120 I	2.3	388000
Comp-17 012313	1/23/2013	3.8	0.160 I	99	0.12 U	17	85	0.060 U	0.0017 U	6.4	0.13	0.6	0.0038 U	2.6	409000
Comp-18 012513	1/25/2013	3.4	3.3	97	0.11 U	11	88	0.94	0.0018 U	4.7	0.15	1.1	0.0039 U	1.5 l	450000
Comp-19 012413	1/24/2013	5.5	0.024 U	88	0.11 U	17	59	0.055 U	0.0016 U	6.5	0.12	0.017 U	0.0034 U	0.57 U	198000
Comp-2 012513	1/25/2013	5.2	0.029 U	93	0.11 U	15	59	0.065 U	0.0019 U	6.7	0.098	0.020 U	0.0041 U	2.0 I	383000
Comp-20 012413	1/24/2013	5	0.025 U	90	0.10 U	14	70	0.057 U	0.0016 U	6.3	0.11	0.14	0.0036 U	0.55 U	361000
Comp-21 012213	1/22/2013	3.5	0.055 I	69	0.17 I	9.4	79	0.052 U	0.0015 U	8.4	0.099	0.2	0.093 I	0.47 U	308000
Comp-22 012313	1/23/2013	4.3	0.027 U	100	0.16 I	12	83	0.063 U	0.0018 U	6.2	0.14	0.020 U	0.0039 U	2.5	448000
Comp-23 012413	1/24/2013	4.2	0.026 U	82	0.11 U	13	59	0.059 U	0.0027 I	5.4	0.12	0.019 U	0.0037 U	2.6	384000
Comp-24 012413	1/24/2013	4.1	0.028 U	99	0.14 I	28	82	0.064 U	0.0018 U	6.6	0.14	0.020 U	0.0040 U	2.5	464000
Comp-25 012513	1/25/2013	6.4	0.031 I	100	0.11 U	19	67	0.058 U	0.0017 U	5.6	0.11	0.12	0.0036 U	2.5	392000
Comp-26 012413	1/24/2013	5.5	0.025 U	98	0.11 U	17	78	0.057 U	0.0016 U	6.4	0.13	0.018 U	0.0036 U	0.58 U	355000
Comp-27 012213	1/22/2013	3.5	0.035 I	89	0.12 U	9.1	74	0.070 U	0.00099 U	5.9	0.14	0.022 U	0.0043 U	2.9	503000
Comp-28 012313	1/23/2013	3.1	0.19	83	0.14 I	26	69	0.058 U	0.0017 U	5.8	0.13	1.7	0.0036 U	1.8 I	415000
Comp-29 012413	1/24/2013	4.3	0.033 U	86	0.14 U	7.2	60	0.074 U	0.0011 U	5.2	0.13	0.023 U	0.0047 U	2.3	485000
Comp-3 012313	1/23/2013	4.3	0.029 U	91	0.11 U	16	82	0.065 U	0.0019 U	5.4	0.11	0.020 U	0.0041 U	2.5	440000
Comp-30 012513	1/25/2013	3.2	0.027 I	96	0.12 U	21	100	0.063 U	0.0018 U	6.9	0.15	0.020 U	0.0039 U	0.65 U	424000
Comp-4 012413	1/24/2013	4.7	0.029 U	95	0.12 U	5.6	91	0.065 U	0.0019 U	5.9	0.14	0.020 U	0.0096 I	2.3 l	354000
Comp-4 DUP 012413	1/24/2013	4.1	0.033 U	93	0.14 U	6.8	80	0.074 U	0.0011 U	5.7	0.13	0.023 U	0.0047 U	1.8 I	259000
Comp-5 012513	1/25/2013	4.6	0.027 U	94	0.11 U	15	53	0.063 U	0.0018 U	5.5	0.12	0.020 U	0.0039 U	2.1	423000
Comp-6 012513	1/25/2013	4.5	0.030 U	110	0.12 U	18	75	0.070 U	0.00099 U	6.1	0.12	0.022 U	0.0043 U	0.66 U	440000
Comp-7 012313	1/23/2013	6.4	0.025 U	97	0.10 U	20	75	0.057 U	0.0016 U	6.3	0.11	0.018 U	0.0036 U	0.55 U	389000
Comp-7 DUP 012313	1/23/2013	5.7	0.025 U	97	0.11 U	19	74	0.058 U	0.0017 U	7.1	0.11	0.018 U	0.0036 U	2.8	329000
Comp-8 012313	1/23/2013	3.8	1.1	96	0.12 U	14	87	0.062 U	0.0018 U	6.3	0.13	0.24	0.0038 U	0.62 U	358000
Comp-9 012213	1/22/2013	3.9	0.38	92	0.12 U	13	67	0.200 I	0.0018 U	5.3	0.12	0.28	0.0039 U	2.4	430000
Comp-9 DUP 012213	1/22/2013	3.5	0.44	110	0.14 U	17	65	0.170 I	0.0010 U	5.8	0.12	0.28	0.0044 U	3	419000

All units mg/kg DW

Detected Conc. > TEC

Detected Conc. > PEC

H.2 A-2 FEB Lands Correspondence

From: Shafer, Mark D SAJ

To: <u>Kukleski, Robert</u>; <u>Taylor, Robert</u>

Cc: <u>Gued, Lisa R SAJ; Morrison, Matthew; Taplin, Kimberley A SAJ</u>

Subject: Shafer review of Phase II Environmental Assessment; Screening Level Ecological Risk Assessment; A-2 Flow

Equalization Basin Project; Former Talisman Sugar Corporation Property (Tract No. D7 100-104)

(UNCLASSIFIED)

Date: Tuesday, April 02, 2013 12:36:00 PM

Classification: UNCLASSIFIED

Caveats: NONE

Bob(s)

Here are my comments on the A2 Sampling report. Lisa Gued indicated that she would send you comments under separate cover hopefully by end of the week.

In addition to the comments below the following are requested.

- a. Documentation of FWS review of A2 sampling results.
- b. Documentation of FDEP review of A2 Sampling results.
- c. Letter from SFWMD to USACE requesting application of Sep 2011 AG-Chem policy to this project.

Shafer Comments:

Overall comment: In addition to USFWS review, this report must be reviewed by FDEP to satisfy USACE Ag-Chem policy.

- 1. Page 1. In reviewing the A2 Phase II report of March 25th, 2012, it references on page 1 the draft Summary Env. Report for the A-2 FEB, dated September 17, 2012. I have a copy of that report and it does not include much of the information that was originally included in the August 21st, 2012 version. I believe that the WMD solution to USACE concerns about the Sep 17 version was to revert back to the August 21st, 2012 version. I will be referencing the August 21st 2012 version in the CEPP PIR. To do this, page 1 of the March 25 report should be changed to reference the August 21st Summary report and the August 21st report should be provided with a signature from Steve Long.
- 2. Page 6. Section 3.1. Should provide statement that USFWS and USACE reviewed the sampling scope of work and approved the sampling plan. Provide copy of USFWS review letter in appendix.
- 3. Page 4.1.1 Soil, 4th bullet. Second sentence says SCTL-LSW is appropriate. Third sentence essentially says SCTL-LSW not relevant. Please confirm with FDEP that FEB would not be a class III water though since the FEB eventually discharges to Class III water body don't know of relevance. Also, a discussion that FEB will discharge to STA34 or STA2B before being discharged to a Class III water.
- 4. Page 12. Metals Results. Chromium exceeded the SCTL-LSW in all samples. Add discussion of why was this analyte not tested using SPLP protocol.
- 5. Page 21. Arsenic: Concentrations do exceed the residential exposure criteria. The FEB may be open to the public for recreation. Some discussion of risks associated with public access should be provided in text. Perhaps a reference to other sites where FDEP has developed a "recreational" exposure criteria (Lake Okeechobee Scenic Trail for instance.)
- 5. Page 21. Chromium. Not sure that it is relevant that the planned FEB will or will not be classified as a Class III water body. The FEB will discharge to the STAs and eventually a class III water body. By the way, this paragraph on the SCTL-LSW exceedances is in direct contrast to the discussion that begins in the next paragraph that follows which begins "Class III surface water criteria".

- 6. Page 21. Bullet on Chromium, mercury, and selenium were.... Actual testing of these analytes using the SPLP test procedure would have been useful so you could say for sure if these "leach to a significant degree". This lack of testing should be further justified or corrected by additional testing.
- 7. Page 22. Arsenic: The recommendation should indicate whether the results for Arsenic should warrant measures taken in the soil management plan to reduce possible human exposure due to potential for arsenic on levee soils. (Blending or capping with low-arsenic soils, for instance.)

Thanks

Mark Shafer

-----Original Message-----

From: Kukleski, Robert [mailto:rkuklesk@sfwmd.gov]

Sent: Tuesday, March 26, 2013 2:30 PM

To: Barnett, Ernie; Teets, Thomas M; Morgan, Temperince; Morrison, Matthew; Thourot, Scott; Burns, Kirk; Cooper, Abner; Warner, Paul; Kivett, Jeff; Mitnik, John; Shirkey, Alan; Leeds, Jennifer; Sciotto, Sara; Jeyakumar, Nirmala; Bertolotti, Lesley; Shaffer, John; Ramirez, Armando; Virgil, Richard; Loehrlein, Vincent; Collins, Kathleen; Story, Ester; Bassell, Richard; Palmer, Ray; Schaeffer, Robert; Arias, Dolores; Taylor, Robert; Smith, Jeffrey; Coughlin, Steve; Trammell, Herbert; Pfeuffer, Richard Cc: robert_frakes@fws.gov; Emily Bauer; 'Anthony Sowers'; Shafer, Mark D SAJ; Gued, Lisa R SAJ; 'Dougherty, Brian'; 'Stuckey, Mark'; 'Lurix, Joe'; 'william.rueckert@dep.state.fl.us'; William C. Kennedy; 'Steve Long'; Michael Rothenburg; 'andrew.cadle@psiusa.com'; 'Joe Allen'; 'Mark Lewis' Subject: Phase II Environmental Assessment; Screening Level Ecological Risk Assessment; A-2 Flow Equalization Basin Project; Former Talisman Sugar Corporation Property (Tract No. D7 100-104)

The attached memorandum is intended to accompany the Phase II Environmental Assessment and Screening Level Ecological Risk Assessment (SLERA) of the A-2 Flow Equalization Basin (FEB) Project, comprised of the former Talisman Sugar Corporation property (Tract No. D7 100-104). All known "point-sources" within the Project footprint have been previously assessed/remediated, with Florida Department of Environmental Protection (FDEP) concurrence with the completeness of corrective actions. The current Phase II Sampling Investigation (and accompanying SLERA) were focused upon the cultivated portions of the subject property that were not previously sampled in order to quantify the residual agrochemical concentrations associated with routine application, and to determine the environmental suitability of the subject property for the proposed Project.

The report was completed by Professional Service Industries, Inc. (PSI). A condensed electronic version (Text, Tables, and Figures) of the PSI report is also attached. A complete version of the report (including all Appendices) has been uploaded into Documentum. Complete printed versions of the report are being transmitted separately by PSI to selected recipients (as detailed in the memorandum).

We value your opinion. Please take a few minutes to share your comments on the service you received from the District by clicking on this link http://my.sfwmd.gov/portal/page/portal/pg-grp-surveysystem/survey%20ext?pid=1653 .

Classification: UNCLASSIFIED

Caveats: NONE

Classification: UNCLASSIFIED

Caveats: NONE

Comments for Phase II Environmental Site Assessment for the A-2 Flow Equalization Basin

Commenter: Lisa R. Gued, Ph.D., USACE

Date: April 11, 2013

Page 2: 1st bullet: How were ND values incorporated in the statistical analyses?

Page 2: 1st bullet: A table listing the mean and the standard deviation of detected compounds would be useful.

Page 7: 2nd paragraph: Which chemicals were recently applied?

Page 8: 2nd bullet: Split samples were not accomplished with OP pesticides and herbicides because the primary split laboratory subcontracted these analyses to Sunlabs. Sunlabs was the primary laboratory.

Page 10: 3rd paragraph: FWS protocols recommend consideration of ESV established by EPA Region IV when Florida SQAGs are not available. Where these values considered in this assessment?

Pages 11-13: In the discussion of the results, the mean and the standard deviation should be reported.

Pages 11-13: For compounds where the detection limit was higher than the criteria, this should be reported.

Page 11: Last paragraph. The MDL that the laboratory reported is approximately 100 times the SQAG-TEC for atrazine.

Page 12: 2nd paragraph: The text fails to state that the holding times for SPLP analyses per method EPA 1312 were exceeded. This makes the data questionable.

Page 13: 4.3 Data validation: ADaPT data validation forms were not provided with the laboratory reports in Appendix A.

Page 13: 4th paragraph: Does USFWS concur with the value used of 4.2 mg/kg selenium?

Page 14: 4th bullet: A spot check of the data indicate that this statement is inaccurate. The method blank run 1/30/13 by CAS has barium, cadmium, copper, mercury in it.

Page 14: It should be noted that the laboratory did not achieve the SQAGs TEC concentrations for any of the organophosphate pesticides (OPP), the triazine herbicides (including atrazine) or toxaphene. The SOW that this assessment was supposed to follow named EPA 8140 as the

method for OPP. The chain of custody from the field requested EPA 8141 + atrazine for the split samples; the chain of custody between ALS and their subcontractor, Sunlabs was changed to EPA 8270. The chain of custody from the field produced to Sunlabs (the primary laboratory) requested EPA 8141. The data was reported out from EPA 8270 which did not conform to the scope. Typically, EPA 8140 provides lower detection limits than EPA 8270 due to use of a more selective detector.

Page 14: Bullets 6&7: There are a wide variety of MDLs being reported by commercial laboratories. Were the labs told which criteria the data was going to be compared to? Were different labs contacted?

Page 17: 1st bullet: Please confirm that the 95% UCL of dieldrin exceeds the SQAG-TEC.

Page 17: 2nd bullet: Does the FWS concur with no risk for barium?

Page 17: 2nd bullet: The range of barium concentration defined by FDEP (Carvalho and Schropp, 2002) in the Florida DEPs Interpretive Tool for Assessment of Metal Enrichment in Florida Freshwater Sediment warns of the limitation that "the majority of the freshwater sediment systems used to build the sediment metals database from which this tool was developed came from central peninsular and north Florida. Therefore, this tool should be used to evaluate sediments from the same region". It goes on to say in the Recommendations: "… the interpretive tool should be used with a cautionary note outside of central peninsular and north Florida."

Table 1: SPLP should have a footnote.

Tables: A complete table listing the criteria and the found value and or detection limit would be useful to see at a glance the detection limit vs the criteria.

Appendix B Screening Level Ecological Risk Assessment

Page 3: 4th paragraph I have been unable to locate the full dataset.

Page 3: 5th paragraph: Which samples are discrete?

Page 4: 3.1.1 Does USFWS concur with this?

Page 4: 3.1.1 The range of barium concentration defined by FDEP (Carvalho and Schropp, 2002) in the Florida DEPs Interpretive Tool for Assessment of Metal Enrichment in Florida Freshwater Sediment warns of the limitation that "the majority of the freshwater sediment systems used to build the sediment metals database from which this tool was developed came from central peninsular and north Florida. Therefore, this tool should be used to evaluate sediments from the

same region". It goes on to say in the Recommendations: "... the interpretive tool should be used with a cautionary note outside of central peninsular and north Florida."

Page 5: 1st paragraph: Does the USFWS concur with the barium concentrations are not likely to cause effects?

Page 5: 4th paragraph: Does the USFWS concur with the lack of PEC exceedance in any sample and the unique properties of muck soils with the A-2 cultivated area suggest that the potential for toxic effects would be lower than predicted by SQAGs?

Page 5: 4th paragraph: Define unique properties.

Page 6: 3.1.3: The information is in conflict with the ESA assertion on page 13. The recommended value for selenium should be inserted in to the detected table 1 and footnoted.

Page 6: 3.1.4 I am unable to identify a Figure 2 in the hard copy report.

Page 6: Does USFWS concur with the recalculation of the 0.0003 ug/kg TEC value for atrazine to 587 ug/kg TEC for atrazine?

Page 6: 3.1.5 What is the half-life for 2,4-D?

Page 6: 3.1.5: Does USFWS concur with the calculation of the site-specific SQAGs for 2,4-D?

Table 1: comp-10 should be shaded for dieldrin concentration

Page 8: 2nd paragraph Does USFWS concur?

Page 8:5th paragraph: Was metribuzin applied recently or not?

Page 8:6th paragraph: Was phorate applied recently or not?

Page 9: 3.2 The cumulative risk did not include the data for barium. Barium data were not used because it was considered background. It those data were left in the average PEC-HQ would be greater than 0.5. Does USFWS concur with deletion of barium data?

Table 2: The value for SQAG PEC for dieldrin is incorrect in this table. The correct value is 0.062 mg/kg.

Page 10: 2nd paragraph: The text says that "a screening-level approach was used to identify COPCs by using the maximum composite sample concentration from the discrete sediment samples…" This does not make sense. There were no discrete samples…

Page 10: 3rd paragraph: Treatment of barium is inconsistent through this report. It was not used in Table 2 to calculate PECs-HQ but it was used in Table 3 to calculate HQs for aquatic – feeding birds.

Page 10: 3rd paragraph: The text says that atrazine is a chemical with low toxicity. How do the authors reconcile the 0.0003 mg/kg SQAG-TEC values; it is the lowest concentration of TEC for the compounds detected.

Page 11: 3.3.1 Does USFWS concur with this position?



United States Department of the Interior

FISH AND WILDLIFE SERVICE South Florida Ecological Services Office 1339 20th Street Vero Beach, Florida 32960



April 17, 2013

Robert Kukleski South Florida Water Management District 3301 Gun Club Road West Palm Beach, Florida 33406

Dear Mr. Kukleski:

The U.S. Fish and Wildlife Service (Service) has reviewed the document entitled "Phase II Environmental Site Assessment for the A-2 Flow Equalization Basin, Palm Beach County, Florida," prepared by Professional Service Industries, Incorporated (PSI). This report summarizes sampling results for the approximately 14,408 acre Talisman property.

Previous due diligence assessments were performed on the A-2 Flow Equalization Basin (FEB) parcels prior to the creation of the current "Protocol for Assessment, Remediation, and Post-Remediation. Monitoring for Environmental Contaminants on Everglades Restoration Projects", therefore a reduced sampling density of 10 percent was agreed to prior to the current assessment of previously cultivated areas in the project footprint. All point source concerns within the A-2 FEB were previously assessed and remediated as necessary. A total of 30, fifty acre grids were sampled using composite samples. Analytical results were compared to the Florida Department of Environmental Protection Sediment Quality Assessment Guidelines (SQAG) and the Florida Administrative Code Soil Cleanup Target Levels (SCTL).

Results

Barium concentrations (69 to 118 mg/kg) exceeded the SQAG threshold effect concentration (20 mg/kg) and probable effect concentration (PEC) (60 mg/kg) in all of the samples. Copper (53 to 110 mg/kg) was detected at concentrations that exceeded the recommended interim screening level for protection of the Everglade snail kite (*Rostrhamus sociabilis plumbeus*) (85 mg/kg) in eight of the samples collected. The calculated 95 percent upper confidence level (UCL) of the mean copper concentrations (83.1 mg/kg) was below 85 mg/kg. The metals chromium, mercury, and selenium exceeded the SCTL for leaching to surface water in several of the sample locations. The herbicides 2,4-D, metribuzin, phorate, and atrazine were detected at some locations with concentrations above the SCTL for leaching to surface water or ground water. Atrazine (27 to 3,500 μ g/kg) was relatively widespread, with detections at 16 of the sampling locations above the SQAG threshold effect concentration (TEC) (0.30 μ g/kg). The pesticide dieldrin was detected above the SQAG TEC (1.9 μ g/kg) in four samples, ranging from 2.7 to 5.1 μ g/kg. Atrazine and dieldrin were also analyzed with the synthetic precipitation leaching procedure (SPLP). Atrazine was detected in SPLP extract at concentrations above the Florida Administrative Code (FAC) groundwater cleanup target level (GCTL) and the FAC

Robert Kukleski Page 2

Surface water Cleanup Target Level (SwCTL). The detection limits for the dieldrin SPLP extracts were above the SwCTL.

Copper concentrations within the A-2 FEB did show some exceedances above the recommended interim screening level, but sitewide they are calculated to be below 85 mg/kg. In addition, the total organic carbon (TOC) content of the soils at the proposed A-2 FEB are high (20-50 percent) and will act to decrease the bioavailability of copper. The recommended interim screening level was generally established for sandy soils with roughly 1 percent TOC. To verify that copper does not present a risk to snail kites, PSI recommended a sampling program at the start-up of the A-2 FEB to monitor copper concentrations in surface water, periphyton, and any apple snails that may establish onsite. To address the exceedances of 2,4-D, atrazine, metribuzin, phorate, dieldrin, chromium, mercury, and selenium above the SCTL for leaching to surface water PSI recommended sampling surface water after start-up operations at the A-2 FEB.

Summary and Recommendations

After reviewing the analytical data, the Service concurs that the detected contaminant concentrations are unlikely to pose risk to Service trust resources at the proposed A-2 FEB. We agree that the proposed monitoring for copper is necessary to verify predictions of reduced copper bioavailability due to the high TOC. While the detected levels of barium could potentially impact the benthic community, it is unlikely that they would pose risk to federally listed species.

The Service agrees that an agrochemical best management practices (BMP) plan is appropriate to address the use of agrochemicals, if the property is used for agricultural purposes prior to project construction. We strongly recommend restricting any further use of copper and discontinuing use of atrazine a minimum of one year prior to project construction. If agrochemicals are applied during the interim use, then further sampling may be necessary to ensure that agrochemical concentrations are below thresholds for ecological risk.

Thank you for the opportunity to provide comments regarding the assessment in the A-2 FEB project area. If you have any questions, please contact Emily Bauer at 772-469-4335.

Sincerely yours,

for Larry Williams

Field Supervisor

South Florida Ecological Services Office

cc: electronic only

Robert Kukleski Page 3

Corps, West Palm Beach, Florida (Tori White) Service, Vero Beach, Florida (Sharon Kocis, Steve Mortellaro) PSI, Tampa, Florida (Stephen Long)



DEPARTMENT OF ENVIRONMENTAL PROTECTION

MEMORANDUM

TO: Joe Lurix, Air/Waste/WF Program Administrator ^N—

FROM: William Rueckert, Environmental Manager, Waste Compliance Assistance

& Enforcement Section WAR

DATE: April 4, 2013

SUBJECT: Phase II Environmental Site Assessment, A-2 Flow Equalization Basin, Palm

Beach County; Site No. COM_157258 (Talisman); Tract Numbers: D7100-044;

-047; -066; -067; -104; -139; -141; and D7200-005.

As requested by the Department's Office of Ecosystem Projects in Tallahassee, I have reviewed the document prepared for the South Florida Water Management District (District) by Professional Service Industries, Inc. (PSI) dated March 25, 2013 (received April 1, 2013) *Phase II Environmental Site Assessment, A-2 Flow Equalization Basin (Report), Palm Beach County, Florida*. The Department's review was performed following the "Protocol for Assessment, Remediation and Post Remediation Monitoring for Environmental Contaminants on Everglades Restoration Projects" known as the White Paper. The Waste Compliance Assistance & Enforcement Section has the following comments:

- 1. Based on the information and representations as presented, this Report adequately addresses the concerns of the Department's Waste Compliance Assistance & Enforcement Section with further discussion below. Therefore, the property addressed in this Report should be capable of being utilized for the intended end use as a flow equalization basin.
- 2. Start Up Operations the Department concurs that during the start up operation a one-time surface water and sediment sampling event should be performed. This sampling event should be performed at the 30- or 60-day period from inundation. In addition, after one year of operations, an additional surface water sampling event should be performed. Sample location, minimum of three, determinations should be based upon the highest concentrations of the listed parameters presented in this Report. The Department suggests three locations with the highest copper concentrations for the metals analyses. For example, sample collection should be in the vicinity of Comp-1, Comp-16, and Comp-30.

Phase II Environmental Site Assessment dated March 25, 2013 A-2 Flow Equalization Basin Page 2 of 2

Sample locations, minimum of three, for the pesticide and herbicide analyses should be in the areas of Comp-9, Comp-18, and Comp-28. The following parameters should be laboratory analyzed: pesticides and herbicides (2,4-D; atrazine; metribuzin; phorate) and metals (barium, chromium, copper, mercury and selenium).

- 3. Arsenic is not suggested for additional analyses but these soils should not be transported off site for uncontrolled disposal. As presented in Section 6.2, Recommendations, a soil management plan should be developed for project construction to ensure proper handling and disposal of the soils.
- 4. Also as presented in Section 6.2 of the Report, an agrochemical best management practices plan should be instituted during the continued use of agrochemicals on the property.

If you have any questions, feel free to contact William Rueckert at (561) 681-6679 or at William.Rueckert@dep.state.fl.us.

cc: (RPPS_Comp@dep.state.fl.us)

130267



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

June 14, 2013

Mr. David S. Hobbie
Deputy District Engineer
Programs and Project Management Division
U.S. Army Corps of Engineers
701 San Marco Boulevard
Jacksonville, FL 32207-8175

Dear Mr. Hobbie:

Subject: Request for Inclusion of a Section Entitled "Residual Agricultural

Chemicals" within the Central Everglades Planning Project Final Integrated Project Implementation Report and Environmental Impact

Statement

I am writing on behalf of the South Florida Water Management District (SFWMD) to request inclusion of a section entitled "Residual Agricultural Chemicals" to the Central Everglades Planning Project (CEPP) Final Integrated Project Implementation Report and Environmental Impact Statement. This request is in accordance with Paragraph 4 of the Comprehensive Everglades Restoration Plan (CERP) – Residual Agricultural Chemicals memorandum issued September 14, 2011 from the Assistant Secretary of the Army for Civil Works.

SFWMD has provided information to the Jacksonville District to fulfill the applicable requirements set forth in Paragraph 4 of the policy guidance for the CEPP and will work with the Jacksonville District to complete this section in the Final Integrated Project Implementation Report and Environmental Impact Statement.

Sincerely,

Temperince Morgan

Director

Office Everglades Policy and Coordination

TM/pv

c: Eric Bush, USACE Howard Gonzales, USACE Kimberley Taplin, USACE Tom Teets, SFWMD

Temperine Molgan

From: <u>Kukleski, Robert</u>
To: <u>Gued, Lisa R SAJ</u>

Cc: robert_frakes@fws.gov; Emily Bauer; Shafer, Mark D SAJ; "william.rueckert@dep.state.fl.us"; "Steve Long";

"andrew.cadle@psiusa.com"; "Joe Allen"; Davis, Murika R SAJ; Irfan, Muhammad SAJ; Taplin, Kimberley A SAJ; Taylor, Robert; Morrison, Matthew; Warner, Paul; Cooper, Abner; Thourot, Scott; Teets, Thomas M; Palmer,

Ray: Bassell, Richard; Bergstrom, Jayne; Virgil, Richard; Loehrlein, Vincent; Kivett, Jeff; Mitnik, John

Response To Additional USACOE Comments; Phase II Environmental Assessment (Addendum #1); Screening

Level Ecological Risk Assessment; A-2 Flow Equalization Basin Project; Former Talisman Sugar Corporation

Property (Tract No. D7 100-104)

Date: Friday, June 14, 2013 11:02:32 AM

Lisa:

Subject:

The South Florida Water Management District (SFWMD, or "the District") is submitting this response to address your requests for clarification on the Phase II Environmental Site Assessment (ESA) for the A-2 Flow Equalization Basin (FEB) that were received via e-mail on May 21, 2013; the comments were issued in response to the Phase II ESA - Addendum #1. We have provided each of your comments in italics below, followed by our response:

1. With respect to the FDEP letter, which standards will be used to evaluate the target compound water concentrations (if any) in the FEB after inundation?

Response: The FDEP concurrence letter, which was previously provided for the Phase II ESA did not specify which standards would be applied to evaluate target compound concentrations in the surface water in the A-2 Flow Equalization Basin (FEB) after inundation. However, the District is not permitting the FEB as a treatment works; and, therefore, the surface water standards for Class III surface water bodies, which are contained in Chapter 62-302, Florida Administrative Code (FAC) would apply.

2. With respect to the FDEP letter, what would be the repercussions if any of the targets exceeded the standards?

Response: The FDEP concurrence letter did not specify the repercussions for any target compounds that might exceed the surface water quality standards during the operation of the FEB. However, exceedences of the water quality standards for this FEB would be treated no differently than exceedences for any other constructed water body or reservoir that is operated by the District. When an exceedence is detected and confirmed through follow-up testing, a corrective action plan would be developed to reduce the chemical concentrations to below the applicable criteria. The District commonly employs adaptive management strategies to meet water quality standards, and the operation of the FEB might need to be altered to meet the water quality standards.

3. With respect to the USFWS letter, what concentrations of copper found in surface water, periphyton and apple snails after FEB inundation would be a cause for concern?

Response: As you are aware, SFWMD, USFWS, FDEP and USACOE are currently participating in a joint Copper Working Group to further our understanding of the fate and transport and potential ecological effects of copper in the Everglades environment. As part of this effort, we have jointly sponsored several studies which are currently underway to evaluate copper bioaccumulation, toxicity, desorption, and other important parameters that significantly impact the potential risks associated with exposure of the Everglades snail kite, and other species to copper in sediments. We believe that it is premature to set goals for allowable concentrations of copper in periphyton and apple snails at this time, but we will be in a better position to jointly set these goals after completion of these studies within the next 12-18 months, and prior to FEB construction. With regard to copper in surface water, the Class III surface water standard for copper would apply, and this value is hardness dependent.

4. With respect to the USFWS letter, what would be the consequences if copper concentrations exceeded the level of concern?

Response: Similar to the FDEP concurrence letter, the USFWS concurrence letter does not identify the consequences if the copper concentrations within the FEB exceeded the level of concern during operation. The District will utilize adaptive management techniques to address any exceedences of copper in surface water, periphyton, or snail tissue.

5. With respect to the USFWS letter, does the SFWMD agree with restricting further use of copper at the site and discontinuing use of atrazine a minimum of one year prior to project construction?

Response: The District does agree with the USFWS recommendation to restrict copper applications and to require the leasee to discontinue atrazine use a minimum of one year prior to project completion. It has been very common for the District to prepare and adopt agricultural chemical Best Management Practices (BMP) Plans which are implemented during interim use to prevent further degradation of a property prior to construction.

6. With respect to the USFWS letter, it says that "If agrochemicals are applied during the interim use, then further sampling may be necessary to ensure that agrochemical concentrations are below thresholds for ecological risk". Please confirm that SFWMD is still planning on leasing the land for the A-2 and agrochemicals will be applied. Please clarify what further sampling would be necessary to ensure that agrochemical concentrations are below threshold for ecological risk.

Response: The current lease on the property varies, with some components of the property leased until 2015 and others until 2019. The portions leased until 2019 can also be extended beyond that timeframe if the Project is not ready for construction. The District intends to allow continued farming on the property, subject to the proposed BMP restrictions, during the interim use period. Upon termination of the lease, the SFWMD Environmental Science Unit (ESU) will conduct an Exit Assessment on the property. The Exit Assessment typically involves a thorough reconnaissance of the property to identify any evidence of spills that may have occurred during the lease period (e.g., dead vegetation, staining, odors), or new chemical sources (e.g., mix/load areas, tanks, etc.) with a high potential for spills. A governmental database search is also typically performed to identify any reported spills or environmental violations that have been reported on the property during the lease period.

If any potential point sources are identified, soil and groundwater samples would typically be collected from these areas. The District would also typically perform re-sampling within the cultivated fields at a few grid locations to verify current conditions. During this re-sampling, we collect samples from previously sampled grids for comparison of current conditions with the Phase II ESA results. We typically perform re-sampling at 5-10% of the previously sampled grids. SFWMD will submit a workplan for any Exit Assessment sampling to FDEP and USFWS to obtain concurrence prior to conducting the additional work.

We trust that these responses will be satisfactory to address the USACOE's concerns regarding the report. If you have any additional questions, please do not hesitate to contact me at (561)686-8800, ext. 3337.

We value your opinion. Please take a few minutes to share your comments on the service you received from the District by clicking on this link

< http://my.sfwmd.gov/portal/page/portal/pg_grp_surveysystem/survey%20ext?pid=1653 > .

H.3 Comprehensive Everglades Ecosystem Restoration Plan Environmental Risk Assessment Protocol Documents

ANNEX H

PART 3

CERP ENVIRONMENTAL RISK ASSESSMENT PROTOCOL DOCUMENTS

1) Whitepaper to Address Florida DEP Remaining Concerns about the Ecological Risk Assessment (ERA) Protocol Prepared by Joseph Allen, Mark Lewis, Ph.D., and Shahrokh Rouhani, Ph.D., P.E. NewFields Companies, LLC

2) 3/14/08 FINAL VERSION
ATTACHMENT 1, PROTOCOL FOR ASSESSMENT, REMEDIATION AND POSTREMEDIATION MONITORING FOR ENVIRONMENTAL CONTAMINANTS ON
EVERGLADES RESTORATION PROJECTS

Whitepaper to Address Florida DEP Remaining Concerns about the Ecological Risk Assessment (ERA) Protocol

Prepared by
Joseph Allen, Mark Lewis, Ph.D., and Shahrokh Rouhani, Ph.D., P.E.
NewFields Companies, LLC

Prepared for South Florida Water Management District

October 15, 2007



1.0 INTRODUCTION

The South Florida Water Management District (SFWMD) routinely acquires large agricultural tracts for incorporation into water storage and water quality improvement projects. Many of these tracts have residual chemicals present in the soil associated with routine agrochemical application during the period of agricultural use. In order to characterize the level of chemical impacts on these tracts, SFWMD and its land acquisition contractors have utilized a protocol for sampling and subsequent risk assessment ("the protocol") of these properties which was developed by the United States Fish and Wildlife Service (USFWS) in cooperation with SFWMD. This protocol has been in use for a number of years and has been revised occasionally to reflect lessons learned through the assessment process. The intent of the protocol is to ensure that the sampling density and methodology is consistent between project objectives and is sufficient to adequately characterize these properties with regard to chemical impacts and potential future use. As the protocol states (USFWS, 2004, page 1):

"Many of these lands proposed for acquisition will support functioning water reservoirs (storm water treatment areas, Aquifer Storage and Recovery detention reservoirs, and storage reservoirs) designed to impound a wide range of water capacities and depths over long periods of time. Additionally, many of these reservoirs will cover large expanses of several thousand acres, establishing local and regional aquatic ecosystems as well as providing foraging habitat for waterfowl and other aquatic wildlife. Without appropriate risk management and attention to design alternatives, the subsequent release of these pesticides and trace metals into CERP [the Comprehensive Everglades Restoration Plan] wetlands, reservoirs, and conveyances will provide exposure pathways to the regional fish and wildlife communities in south Florida."

Ultimately, the data collected using the USFWS protocol are utilized in performing ecological risk assessments (ERA) and in the decision making process as to whether the land is suitable for the proposed water quality projects, or whether remedial actions are required to protect the receptors that may utilize the habitat created by the proposed water quality improvement project.

This document has been prepared in response to concerns raised by the Florida Department of Environmental Protection (FDEP) regarding the ERA guidance. In recent months, FDEP has provided comments on environmental reports for tracts within the BBCW and C-111 projects, and other SFWMD projects. On October 20, 2006 FDEP provided SFWMD with a list of comments and concerns related to the ERA guidance. A meeting to discuss these comments was held on November 3, 2006 with technical experts representing FDEP, USFWS and SFWMD with the primary goal of addressing FDEPs concerns regarding the ERA guidance and associated sampling protocols. These comments, including the SFWMD responses to the comments were provided at the November 3, 2006



meeting. A round of comments based on the SFWMD responses was provided to SFWMD on February 26, 2007 by FDEP.

To address the above FDEP comments, a draft version of this document was submitted to FDEP on July 9, 2007, which was followed by a joint FDEP/SFWMD meeting on July 12, 2007. Discussions during this meeting indicated that the submitted draft document satisfactorily addressed most of the concerns raised by FDEP. A final round of comments, highlighting the remaining concerns, was provided to SFWMD on September 9, 2007 by FDEP. This document has been revised to address these comments.

2.0 OUTLINE OF THE ECOLOGICAL RISK ASSESSMENT GUIDANCE

The ERA guidance outlines a multi-phased approach toward determining the presence or absence of hazardous materials and the potential for ecological risk associated with their presence. The assessment steps provided in the ERA guidance are as follows:

- An initial Phase I Environmental Site Assessment ("ESA") is performed according to American Society of Testing and Materials ("ASTM") Standard Practice E1527-00 with the goal of identifying the presence or likely presence of any hazardous substance of petroleum products on the property.
 - o The Phase I ESA includes a thorough site inspection, review of historical aerial photographs, land use records, and review of pertinent environmental databases, as well as onsite personnel interviews. Information acquired via the Phase I ESA is used to determine the necessity for a Phase II ESA.
 - If the Phase I ESA indicates the presence of contamination or that the potential for contamination exists, a Phase II ESA is initiated that includes coordination with the USFWS.
- A Phase II ESA is used to identify sources and locations of contamination, specifically contaminants of potential concern (both human health and ecological), and provide recommendations for additional sampling, testing or risk assessment; and corresponding corrective actions.
 - The Phase II ESA is focused on potential point sources at the property along with additional limited sampling within canals or agricultural fields.
 - Data are used to conduct a screening-level ERA (SLERA) using available benchmarks, such as the Florida Sediment Quality Assessment Guidelines (SQAGs) and/or surface water quality standards and assessment of risk to USFWS trust species.



 The ERA guidance recommends risk assessment protocols for further risk-based evaluation should the results of the SLERA indicate that risks may be elevated at the site.

3.0 OUTLINE OF THE PHASE II SAMPLING PROTOCOL

The sampling protocol for Phase II ESAs provides data for risk assessment purposes in both potential point source areas and within current or former agricultural areas. The media sampled may include soils, sediments, groundwater and/or surface water (if present).

- Phase II ESA sampling is generally focused on facilities (current and/or former) and potential point sources on the property.
 - Discrete samples are collected from all potential source areas identified during the site inspection or historical review conducted as part of the Phase I ESA and may include: pesticide mixing and loading areas, storage sheds, vehicle turn-arounds, airstrips, cattle dip tanks, pumping stations and burn areas.
 - Sediment and surface water data are collected from canals at the site.
- Phase II sampling also includes the collection of data from the current or former agricultural areas at the property following a standard protocol. The collected data in the former agricultural areas are intended to provide representative average concentrations over the specified grids for risk assessment purposes. The proposed sampling protocol does not recommend the use of grid-wide values, especially grid composite data, to delineate and/or evaluate extents or magnitudes of potential hot spots.
 - On small properties (< 500 acres), discrete samples are collected at regular intervals across the property with a density of at least one sample per 10 to 20 acres with a minimum of 10 samples.
 - On large properties (> 500 acres), a composite sampling protocol is instituted based on 50-acre grid cells.
 - On very large properties, a previously determined number of grids are randomly selected for sampling.
 - On smaller properties (e.g. < 1000 acres) an attempt is made to sample all grids.
 - o 50-acre grids are stratified by agricultural use.
 - o Grids are divided into ten 5-acre plots.
 - o A discrete random sample is collected from each 5-acre plot.
 - Samples are composited from all discrete samples within the 50acre grid.
 - A second aliquot from each 5-acre grid sample is typically archived for future analysis.
 - Copper is analyzed in all 5-acre discrete samples.



4.0 RISK MANAGEMENT GOALS AND GUIDING PRINCIPLES FOR THE CERP LAND ACQUISITION AND ASSESSMENT.

Risk Management Goals (RMGs) are an important part of assessing risk (EPA 1998). The RMGs for an ERA form the basis of the sampling design and process by which risks are assessed. The RMGs implicit in CERP guiding documents and ERA risk assessment and management process are as follows:

- The overall purpose of CERP is to manage ecosystem nutrient loading and hydrology.
- The CERP process recognizes that agricultural chemicals, and the risk of adverse effects from them cannot be completely removed (i.e., cannot manage to NO Risk).
- The benefits realized from reclamation of wetland and hydrologic function through CERP outweighs risk of adverse effects from residual agricultural chemicals.
- Risks to USFWS trust species are managed to avoid unacceptable adverse effects on "individual" basis rather than on a population basis.
- Ecological function from other aquatic receptors (benthos and fish) is protected on populations and community basis, some effect is tolerated if ecosystem function is protected.
- Risks and ecological function are assessed and managed on a landscape scale rather than on the smaller scale typically encountered on a regulated industrial or commercial cleanup site.
- The ability to assess ecotoxic risk is limited by available resources (time and money).

The ERA process design is based on the primary RMGs of protecting Trust wildlife species, and ecological function on a landscape scale. The process for assessing benthic effects is based on this underlying principle in that:

 The Assessment Endpoint for the benthic community is based on function of the community as a whole ecosystem occupying the landscape. Functions of benthos include nutrient cycling (including organic carbon) and to provide important prey base for the aquatic food web. These functions are generally scaled over large, landscape levels rather than at small scales and can tolerate small-scale disturbances provided that the majority of the community



remains viable. The overall impact on function should be related to the degree to which the system is affected.

- The system level effects from direct sediment toxicity to benthos (or anything else), if they occur, do not extend beyond the boundaries of the affected portion of the site (whereas bioaccumulation effects can affect area and resources beyond contaminated spot).
 - As a result, a relatively small portion of an area may be severely affected, without affecting function in the system.
 - Conversely, a large area with relatively small level of effects can have significant system effects because a proportionately larger fraction of the system is affected.
- The RMGs relate to restoring ecosystem function and protecting Trust wildlife species. For benthos and other ecological functions, this typically applies to landscape scales of the project areas. As a result, the ERA assessment goal for benthos is geared toward detecting large areas of even small effects, possibly sacrificing resolution of proportionately small areas of higher impact. This is consistent with the goals cited in the USFWS/SFWMD Guidance. This is driven, in part, by limited resources (time and money) to investigate such large tracts.

5.0 ADDRESSING FDEP KEY CONCERNS AND RECOMMENDATIONS

As noted, FDEP provided a series of comments about various aspects of the sampling protocol. Some of these comments were satisfactorily addressed by SFWMD. The remaining FDEP comments can be grouped into the following key concerns:

- Reliability of composite samples proposed in large property investigations;
- Random selection of grids for composite sampling and analysis in very large properties;
- Analysis of resulting composite data in ERA decisions;
- Sufficiency of collected data in agricultural areas of the investigated properties;
- The use of copper Threshold Effect Concentrations (TECs), Probable Effect Concentrations (PECs) and the interim benchmark for the protection of the Everglades snail kite.
- The overall protectiveness of the process for benthic receptors (i.e. the aquatic community).
- The use of bioaccumulation and toxicity testing studies.
- Additional analysis for heavy metals.
- · Canal sediment sampling.
- Fish tissue sampling.



The following sections address the above concerns and provide recommendations where appropriate.

5.1 Discrete Sample Compositing

In large properties, discrete sampling at short intervals would be at best cost prohibitive, if not impracticable. Reducing the sample density, however, can lead to under-representation of large portions of the property, as well as elevated likelihood of missing hotspots. Composite sampling is a compromise, under which large numbers of discrete samples are collected, but composited prior to laboratory analyses. As early as the 1980s, the United States Environmental Protection Agency (EPA) recognized the utility of composite sampling in large site investigations (e.g. EPA, 1989, Section 6.6).

The main advantage of composite sampling is its expanded spatial coverage, which is achieved without the ensuing increase in analytical costs. The proposed composite samples, which are unbiased and representative samples of their constituent aliquots, have the following characteristics:

- Composite samples yield unbiased and representative estimates of average concentrations over exposure areas that have ecologically relevant scales for large properties. For example, comparison of an individual composite sample to appropriate ecological benchmarks allows an appropriate remedial decision concerning the entire 50-acre grid.
- For the aquatic community endpoint, site-wide averages are an appropriate scale. Composite samples directly provide estimates of exposure and potential risk to the entire aquatic community that may colonize the site.
- For the USFWS trust species, risks to individuals are more important than
 risks to the population due to their threatened or endangered status. This
 sampling protocol allows for average concentrations to be measured directly
 over areas that may encompass the entire foraging range or only a portion of
 the foraging range depending on the species being evaluated.

The primary disadvantage of composite samples is the likelihood of masking hotspots by diluting the elevated discrete samples with cleaner aliquots. This masking can be viewed as a form of a "false negative," i.e., the probability of yielding clean composite results, while certain portions of the grid may exceed ecological benchmarks.

The protocol attempts to minimize the above disadvantage by including rules according to which all discrete aliquot samples associated with an exceeding composite sample should be analyzed individually. As noted, recent adjustments to the protocol have also called for the analysis of the archived discrete aliquot samples from adjacent grids.



The above protocol rule addresses the false negative problem associated with elevated composite samples. The question that remains is the problem of false negatives among non-exceeding composites. For this purpose, available data can be used to quantify such likelihoods. For example, consider the discrete and composite copper concentrations from 37 50-acre grids from various sites that have been sampled under the Phase II ESA protocol, as listed in Table 1. Figure 1 shows the range of variability of discrete aliquot samples associated with each composite. The issue is whether these exceeding discrete values are ecologically significant.

The probability of an aliquot exceeding a benchmark in a given grid can be computed as the ratio of the number of exceeding discrete aliquots in that grid over its total number of aliquots. Using the above copper data, Table 2 lists the aliquot exceedance rates in individual grids based on the three copper benchmark levels routinely used in the SLERAs of 85 ppm (USFWS Interim Benchmark for the Everglades Snail Kite), 31.6 ppm (TEC), and 150 ppm (PEC). On average, the aliquot exceedance in individual grids increases with decreasing ecological benchmarks and increasing composite values.

To address FDEP's concern about false negatives associated with non-exceeding composite samples, a supplementary step can be added to the protocol. For this purpose, a subset of non-exceeding grids is randomly selected, in which all discrete aliquots are laboratory analyzed. These discrete results are then added to discrete aliquot data produced for exceeding grids. When selecting the subset of non-exceeding grids, the following should be considered: (1) the non-exceeding grids targeted for discrete sampling shall not be clustered; and (2) the number of non-exceeding grids targeted for discrete sampling shall be at least 20% of the total number of non-exceeding grids but not greater than 10.

For each grid, the aliquot exceedance rate is computed based on the appropriate ecological benchmarks. The resulting rates are then listed according to the ascending order of their corresponding composite values, as listed in Table 2. Using these results, then the average aliquot exceedance rates are computed in the ascending grids (i.e., all grids having a composite value equal or less than the given grid). Such results allows the analyst to identify the composite concentration beyond which ascending average aliquot exceedance rates is greater than a pre-determined level, e.g. 5%. This composite threshold value is then considered as the area-specific trigger level. The trigger values for the example copper dataset based on the above three ecological benchmarks are listed in Table 2.

Consistent with the FDEP's recommendation, the final area-specific trigger levels must meet the following criteria: (1) trigger levels shall be determined on a chemical- and area-specific basis; and 2) if the empirically derived trigger level



exceeds the chemical-specific PEC (or PEC equivalent) benchmark then the benchmark shall be used as the trigger level.

Upon the above determination, all grids associated with composite concentrations in excess of the trigger level either will be remediated in their entirety, or their discrete samples will be laboratory analyzed for all contaminants of concern and investigated in a manner similar to other previously analyzed discrete samples. This supplementary step: (a) enhances the conservative basis of the protocol, (b) reduces the chances of false negatives consistent with areaspecific results, and (c) avoids reliance of arbitrary trigger levels, such as 1/10 of a benchmark.

As the final comments of FDEP indicate, although the above approach reduces the likelihood of false negatives, it does not eliminate the chances of such occurrences. The question that immediately arises is whether the proposed approach leaves unreasonable data gaps regarding undetected hot spots. For this purpose, the following must be considered:

- The majority of hot spots are likely to occur within grids associated with composite concentrations in excess of trigger values. Therefore, although such hot spots may go undetected individually, they will be addressed collectively through proposed grid-wide remediations or further investigation.
- Under the proposed approach, the chances of missing isolated hot spots in non-exceeding grids, i.e. grids with composite concentrations less than trigger values, will be maintained below a pre-determined level, e.g. 5%. Given the fact that non-exceeding grids cover only parts of the area, the cumulative extent of undetected, isolated hot spots on an area-wide basis will always remain below the pre-determined level.
- The cumulative extent of undetected, isolated hotspots is further reduced by the fact that in the revised approach, based on the FDEP's recommendation, trigger values are ensured to remain at or below their corresponding benchmark criteria, i.e. the final chances of missing isolated hot spots in nonexceeding grids will always be at or below the pre-determined level.
- Regardless of sampling density, any field measurement entails the likelihood of a false negative. As EPA guidance (1989, page 2-1) states the question is: "How can you balance the two sets of possibilities: the chance that the site is contaminated even when the sampling shows attainment of the cleanup standard, and the chance of contamination when the majority of samples taken show the site to be clean? The answer is to evaluate the potential magnitude of these two errors and balance them using the statistical strategies described in [EPA (1989)]." This is exactly how SFWMD approached the problem and addressed it in accordance with EPA Guidance (EPA, 1989).



Considering the above, SFWMD concludes that the proposed sampling protocol provides a balanced approach, which maintains the chances of false negatives at a reasonable level. Language addressing FDEP's concerns regarding the accumulation of risk based on unidentified, small hot spots will be included as an uncertainty in all future risk assessments.

5.2 Random Selection of Grids

As noted, the protocol prescribes random selection of a pre-determined number of 50-acre grids for composite sampling and analysis in very large properties (>1000 acres). FDEP raised concerns about the fact that such random selections may lead to data gaps and uneven sampling of the property resulting in under-representation of large portions of the property.

Theoretically, the homogeneity of the delineated properties mitigates concerns about potential gaps and under-representations. In fact, the ERA Phase I investigation is primarily focused on ensuring the homogeneity of the investigated properties by excluding potential hotspots and point sources. The chance, however, exists that random selection of grids may leave certain zones of a property under-represented.

To address the above concern SFWMD proposes to divide very large properties into super-grids, each consisting of about 25 50-acre grids, and then randomly select a pre-determined number of grids from each super-grid. This stratified random sampling, which is consistent with EPA Guidance (EPA, 1989, Section 6.5.2.2), addresses the coverage issue, while preserving the unbiased nature of the sampling process, without undue increases in the overall cost of the sampling or analysis effort.

5.3 Analysis of Composite Data

FDEP has raised a number of comments concerning the use of composite data in remedial computations and decisions, specifically with regards to maximum and the upper confidence level of the mean (UCL) computations. Comments indicate that the main concerns stem from the apparent treatment of composite values, which are physical averages of a finite number of aliquots, as discrete values.

Any sample is representative of a given volume. The use of discrete and composite data is predicated on the following fundamental requirements that are already imbedded in the protocol, including:

 Samples representative of different volumes shall not be mixed in any statistical computations. For example, the UCL of the mean concentration



over an area cannot be calculated based on a mixture of composite and discrete samples.

- Estimates, such as mean or maximum concentration, computed based on composite or discrete samples, shall be considered as representative of the volumetric base of their constituent sample data.
- ERA decisions must be made based on sample data that have volumetric bases consistent with the given decision.

The computational procedures in the protocol are based on strict separation of composite and discrete samples. These procedures fully recognize the fact that composite data generally have lower standard deviations when compared to discrete datasets. However, many statistical procedures have self correcting mechanism to account for such differences. For example, discrete data are usually more numerous than composite data, e.g. Table 1. However, when calculating the UCL, the higher standard deviation of the discrete aliquot copper data is compensated by their larger sample size. As a result, UCLs of the mean based on both discrete and composite data would yield nearly similar results. As listed in Table 3, in the example dataset, although discrete aliquots have a higher standard deviation, due to their much larger number, yield a lower UCL when compared to the one calculated based on composite data.

Such self correcting mechanism does not exist for composite sample statistics. For example, on average, the maximum composite concentration in a given property is bound to be less than the maximum discrete concentrations. For example, see Table 3. Use of such sample statistics in an ERA decision is appropriate, if only the volumetric base of the composite data are considered as consistent with the underlying assumptions of the given decision.

5.4 Sufficiency of Composite Data

FDEP has raised concerns about the potential insufficiency of composite datasets for characterizing large properties. In statistical terms, large sample sizes are required for characterization of highly variable contaminants (see EPA, 1989, Box 6.10, page 6-14). The protocol pursues procedures to ensure the homogeneity of the delineated properties. Implicit in this approach is the low level of variability among the contaminants of concern within the delineated area. However, definitive confirmation of the data adequacy occurs upon the completion of the sampling effort when UCL of the mean over the entire area is computed.

Given the unbiased and representative nature of composite samples, if the computed UCL is less than ecological benchmarks, then consistent with EPA guidance (EPA, 1989, Section 6.4.3), the property as a whole can be considered as clean and the sample size can be viewed as adequate. In contrast, if the



resulting composite data display high variability, then the computed UCL may exceed ecological benchmarks, even when the computed mean is low. Under such a condition, the sample size can be viewed as inadequate for determining the clean status of the property.

If data inadequacy is determined, specific alternative can be pursued, including: (a) additional grid sampling; or (b) segregating grids that cause elevated standard deviations and repeat the process for each part separately. The segregation of composite data into statistically homogeneous subsets can be accomplished using techniques, such as the probability plot analysis (DON, 2002).

The above post-sampling analyses not only provide appropriate data for ERA decisions, but also confirm the sufficiency of the data to reach the appropriate decision.

5.5 The Use of Copper Benchmarks

Comments from FDEP have indicated concern over the application of the TEC and PEC copper benchmarks along with the interim benchmark for the protection of the Everglades snail kite. The comments have suggested that the snail kite benchmark appears to supersede all other values in risk assessment conclusions and risk management decisions.

Current SFWMD practice is to analyze all discrete 5-acre grid subcells from sampled 50-acre grid cells for copper. As a result, copper is evaluated in all current SLERAs conducted at citrus farms on a discrete sample basis only. This is an example of a protocol change made in response to agency (USFWS) comments.

In practice, all copper data are screened against the TEC. If the maximum concentration (grid composite or discrete sample) exceeds the TEC, the copper distribution is further evaluated by identifying the (discrete) grid cells in which the TEC or the PEC is exceeded. The results are presented in reports. Copper concentrations in all samples are also compared to the 85-ppm snail kite benchmark and the locations exceeding this value are identified.

Based on the results of the SLERA, risk managers at SFWMD make decisions on corrective actions and/or decisions to do more extensive ecological risk analysis, including toxicity testing, bioaccumulation testing, and elutriate testing as appropriate to the chemicals and receptors identified in the Phase II analysis.

Remediation for copper is usually based on exceedance of the snail kite screening value (85 ppm). Toxicity test results used for development of the SQAGs indicate that the 85-ppm value is protective of benthos. The snail kite value is approximately 57% of the copper PEC (150 mg/Kg). Although specific



data for copper are not available for review, FDEP (2003) indicates that an average PEC-quotient (PEC-Q) less than 0.5 (50%) for all chemicals combined corresponds to less than 20% toxicity in laboratory tests (See Attachment A, Table 4.10). This also applies to PEC-Q for combined metals (see Table 2 in USEPA 2000). This percentage is within the range corresponding to identification of TECs (See Attachment A, Table 4.8). Therefore, site management decisions made to protect snail kites based on this value appear to be protective of benthic invertebrates.

5.6 Overall Protectiveness of the ERA Process for the Aquatic Community

Comments received from FDEP have indicated that the use of the PEC value for screening purposes is not acceptable and have suggested the use of the PEC divided by a safety factor (i.e., 1/10 of the PEC) for use in the SLERA. FDEP comments also suggest that risk from combinations of chemicals (i.e., cumulative risks) are not adequately represented, and that sediment toxicity testing should be used to assess this aspect of risk to benthos.

SFWMD disagrees that 1/10 PEC should be used as a screening value. In response to past comments from FDEP and USFWS, the ERA screening process that is implemented is more conservative than described in the guidance and essentially equivalent to what FDEP has suggested. The process described above for copper is also applied to all other chemicals detected at each site. All chemical results are first screened against the TEC. For properties smaller than 500 acres this means that each 5-acre parcel is screened. For larger properties, this includes 50-acre grid composite samples. All screening results are presented in the ERA reports.

FDEP (2003) recommends using a TEC as a screening level, below which adverse effects on benthics is considered unlikely. For most organic chemicals, the TEC is less than 20% of the PEC, and for many important insecticides, less than 10% (Table 4). For metals, the ratio is higher, but still protective based on the RMGs described in previous sections. Therefore, the level of conservatism implied by screening against the TEC is near that requested for composite samples in FDEP's comment.

To address the issue of a cumulative risk to benthos from multiple chemicals, SFWMD proposes adding the PEC-quotient (PEC-Q) method to the screening process (FDEP 2003). Based on data presented by FDEP (2003), the SFWMD proposes to use a mean PEC-Q of 0.5 as a screening level. Samples from the Southeastern US with mean PEC-Q values less than 0.5 exhibited detectable toxicity in less than 20% of samples (See Attachment A, Table 4.10). FDEP guidance relies upon TECs as screening levels, and TECs typically represent concentrations at which 15-30% of toxicity tests show positive results (See



Attachment A, Table 4.8). Therefore, a PEC-Q corresponding to equivalent toxicity would offer similar protection.

Results could be used to determine whether corrective actions can be used to reach acceptable conditions. If corrective action decisions cannot be made on the basis of the above, then an expanded ERA will be performed for the site. The scope for the expanded ERAs is dependent upon results of the SLERA, and on site-specific conditions and data needs. In the past, the expanded risk assessments have included toxicity testing to varying degrees. Use of toxicity testing as part of an expanded ERA may be considered. SFWMD proposes that standard testing procedures be used to maintain consistency.

5.7 Bioaccumulation and Toxicity Testing Studies

In cases where expanded ERAs are necessary, additional data are required that allow the ERA to move beyond the typical SLERA stage. The USFWS/SFWMD guidance document provides some examples of the types of testing that could be done as part of an expanded ERA. Comments received from FDEP have provided additional suggestions.

In current practice, the use of expanded ERAs has been minimal. The Phase I/Phase II ESA process associated with the acquisition process requires relatively quick turn-around in the initial 'screening' stages. On a project-specific basis, long-term investigations (e.g., long-term bioaccumulation testing) are not feasible in the initial stages. SFWMD practice has been to make conservative decisions on corrective actions to expedite process.

Expanded ERAs have been conducted under USFWS oversight in cases where decisions on corrective actions are not possible based on screening assessments. Such assessments have included bioaccumulation and toxicity testing. Study designs have been based on EPA and ASTM standard methods.

SFWMD is willing to combine data from past bioaccumulation and toxicity testing exercises to glean trends in bioaccumulation rates, and to support the development of South Florida benchmarks based on toxicity test results. Results can be used to help guide use of toxicity tests and bioaccumulation testing in the future.

SFWMD is also willing to consider research, or use of non-standard methods on a separate path. However, schedule and budget constraints in the Phase I/II process must be considered. The SFWMD agrees that additional types of data may be valuable as part of an expanded ERA and that consultation with FDEP can be beneficial to the successful completion of an expanded ERA.



5.8 Additional Analysis for Heavy Metals

The FDEP has requested that the SFWMD consider routinely analyzing soil, sediment, and groundwater samples for metals such as cadmium, chromium, boron, vanadium, nickel, and zinc because these heavy metals may be present in pesticides.

The SFWMD already routinely analyzes samples for cadmium and chromium, as part of the eight Resource Conservation and Recovery Act (RCRA) metals suite. However, these metals have not typically been detected at concentrations to raise any human health or ecological concerns.

A detailed evaluation of agrochemical application is typically conducted as part of the Phase I environmental site assessment (ESA) portion of the CERP ERA process. This evaluation includes interviews with the property manager regarding the type, quantity, timing, and method of application of agrochemicals. The evaluation also typically includes a review of material safety data sheets (MSDS) for chemicals which are handled by the property manager. Based on the SFWMD's experience, the chemicals cited by FDEP as potential components of pesticides have not been noted on any reviewed MSDS. In the event that any of these metals were noted in the MSDS, the analytical suite for the Phase II ESA would be expanded to include these chemicals. The SFWMD does not believe that routine analyses for these metals are warranted. Therefore, the SFWMD proposes to conduct these analyses on a case by case basis, as warranted by the Phase I ESA results.

5.9 Canal Sediment Sampling

The FDEP has suggested expanding the sampling of sediments in site canals as a potential screening tool for the CERP ERA protocol. While limited canal sediment sampling is typically performed as a component of the ERA protocol, the SFWMD's experience indicates that expanded canal sediment sampling is not likely to be an effective screening tool. Currently, canal sediment sampling is typically limited to potential point source areas where run-off of agrochemicals into the canals appears likely. A limited number of canal sediment samples are also typically collected in areas where canals converge or in other areas which the sampler believes would most likely be impacted.

One of the major concerns with using canal sediment sampling as a screening tool is the high potential for false negatives due to the fact that most agricultural canals are dredged on a routine basis. In many cases, the SFWMD has found a complete lack of sediments for sampling, or the chemicals of concern in the site soils have been banned for many years (e.g., DDT) and the canals have been dredged multiple times since the last application.



Additionally, since very few canals originate and terminate on the same property, it is very difficult to conclude whether the sediments in the canal originated onsite or off-site. The presence of absence of a chemical in the canal sediments appears to be a poor predictor of whether the chemical will be detected in the site soils.

Lastly, the presence of contaminants in canal sediments would probably be a minor contributor to ecological risk on agricultural properties after they are converted to water storage or treatment areas. The relatively low contribution to the overall ecological risk is also associated with several factors related to the typical construction characteristics of these projects.

- (1) Most of the canals within the areas proposed for flooding are backfilled during construction to promote sheet flow across the storage areas. The backfilling of the canals would eliminate the exposure pathway to contaminated canal for ecological risk.
- (2) The canals generally represent a very small percentage of the overall footprint of the eventual project areas, so they do not represent a significant portion of total habitat area when compared to the project scale.
- (3) Existing conditions in many remaining canals would typically not be preferred habitat for wading birds and other sensitive receptors due to steep banks that prevent shallow water areas needed for emergent vegetation and that are preferred by wading birds.

If canal segments are to be included in project plans as part of the deepwater refugia, then samples will be collected from segments that are to remain. However, these segments cannot be identified during the Phase I/II process because detailed designs are not available.

5.10 Fish Tissue Sampling

The FDEP has suggested the collection of fish tissue samples from existing canals on agricultural properties as a screening mechanism for evaluating cumulative ecological risk. The SFWMD acknowledges that fish tissue analysis may be an appropriate tool in post-construction monitoring and adaptive management of the CERP projects. However, pre-construction sampling of fish within existing canals would not be an effective tool in making decisions about corrective actions or evaluating post construction conditions.

Foremost, it must be acknowledged that most of the canals on these agricultural properties cross many properties. Both the surface water and fish in these canals move freely between sites. While the home range of smaller fish may be solely within the subject property boundaries, the fish are exposed to water,



sediment, and possibly food sources that enter the subject property from upgradient areas. As a result, it would not be possible to infer that any accumulation of agrochemicals in fish tissue is associated with the subject property.

The construction of the CERP projects typically involves significant alteration of the surface water hydrology and habitat on these agricultural sites. Therefore, post-construction conditions are likely to be vastly different from pre-construction conditions. It is likely that most of the existing fauna on these properties would be excluded from the proposed water storage areas due to significant alteration of the habitat during and after the construction stage. For example, most existing fish in the site canals would move off-site during the draining and filling of on-site canals and other disruptive construction activities.

The SFWMD has limited experience that indicates that fish tissue may not be a reliable indicator of sources of contamination in sediments. On one particular site, no significant concentrations of toxaphene were detected in fish tissue samples collected from existing canals where high toxaphene concentrations were present in the soils of the adjacent property. Additionally, the interpretation of the data is likely to require iterative sampling and negotiating access to off-site properties in order to determine whether the source of any identified fish tissue burdens are related to on-site or off-site sources. Such a process is not likely to fit into schedule available during the property acquisition process.

Fish tissue samples collected on a project-wide basis may be good indicators of contaminants that may have the potential to cause risk following construction of the project. Such information could be used to focus on the contaminant types (and associated land uses) that are important to manage or control through design and management of the reservoirs and STAs. However, such samples do not appear to be a useful tool in the relatively narrowly focused decisions associated with the property acquisition Phase I/II process.

6.0 SUMMARY

The ecological risk assessment protocol designed and utilized by SFWMD and USFWS represents a defensible and adequate approach to making informed risk management decisions regarding the purchase of property to be utilized in various SFWMD projects.

This document was prepared in order to address several concerns regarding the protocol that have been raised by FDEP. These concerns have been grouped into ten (10) categories and the conclusions reached in each for each of these topics following discussions with FDEP are as follows:

Reliability of composite samples proposed in large property investigations.



- An area and chemical-specific trigger value that is equal or less than the PEC benchmark (or PEC equivalent benchmark) will be calculated and used to indicate grids requiring discrete sample analysis.
- Random selection of grids for composite sampling and analysis in very large properties.
 - On very large properties, using a 'super-grid' system, blocks of 50-acre grid cells will be created and a random subset of those grids will be sampled in a stratified random sampling design to ensure more uniform sample coverage.
- Analysis of resulting composite data in ERA decisions.
 - Statistical calculations will not mix composite and discreet data and estimates of the mean will be noted as being calculated on a volumetric basis.
- Sufficiency of collected data in agricultural areas of the investigated properties.
 - Additional data may be collected if the non-point source dataset is deemed to be statistically inadequate.
 - Discrete samples will continue to be collected at all known point-source locations
- The use of copper Threshold Effect Concentrations (TECs), Probable Effect Concentrations (PECs) and the interim benchmark for the protection of the Everglades snail kite.
 - A review of the toxicological data used to calculate the TEC and PEC indicates that the interim benchmark for the Everglades snail kite is expected to approximate the benthic toxicity predicted by the TEC and is adequately protective of the aquatic community.
- The overall protectiveness of the process for benthic receptors (i.e. the aquatic community).
 - The PEC-Q approach recommended in the FDEP sediment benchmark guidance document will be utilized as another line-ofevidence in assessing risk to the aquatic community.
- The use of bioaccumulation and toxicity testing studies.
 - Where expanded ERAs are required, SFWMD will consider the use of bioaccumulation studies using both standard and non-standard protocols on a project-specific basis.
- Additional analysis for heavy metals.
 - SFWMD will consider the analysis of heavy metals not included in the standard Phase II investigation on a case-by-case basis if the Phase I investigation indicates their potential presence.



- · Canal sediment sampling.
 - If canal segments are to be included in project plans as part of the deepwater refugia, then samples will be collected from segments that are to remain but not as part of the property acquisition Phase I/II process.
- Fish tissue sampling.
 - Fish tissue samples do not appear to be a useful tool in the relatively narrowly focused decisions associated with the property acquisition Phase I/II process; however, their collection will be considered on a project-wide basis.

7.0 REFERENCES

- Department of Navy (DON), "Guidance for Environmental Background Analysis, Volume I: Soil, NFESC User's Guide," UG-2049-ENV, April 2002.
- Florida Department of Environmental Protection (FDEP). "Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters," Prepared by MacDonald Environmental Sciences Ltd, and United States Geological Survey, 2003.
- United States Environmental Protection Agency (EPA), "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Soil Media," EPA230/02-89-042, 1989.
- U.S. Environmental Protection Agency (EPA), "Guidelines for Ecological Risk Assessment," EPA/630/R-95/002F, 1998.
- United States Environmental Protection Agency (EPA). "Prediction of sediment toxicity using consensus-based freshwater sediment quality guidelines." Prepared by USGS for USEPA. EPA 905/R-00/007. 2000.
- United States Fish and Wildlife Service (USFWS), "Ecological Risk Assessment Guidance for Wetland Restoration on Agricultural Lands in South Florida," South Florida Ecological Services Office, Revised August 2004.



Tables



Table 1. Examples of Aliquot and Composite Copper Data

	Grid	Grid	Aliquot	Copper			Copper	
Area	ID	Number	ID	(Aliquot)	Unit	Qualifier	(Composite)	Unit
AG Property	A1	1	A1-1	79	mg/Kg dw		95	mg/Kg dw
AG Property	A1	1	A1-2	200	mg/Kg dw	*	95	mg/Kg dw
AG Property	A1	1	A1-3	50	mg/Kg dw		95	mg/Kg dw
AG Property	A1	1	A1-4	120	mg/Kg dw	*	95	mg/Kg dw
AG Property	A1	1	A1-5	56	mg/Kg dw		95	mg/Kg dw
AG Property	A1	1	A1-6	84	mg/Kg dw		95	mg/Kg dw
AG Property	A1	1	A1-7	74	mg/Kg dw		95	mg/Kg dw
AG Property	A1	1	A1-8	230	mg/Kg dw	*	95	mg/Kg dw
AG Property	A1	1	A1-9	43	mg/Kg dw		95	mg/Kg dw
AG Property	A1	1	A1-10	52	mg/Kg dw		95	mg/Kg dw
AG Property	A2	2	A2-1	37	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-2	55	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-3	71	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-4	85	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-5	37	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-6	17	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-7	2	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-8	81	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-9	22	mg/Kg dw		86	mg/Kg dw
AG Property	A2	2	A2-10	36	mg/Kg dw		86	mg/Kg dw
AG Property	A3	3	A3-1	100	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-2	9	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-3	73	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-4	13	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-5	180	mg/Kg dw	*	90	mg/Kg dw
AG Property	A3	3	A3-6	48	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-7	5.5	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-8	53	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-9	23	mg/Kg dw		90	mg/Kg dw
AG Property	A3	3	A3-10	37	mg/Kg dw		90	mg/Kg dw
AG Property	A4	4	A4-1	120	mg/Kg dw	*	97	mg/Kg dw
AG Property	A4	4	A4-2	190	mg/Kg dw	*	97	mg/Kg dw
AG Property	A4	4	A4-3	25	mg/Kg dw		97	mg/Kg dw
AG Property	A4	4	A4-4	130	mg/Kg dw	*	97	mg/Kg dw
AG Property	A4	4	A4-5	77	mg/Kg dw		97	mg/Kg dw
AG Property	A4	4	A4-6	28	mg/Kg dw		97	mg/Kg dw
AG Property	A4	4	A4-7	50	mg/Kg dw		97	mg/Kg dw
AG Property	A4	4	A4-8	91	mg/Kg dw		97	mg/Kg dw
AG Property	A4	4	A4-9	32	mg/Kg dw		97	mg/Kg dw
AG Property	A4	4	A4-10	45	mg/Kg dw		97	mg/Kg dw
AG Property	A5	5	A5-10	99	mg/Kg dw		120	mg/Kg dw
AG Property	A5	5	A5-1	30	mg/Kg dw		120	mg/Kg dw
AG Property	A5	5	A5-2	150	mg/Kg dw	*	120	mg/Kg dw
AG Property	A5	5	A5-3 A5-4	26	mg/Kg dw		120	mg/Kg dw
AG Property	A5	5	A5-4 A5-5	180	mg/Kg dw	*	120	mg/Kg dw
	A5 A5	5	A5-5 A5-6	63	mg/Kg dw	 	120	mg/Kg dw
AG Property	A5 A5	5	A5-6 A5-7	370		*	120	
AG Property					mg/Kg dw		120	mg/Kg dw
AG Property	A5	5	A5-8	50	mg/Kg dw		120	mg/Kg dw

Table 1. Examples of Aliquot and Composite Copper Data

	Grid	Grid	Aliquot	Copper			Copper	
Area	ID	Number	ID	(Aliquot)	Unit	Qualifier	(Composite)	Unit
AG Property	A5	5	A5-9	19	mg/Kg dw		120	mg/Kg dw
AG Property	A5	5	A5-10	45	mg/Kg dw		120	mg/Kg dw
Biscayne Bay CW	S1	6	S1-A	45.1	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-B	8.13	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-C	12.3	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-D	9.07	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-E	5.97	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-F	5.88	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-G	20.8	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-H	2.9	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-I	13.7	mg/kg		20.9	mg/kg
Biscayne Bay CW	S1	6	S1-J	11.8	mg/kg		20.9	mg/kg
Biscayne Bay CW	S2	7	S2-A	6.66	mg/kg		7.35	mg/kg
Biscayne Bay CW	S2	7	S2-B	12	mg/kg		7.35	mg/kg
Biscayne Bay CW	S2	7	S2-C	7.42	mg/kg		7.35	mg/kg
Biscayne Bay CW	S2	7	S2-D	6.13	mg/kg		7.35	mg/kg
Biscayne Bay CW	S2	7	S2-E	4.36	mg/kg		7.35	mg/kg
Biscayne Bay CW	S2	7	S2-F	17	mg/kg		7.35	mg/kg
Biscayne Bay CW	S2	7	S2-G	11.3	mg/kg		7.35	mg/kg
Biscayne Bay CW	S3	8	S3-A	9.6	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-B	7.33	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-C	15.5	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-D	12.9	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-E	5.81	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-F	3.45	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-G	6.21	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-H	19.3	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-I	18.2	mg/kg		6.68	mg/kg
Biscayne Bay CW	S3	8	S3-J	16	mg/kg		6.68	mg/kg
Biscayne Bay CW	S4	9	S4-A	6.08	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-B	5.64	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-C	4.97	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-D	3.15	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-E	3.12	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-F	2.99	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-G	4.24	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-H	13.1	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-I	13.6	mg/kg		4.18	mg/kg
Biscayne Bay CW	S4	9	S4-J	13.5	mg/kg		4.18	mg/kg
Biscayne Bay CW	S5	10	S5-A	15.6	mg/kg		4.1	mg/kg
Biscayne Bay CW	S5	10	S5-A	21.8	mg/kg		4.1	mg/kg
Biscayne Bay CW	S5	10	S5-C	12.8	mg/kg		4.1	mg/kg
Biscayne Bay CW	S5	10	S5-D	6.63	mg/kg		4.1	mg/kg
Biscayne Bay CW	S5	10	S5-E	2.76			4.1	mg/kg
Biscayne Bay CW	S5	10	S5-E	6.12	mg/kg		4.1	
Biscayne Bay CW	S5	10	S5-F	4.2	mg/kg		4.1	mg/kg
	S5		S5-G S5-H	2.49	mg/kg		4.1	mg/kg
Biscayne Bay CW		10			mg/kg			mg/kg
Biscayne Bay CW	S5	10	S5-I	2.24	mg/kg		4.1	mg/kg

Table 1. Examples of Aliquot and Composite Copper Data

	Grid	Grid	Aliquot	Copper			Copper	
Area	ID	Number	ID	(Aliquot)	Unit	Qualifier	(Composite)	Unit
Biscayne Bay CW	S5	10	S5-J	2.66	mg/kg		4.1	mg/kg
Biscayne Bay CW	S6	11	S6-A	9.78	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-B	9.81	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-C	8.26	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-D	16.2	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-E	2.51	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-F	22.3	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-G	3.02	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-H	6.01	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-I	2.16	mg/kg		5.29	mg/kg
Biscayne Bay CW	S6	11	S6-J	2.45	mg/kg		5.29	mg/kg
Biscayne Bay CW	S7	12	S7-A	27	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-B	29.4	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-C	25.3	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-D	18.8	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-E	26.1	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-F	24.3	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-G	23	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-H	23.2	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-I	20.7	mg/kg		21.8	mg/kg
Biscayne Bay CW	S7	12	S7-J	29.2	mg/kg		21.8	mg/kg
Biscayne Bay CW	S8	13	S8-A	27.2	mg/kg		17.6	mg/kg
Biscayne Bay CW	S8	13	S8-B	35	mg/kg		17.6	mg/kg
Biscayne Bay CW	S8	13	S8-C	3.46	mg/kg		17.6	mg/kg
Biscayne Bay CW	S8	13	S8-D	17	mg/kg		17.6	mg/kg
Biscayne Bay CW	S8	13	S8-E	15.5	mg/kg		17.6	mg/kg
Biscayne Bay CW	S8	13	S8-F	14.6	mg/kg		17.6	mg/kg
Biscayne Bay CW	S8	13	S8-G	15	mg/kg		17.6	mg/kg
Biscayne Bay CW	S9	14	S9-A	53.6	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-B	36.6	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-C	30	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-D	23.6	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-E	29.3	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-F	21.8	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-G	42.1	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-H	28.2	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-I	57.4	mg/kg		28.3	mg/kg
Biscayne Bay CW	S9	14	S9-J	57.1	mg/kg		28.3	mg/kg
Biscayne Bay CW	S10	15	S10-A	82.7	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-B	4.57	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-D	10.4	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-D	2.83	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-E	3.81	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-E	6.61	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-I	15.4	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-G	5.92	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-I1	5.34	mg/kg		7.6	mg/kg
Biscayne Bay CW	S10	15	S10-1	7.33	mg/kg		7.6	mg/kg
DISCAYIIE DAY CVV	310	10	310-0	1.33	mg/kg		1.0	my/ky

Table 1. Examples of Aliquot and Composite Copper Data

	Grid	Grid	Aliquot	Copper			Copper	
Area	ID	Number	ID	(Aliquot)	Unit	Qualifier	(Composite)	Unit
Biscayne Bay CW	S11	16	S11-A	14	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-B	9.32	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-C	8.71	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-D	8.62	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-E	7.69	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-F	9.01	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-G	12	mg/kg		10.5	mg/kg
Biscayne Bay CW	S11	16	S11-H	6.9	mg/kg		10.5	mg/kg
Biscayne Bay CW	S12	17	S12-A	4.75	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-B	4.1	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-C	19.5	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-D	5.36	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-E	5.02	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-F	4.38	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-G	6.35	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-H	3.24	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-I	11.3	mg/kg		4.95	mg/kg
Biscayne Bay CW	S12	17	S12-J	9.65	mg/kg		4.95	mg/kg
Biscayne Bay CW	S13	18	S13-A	4.1	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-B	4.33	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-C	6.2	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-D	3.82	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-E	6.42	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-F	6.81	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-G	4.72	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-H	3.23	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-I	5.4	mg/kg		4.89	mg/kg
Biscayne Bay CW	S13	18	S13-J	26	mg/kg		4.89	mg/kg
Biscayne Bay CW	S14	19	S14-A	3.46	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-B	4.71	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-C	4.65	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-D	4.23	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-E	4	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-F	4.43	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-G	3.96	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-H	4.32	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-I	3.69	mg/kg		4.71	mg/kg
Biscayne Bay CW	S14	19	S14-J	4.59	mg/kg		4.71	mg/kg
Biscayne Bay CW	S15	20	S15-A	4.06	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-B	4.4	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-C	4.69	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-D	4.59	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-E	4.6	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-F	4.24	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-G	4.12	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-H	3.85	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-I	4.39	mg/kg		4.36	mg/kg
Biscayne Bay CW	S15	20	S15-I	4.02	mg/kg		4.36	mg/kg
DISCAYIIE DAY CVV	313	20	3 10 - 0	4.02	my/ky		4.30	my/ky

Table 1. Examples of Aliquot and Composite Copper Data

Biscayne Bay CW S16 21 S16-A 3.41 mg/kg 3.16 mg/kg S16-A 3.41 mg/kg 3.16 mg/kg S16-B 3.8 mg/kg 3.16 mg/kg S16-B 3.8 mg/kg S16-B 3.8 mg/kg S16-B S16-P S1									
Biscayne Bay CW S16 21 S16-A 3.41 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-B 3.8 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-D 4.01 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-D 4.01 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-F 4.1 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-I 10.1 mg/kg 3.16 mg/k Biscayne Bay CW S16 21 S16-J 2.82 mg/kg 3.16 mg/k Biscayne Bay CW S17 22 S17-B 2.62 mg/kg U 4.36 <		Grid	Grid	Aliquot	Copper			Copper	
Biscayne Bay CW S16 21 S16-B 3.8 mg/kg 3.16 mg/kg S16 21 S16-C 3.64 mg/kg 3.16 mg/kg 3.16 mg/kg S16 21 S16-C 3.64 mg/kg 3.16 mg/kg S16 21 S16-B 3.08 mg/kg 3.16 mg/kg S16 21 S16-E 3.08 mg/kg 3.16 mg/kg S16 21 S16-E 3.08 mg/kg 3.16 mg/kg S16 21 S16-F 4.1 mg/kg 3.16 mg/kg S16 21 S16-F 4.1 mg/kg 3.16 mg/kg S16 21 S16-F 4.1 mg/kg 3.16 mg/kg S16 21 S16-B 2.54 mg/kg 3.16 mg/kg S16 21 S16-B 2.54 mg/kg U 3.16 mg/kg S16 S16-B 2.54 mg/kg U 3.16 mg/kg S16 S16-B 2.55 mg/kg U 4.36 mg/kg S16 S16-B S16			Number			Unit	Qualifier		Unit
Biscayne Bay CW S16 21 S16-C 3.64 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-D 4.01 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-F 3.08 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-F 4.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-J 2.82 mg/kg 3.16 mg/kg Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-E 3.53 mg/kg	Biscayne Bay CW		21			mg/kg			mg/kg
Biscayne Bay CW S16 21 S16-D 4.01 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-E 3.08 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-E 4.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-H 2.54 mg/kg U 3.16 mg/kg Biscayne Bay CW S16 21 S16-J 2.82 mg/kg 3.16 mg/kg Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-C 3.44 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-F <t< td=""><td></td><td></td><td>21</td><td></td><td>3.8</td><td>mg/kg</td><td></td><td></td><td>mg/kg</td></t<>			21		3.8	mg/kg			mg/kg
Biscayne Bay CW S16 21 S16-E 3.08 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-F 4.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-F 4.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-H 2.54 mg/kg U 3.16 mg/kg Biscayne Bay CW S16 21 S16-H 10.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S17-A 2.5 mg/kg 3.16 mg/kg Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-B 2.62 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-E	Biscayne Bay CW		21		3.64	mg/kg			mg/kg
Biscayne Bay CW S16 21 S16-F 4.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-H 2.58 mg/kg U 3.16 mg/kg Biscayne Bay CW S16 21 S16-J 10.1 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-J 2.82 mg/kg 3.16 mg/kg Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-C 3.44 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-E 3.53 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-F <td< td=""><td>Biscayne Bay CW</td><td></td><td>21</td><td></td><td>4.01</td><td>mg/kg</td><td></td><td>3.16</td><td>mg/kg</td></td<>	Biscayne Bay CW		21		4.01	mg/kg		3.16	mg/kg
Biscayne Bay CW S16 21 S16-G 2.58 mg/kg 3.16 mg/kg Biscayne Bay CW S16 21 S16-H 2.54 mg/kg U 3.16 mg/kg Biscayne Bay CW S16 21 S16-I 10.1 mg/kg 3.16 mg/kg Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-C 3.44 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-	Biscayne Bay CW	S16	21	S16-E	3.08	mg/kg		3.16	mg/kg
Biscayne Bay CW \$16 \$21 \$16-H \$2.54 mg/kg \$U \$3.16 mg/kg Biscayne Bay CW \$16 \$21 \$16-J \$2.82 mg/kg \$3.16 mg/kg Biscayne Bay CW \$17 \$22 \$17-A \$2.5 mg/kg \$U \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-B \$2.62 mg/kg \$U \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-C \$3.44 mg/kg \$U \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-D \$2.23 mg/kg \$U \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-E \$3.53 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-G \$5.12 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-H \$5.5 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17	Biscayne Bay CW	S16	21	S16-F	4.1	mg/kg		3.16	mg/kg
Biscayne Bay CW \$16 \$21 \$16-I \$10.1 mg/kg \$3.16 mg/kg Biscayne Bay CW \$16 \$21 \$16-J \$2.82 mg/kg \$3.16 mg/kg Biscayne Bay CW \$17 \$22 \$17-A \$2.5 mg/kg \$1 \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-C \$3.44 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-C \$3.44 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-C \$3.44 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-E \$3.53 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-F \$3.5 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-H \$5.5 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-H \$5.11 mg/k	Biscayne Bay CW	S16	21	S16-G	2.58	mg/kg		3.16	mg/kg
Biscayne Bay CW \$16 \$21 \$16-J \$2.82 mg/kg \$3.16 mg/kg Biscayne Bay CW \$17 \$22 \$17-A \$2.5 mg/kg \$1 \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-B \$2.62 mg/kg \$1 \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-C \$3.44 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-D \$2.23 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-F \$3.53 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-F \$3.5 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-H \$5.5 mg/kg \$4.36 mg/kg Biscayne Bay CW \$17 \$22 \$17-J \$4.59 mg/kg \$4.36 mg/kg Biscayne Bay CW \$18 \$23 \$18-A \$3.72 </td <td>Biscayne Bay CW</td> <td>S16</td> <td>21</td> <td></td> <td>2.54</td> <td>mg/kg</td> <td>U</td> <td>3.16</td> <td>mg/kg</td>	Biscayne Bay CW	S16	21		2.54	mg/kg	U	3.16	mg/kg
Biscayne Bay CW S17 22 S17-A 2.5 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-B 2.62 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-C 3.44 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-E 3.53 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-H 5.12 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-J 5.5 mg/kg 4.36 mg/ks Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/ks Biscayne Bay CW S18 23 S18	Biscayne Bay CW	S16	21	S16-I	10.1	mg/kg		3.16	mg/kg
Biscayne Bay CW S17 22 S17-B 2.62 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-C 3.44 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/ks Biscayne Bay CW S17 22 S17-F 3.53 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-G 5.12 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-J 5.5 mg/kg 4.36 mg/ks Biscayne Bay CW S17 22 S17-J 4.59 mg/kg 4.36 mg/ks Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/ks Biscayne Bay CW S18 23 S18-B 4.31 mg/kg	Biscayne Bay CW	S16	21	S16-J	2.82	mg/kg		3.16	mg/kg
Biscayne Bay CW S17 22 S17-C 3.44 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-E 3.53 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-G 5.12 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 5.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 4.59 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27	Biscayne Bay CW	S17	22	S17-A	2.5	mg/kg	U	4.36	mg/kg
Biscayne Bay CW S17 22 S17-D 2.23 mg/kg U 4.36 mg/kg Biscayne Bay CW S17 22 S17-E 3.53 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-G 5.12 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-H 5.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/k Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/k Biscayne Bay CW S18 23 S18-F 4.75 mg/kg 4.27	Biscayne Bay CW	S17	22	S17-B	2.62	mg/kg	U	4.36	mg/kg
Biscayne Bay CW S17 22 S17-E 3.53 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-G 5.12 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-H 5.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg <td>Biscayne Bay CW</td> <td>S17</td> <td>22</td> <td>S17-C</td> <td>3.44</td> <td>mg/kg</td> <td></td> <td>4.36</td> <td>mg/kg</td>	Biscayne Bay CW	S17	22	S17-C	3.44	mg/kg		4.36	mg/kg
Biscayne Bay CW S17 22 S17-F 3.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-G 5.12 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-H 5.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg	Biscayne Bay CW	S17	22	S17-D	2.23	mg/kg	U	4.36	mg/kg
Biscayne Bay CW S17 22 S17-G 5.12 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-H 5.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-G 4.46 mg/kg 4.27 mg/kg </td <td>Biscayne Bay CW</td> <td>S17</td> <td>22</td> <td>S17-E</td> <td>3.53</td> <td>mg/kg</td> <td></td> <td>4.36</td> <td>mg/kg</td>	Biscayne Bay CW	S17	22	S17-E	3.53	mg/kg		4.36	mg/kg
Biscayne Bay CW S17 22 S17-H 5.5 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.86 mg/kg 4.27 mg/kg <td>Biscayne Bay CW</td> <td>S17</td> <td>22</td> <td>S17-F</td> <td>3.5</td> <td>mg/kg</td> <td></td> <td>4.36</td> <td>mg/kg</td>	Biscayne Bay CW	S17	22	S17-F	3.5	mg/kg		4.36	mg/kg
Biscayne Bay CW S17 22 S17-I 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 4.59 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.48 mg/kg 4.27 mg/kg<	Biscayne Bay CW	S17	22	S17-G	5.12	mg/kg		4.36	mg/kg
Biscayne Bay CW S17 22 S17-I 5.11 mg/kg 4.36 mg/kg Biscayne Bay CW S17 22 S17-J 4.59 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg<		S17	22	S17-H	5.5			4.36	mg/kg
Biscayne Bay CW S17 22 S17-J 4.59 mg/kg 4.36 mg/kg Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg <td></td> <td>S17</td> <td>22</td> <td></td> <td>5.11</td> <td></td> <td></td> <td>4.36</td> <td>mg/kg</td>		S17	22		5.11			4.36	mg/kg
Biscayne Bay CW S18 23 S18-A 3.72 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-I 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.27 mg/kg <td></td> <td>S17</td> <td>22</td> <td>S17-J</td> <td>4.59</td> <td></td> <td></td> <td>4.36</td> <td>mg/kg</td>		S17	22	S17-J	4.59			4.36	mg/kg
Biscayne Bay CW \$18 23 \$18-B 4.31 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-G 4.46 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-H 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW \$18 23 \$18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW \$19 24 \$19-A 4.61 mg/kg 4.41 mg/kg </td <td></td> <td>S18</td> <td>23</td> <td>S18-A</td> <td>3.72</td> <td></td> <td></td> <td>4.27</td> <td>mg/kg</td>		S18	23	S18-A	3.72			4.27	mg/kg
Biscayne Bay CW S18 23 S18-C 5.2 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-G 4.46 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg </td <td></td> <td>S18</td> <td>23</td> <td></td> <td>4.31</td> <td></td> <td></td> <td>4.27</td> <td>mg/kg</td>		S18	23		4.31			4.27	mg/kg
Biscayne Bay CW S18 23 S18-D 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-G 4.46 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg<									mg/kg
Biscayne Bay CW S18 23 S18-E 4.75 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-G 4.46 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg<		S18			4.61			4.27	mg/kg
Biscayne Bay CW S18 23 S18-F 4.7 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-G 4.46 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>mg/kg</td>									mg/kg
Biscayne Bay CW S18 23 S18-G 4.46 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-I 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>mg/kg</td>									mg/kg
Biscayne Bay CW S18 23 S18-H 4.88 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-I 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg					4.46				mg/kg
Biscayne Bay CW S18 23 S18-I 4.48 mg/kg 4.27 mg/kg Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>mg/kg</td>									mg/kg
Biscayne Bay CW S18 23 S18-J 4.42 mg/kg 4.27 mg/kg Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 5 mg/kg 4.41 mg/kg									mg/kg
Biscayne Bay CW S19 24 S19-A 4.61 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg									mg/kg
Biscayne Bay CW S19 24 S19-B 5.08 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg									mg/kg
Biscayne Bay CW S19 24 S19-C 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/kg dw V 96 mg/	, ,								mg/kg
Biscayne Bay CW S19 24 S19-D 4.72 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96									mg/kg
Biscayne Bay CW S19 24 S19-E 5.21 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									mg/kg
Biscayne Bay CW S19 24 S19-F 5.03 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									mg/kg
Biscayne Bay CW S19 24 S19-G 5.36 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									mg/kg
Biscayne Bay CW S19 24 S19-H 5.55 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									
Biscayne Bay CW S19 24 S19-I 5 mg/kg 4.41 mg/kg Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									
Biscayne Bay CW S19 24 S19-J 4.33 mg/kg 4.41 mg/kg Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									mg/kg
Conley C2 25 C2-1 120 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									mg/kg
Conley C2 25 C2-2 11 mg/Kg dw V 96 mg/Kg Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg							V		mg/Kg dw
Conley C2 25 C2-3 78 mg/Kg dw V 96 mg/Kg									mg/Kg dw
3 3									mg/Kg dw
Conley C2 25 C2-4 220 mg/Kg dw V 96 mg/Kg		C2	25	C2-4	220	mg/Kg dw	V	96	mg/Kg dw
3 3 3									mg/Kg dw
3 3									mg/Kg dw
3 3									mg/Kg dw
									mg/Kg dw

Table 1. Examples of Aliquot and Composite Copper Data

Conley C2 25 C2-10 52 mg/Kg dw V 96 mg/Kg dw Conley C4 26 C4-1 93 mg/Kg dw V 87 mg/Kg dw </th <th>A</th> <th>Grid</th> <th>Grid</th> <th>Aliquot</th> <th>Copper</th> <th>11</th> <th>0</th> <th>Copper</th> <th>11</th>	A	Grid	Grid	Aliquot	Copper	11	0	Copper	11
Conley C2 25 C2-10 52 mg/Kg dw V 96 mg/Kg dw Conley C4 26 C4-1 93 mg/Kg dw V 87 mg Conley C4 26 C4-3 90 mg/Kg dw V 87 mg Conley C4 26 C4-4 75 mg/Kg dw V 87 mg Conley C4 26 C4-5 69 mg/Kg dw V 87 mg Conley C4 26 C4-6 48 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-8 31 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Graves 25GC 27 36G 98 mg/Kg dw									Unit
Conley C4 26 C4-1 93 mg/Kg dw V 87 mg Conley C4 26 C4-2 81 mg/Kg dw V 87 mg Conley C4 26 C4-3 90 mg/Kg dw V 87 mg Conley C4 26 C4-4 75 mg/Kg dw V 87 mg Conley C4 26 C4-5 69 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 <tm>mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw <td< td=""><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>mg/Kg dw mg/Kg dw</td></td<></tm>	•								mg/Kg dw mg/Kg dw
Conley C4 26 C4-2 81 mg/Kg dw V 87 mg Conley C4 26 C4-3 90 mg/Kg dw V 87 mg Conley C4 26 C4-4 75 mg/Kg dw V 87 mg Conley C4 26 C4-5 69 mg/Kg dw V 87 mg Conley C4 26 C4-6 48 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-8 31 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Graves 25GC 27 36G 98 mg/Kg 11									
Conley C4 26 C4-3 90 mg/Kg dw V 87 mg Conley C4 26 C4-4 75 mg/Kg dw V 87 mg Conley C4 26 C4-6 68 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Graves 25GC 27 32G 68 mg/kg	•								mg/Kg dw
Conley C4 26 C4-4 75 mg/Kg dw V 87 mg Conley C4 26 C4-5 69 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-8 31 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Graves 25GC 27 36G 98 mg/Kg dw V 87 mg Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 280 mg/kg 110 r Graves 25GC 27 28G 89 mg/kg 110 r Graves 25GC	•								mg/Kg dw
Conley C4 26 C4-5 69 mg/Kg dw V 87 mg/Kg conley Conley C4 26 C4-7 40 mg/Kg dw V 87 mg/Kg conley X 87 mg/Kg conley X 87 mg/Kg conley X 86 Mg/Kg conley X 110 r x 28 25GC 27 23G 88 mg/Kg 110 <	•					,			mg/Kg dw
Conley C4 26 C4-6 48 mg/Kg dw V 87 mg Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 89 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Gr	•					0			mg/Kg dw
Conley C4 26 C4-7 40 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Graves 25GC 27 38G 98 mg/Kg 110 r 110 r graves 25GC 27 28G 270 mg/kg 110 r graves 25GC 27 28G 89 mg/kg 110 r graves 25GC 27 28G 98 mg/kg 110 r graves 25GC 27 26G 190 mg/kg 110 r graves 25GC 27 30G	•								mg/Kg dw
Conley C4 26 C4-8 31 mg/Kg dw V 87 mg Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Graves 25GC 27 36G 98 mg/Kg 110 r Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 25G 190 mg/kg 110 r Graves 25GC 27 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>,</td><td></td><td></td><td>mg/Kg dw</td></td<>						,			mg/Kg dw
Conley C4 26 C4-9 75 mg/Kg dw V 87 mg Conley C4 26 C4-10 51 mg/Kg dw V 87 mg Graves 25GC 27 36G 98 mg/kg 110 r Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 36G 55 mg/kg 110 r Graves 25GC 27 36G <td< td=""><td>•</td><td></td><td></td><td></td><td></td><td>0</td><td></td><td></td><td>mg/Kg dw</td></td<>	•					0			mg/Kg dw
Conley C4 26 C4-10 51 mg/kg dw V 87 mg Graves 25GC 27 36G 98 mg/kg 110 r Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 30G 120 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 31G 83 <td< td=""><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>mg/Kg dw</td></td<>	•								mg/Kg dw
Graves 25GC 27 36G 98 mg/kg 110 r Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 25G 190 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg <	•								mg/Kg dw
Graves 25GC 27 32G 68 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg <							V		mg/Kg dw
Graves 25GC 27 28G 270 mg/kg 110 r Graves 25GC 27 33G 89 mg/kg 110 r Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 30G 120 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg <									mg/kg
Graves 25GC 27 33G 89 mg/kg 110 r Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 30G 120 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>mg/kg</td></td<>									mg/kg
Graves 25GC 27 29G 98 mg/kg 110 r Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-D 20 mg/kg <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>mg/kg</td></t<>									mg/kg
Graves 25GC 27 25G 160 mg/kg 110 r Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 30G 120 mg/kg 1110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg									mg/kg
Graves 25GC 27 26G 190 mg/kg 110 r Graves 25GC 27 30G 120 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg									mg/kg
Graves 25GC 27 30G 120 mg/kg 110 r Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg	Graves					mg/kg			mg/kg
Graves 25GC 27 34G 98 mg/kg 110 r Graves 25GC 27 35G 55 mg/kg 1110 r Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg	Graves	25GC	27	26G	190	mg/kg		110	mg/kg
Graves 25GC 27 35G 55 mg/kg 110 r Graves 25GC 27 31G 83 mg/kg 1110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-I 130 mg/kg	Graves	25GC	27	30G	120	mg/kg		110	mg/kg
Graves 25GC 27 31G 83 mg/kg 110 r Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg	Graves	25GC	27	34G	98	mg/kg		110	mg/kg
Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg	Graves	25GC	27	35G	55	mg/kg		110	mg/kg
Graves 25GC 27 27G 190 mg/kg 110 r L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg	Graves	25GC	27	31G	83	mg/kg		110	mg/kg
L31 N 046 28 046-A 100 mg/kg 160 r L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg		25GC	27	27G	190			110	mg/kg
L31 N 046 28 046-B 190 mg/kg 160 r L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg		046	28	046-A	100			160	mg/kg
L31 N 046 28 046-C 500 mg/kg 160 r L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg	L31 N	046	28		190			160	mg/kg
L31 N 046 28 046-D 420 mg/kg 160 r L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-I 130 mg/kg 160 r L31 N 046 28 046-J 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 15M 83 mg/kg									mg/kg
L31 N 046 28 046-E 180 mg/kg 160 r L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-I 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 100 r MacArthur M22 29 13M 39 mg/kg									mg/kg
L31 N 046 28 046-F 130 mg/kg 160 r L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg									mg/kg
L31 N 046 28 046-G 210 mg/kg 160 r L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-J 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 14M 83 mg/kg 100 r MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>mg/kg</td>									mg/kg
L31 N 046 28 046-H 130 mg/kg 160 r L31 N 046 28 046-I 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 14M 83 mg/kg 100 r MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>mg/kg</td>									mg/kg
L31 N 046 28 046-I 130 mg/kg 160 r L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 14M 83 mg/kg 100 r MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>mg/kg</td>									mg/kg
L31 N 046 28 046-J 87 mg/kg 160 r MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 14M 83 mg/kg 100 r MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg									mg/kg
MacArthur M22 29 13M 39 mg/kg 100 r MacArthur M22 29 14M 83 mg/kg 100 r MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/									mg/kg
MacArthur M22 29 14M 83 mg/kg 100 r MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg									mg/kg
MacArthur M22 29 15M 39 mg/kg 100 r MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 16M 84 mg/kg 100 r MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 17M 99 mg/kg 100 r MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 18M 56 mg/kg 100 r MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 19M 48 mg/kg 100 r MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 20M 49 mg/kg 100 r MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 21M 52 mg/kg 100 r MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M22 29 22M 37 mg/kg 100 r MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
MacArthur M23 30 23M 120 mg/kg 120 r MacArthur M23 30 24M 130 mg/kg 120 r									
MacArthur M23 30 24M 130 mg/kg 120 r									mg/kg
									mg/kg
INAGGN									mg/kg
									mg/kg mg/kg

Table 1. Examples of Aliquot and Composite Copper Data

	Grid	Grid	Aliquot	Copper			Copper	
Area	ID	Number	ID	(Aliquot)	Unit	Qualifier	(Composite)	Unit
MacArthur	M23	30	27M	130	mg/kg		120	mg/kg
MacArthur	M23	30	28M	74	mg/kg		120	mg/kg
MacArthur	M23	30	29M	83	mg/kg		120	mg/kg
MacArthur	M23	30	30M	52	mg/kg		120	mg/kg
MacArthur	M23	30	31M	73	mg/kg		120	mg/kg
MacArthur	M23	30	32M	180	mg/kg		120	mg/kg
MacArthur	M55	31	53M	42	mg/kg		60	mg/kg
MacArthur	M55	31	54M	29	mg/kg		60	mg/kg
MacArthur	M55	31	55M	55	mg/kg		60	mg/kg
MacArthur	M55	31	56M	49	mg/kg		60	mg/kg
MacArthur	M55	31	57M	58	mg/kg		60	mg/kg
MacArthur	M55	31	58M	47	mg/kg		60	mg/kg
MacArthur	M55	31	59M	36	mg/kg		60	mg/kg
MacArthur	M55	31	60M	30	mg/kg		60	mg/kg
MacArthur	M55	31	61M	13	mg/kg		60	mg/kg
MacArthur	M55	31	62M	35	mg/kg		60	mg/kg
MacArthur	M117	32	113M	31	mg/kg		100	mg/kg
MacArthur	M117	32	114M	57	mg/kg		100	mg/kg
MacArthur	M117	32	115M	320	mg/kg		100	mg/kg
MacArthur	M117	32	116M	53	mg/kg		100	mg/kg
MacArthur	M117	32	117M	18	mg/kg		100	mg/kg
MacArthur	M117	32	118M	31	mg/kg		100	mg/kg
MacArthur	M117	32	119M	75	mg/kg		100	mg/kg
MacArthur	M117	32	120M	140	mg/kg		100	mg/kg
MacArthur	M117	32	121M	100	mg/kg		100	mg/kg
MacArthur	M117	32	122M	34	mg/kg		100	mg/kg
Marcott	M1	33	M1-1	15	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-2	100	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-3	99	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-4	130	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-5	150	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-6	25	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-7	51	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-8	46	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-9	57	mg/Kg dw	V	120	mg/Kg dw
Marcott	M1	33	M1-10	65	mg/Kg dw	V	120	mg/Kg dw
Marcott	M2	34	M2-1	45	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-2	33	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-3	66	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-4	56	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-5	45	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-6	15	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-7	14	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-8	48	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-9	16	mg/Kg dw		89	mg/Kg dw
Marcott	M2	34	M2-10	29	mg/Kg dw		89	mg/Kg dw
Marcott	M3	35	M3-1	57	mg/Kg dw		86	mg/Kg dw
Marcott	M3	35	M3-2	88	mg/Kg dw		86	mg/Kg dw

Table 1. Examples of Aliquot and Composite Copper Data

	Grid	Grid	Aliquot	Copper			Copper	
Area	ID	Number	ID	(Aliquot)	Unit	Qualifier	(Composite)	Unit
Marcott	M3	35	M3-3	33	mg/Kg dw	4	86	mg/Kg dw
Marcott	M3	35	M3-4	60	mg/Kg dw		86	mg/Kg dw
Marcott	M3	35	M3-5	21	mg/Kg dw		86	mg/Kg dw
Marcott	M3	35	M3-6	51	mg/Kg dw		86	mg/Kg dw
Marcott	M3	35	M3-7	43	mg/Kg dw	V	86	mg/Kg dw
Marcott	M3	35	M3-8	98	mg/Kg dw	V	86	mg/Kg dw
Marcott	M3	35	M3-9	45	mg/Kg dw	V	86	mg/Kg dw
Marcott	M3	35	M3-10	24	mg/Kg dw	V	86	mg/Kg dw
Marcott	M4	36	M4-1	59	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-2	1.2	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-3	96	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-4	4	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-5	22	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-6	19	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-7	18	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-8	80	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-9	23	mg/Kg dw	V	210	mg/Kg dw
Marcott	M4	36	M4-10	31	mg/Kg dw	V	210	mg/Kg dw
Tetley	TC	37	1T	36	mg/kg		40	mg/kg
Tetley	TC	37	3T	54	mg/kg		40	mg/kg
Tetley	TC	37	5T	24	mg/kg		40	mg/kg
Tetley	TC	37	7T	21	mg/kg		40	mg/kg
Tetley	TC	37	9T	23	mg/kg		40	mg/kg
Tetley	TC	37	10T	85	mg/kg		40	mg/kg
Tetley	TC	37	11T	24	mg/kg		40	mg/kg
Tetley	TC	37	12T	42	mg/kg		40	mg/kg

Table 2. Determination of Copper Trigger Levels Using Different Ecological Benchmarks

		Rate o	f Aliquots I	Aliquots Exceeding Benchmark				
			,	TEC	PEC			
Benchmark	8	5 ppm	(31	.6 ppm)	(14	19 ppm)		
Copper	Individual	_	Individual		Individual			
(Composite in ppm)	Grid Rate	Grid Average		Grid Average		Grid Average		
3.16	0%	0%	0%	0%	0%	0%		
4.1	0%	0%	0%	0%	0%	0%		
4.18	0%	0%	0%	0%	0%	0%		
4.27	0%	0%	0%	0%	0%	0%		
4.36	0%	0%	0%	0%	0%	0%		
4.36	0%	0%	0%	0%	0%	0%		
4.41	0%	0%	0%	0%	0%	0%		
4.71	0%	0%	0%	0%	0%	0%		
4.89	0%	0%	0%	0%	0%	0%		
4.95	0%	0%	0%	0%	0%	0%		
5.29	0%	0%	0%	0%	0%	0%		
6.68	0%	0%	0%	0%	0%	0%		
7.35	0%	0%	0%	0%	0%	0%		
7.6	0%	0%	10%	1%	0%	0%		
10.5	0%	0%	0%	1%	0%	0%		
17.6	0%	0%	14%	2%	0%	0%		
20.9	0%	0%	10%	2%	0%	0%		
21.8	0%	0%	0%	2%	0%	0%		
28.3	0%	0%	50%	4%	0%	0%		
40	0%	0%	50%	7%	0%	0%		
60	0%	0%	70%	10%	0%	0%		
86	0%	0%	70%	12%	0%	0%		
86	20%	1%	80%	15%	0%	0%		
87	20%	2%	90%	19%	0%	0%		
89	0%	2%	60%	20%	0%	0%		
90	20%	2%	60%	22%	10%	0%		
95	30%	3%	100%	25%	20%	1%		
96	50%	5%	90%	27%	30%	2%		
97	40%	6%	80%	29%	10%	2%		
100	30%	7%	70%	30%	10%	3%		
100	10%	7%	100%	32%	0%	3%		
110	75%	9%	100%	35%		4%		
120	40%	10%	70%	36%		4%		
120	40%	11%	80%	37%		5%		
120	50%	12%	100%	39%		5%		
160	100%	15%	100%	40%		6%		
210	10%		30%	40%		6%		
Lower Bound of Trigger Level	12,0	95		28.3	270	120		

Note: Composite values corresponding to the highlighted cells define the bounds of the trigger value for the given benchmark based on a cutoff exceedance rate of 5%

Table 3. Descriptive Statistics of Aliquot and Composite Copper Data

Parameters	Aliquot	Composite
Count	362	37
Minimum	1.2	3.2
Maximum	500.0	210.0
Mean	44.7	55.0
Std. Deviation	61.6	54.5
Std. Error	3.2	9.0
95%UCL of Mean	50.0	70.1

Table 4 Florida SQAGs and TEC/PEC Ratio

from: Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters. FDEP 2003

Chemical	TEC	PEC	TEC/PEC
Arsenic	9.8	33	0.3
Barium	20	60	0.33
Beryllium	NG	NG	
Boron	NG	NG	
Cadmium	1	5	0.2
Chromium	43	110	0.39
Cobalt	50	NG	
Copper	32	150	0.21
Lead	36	130	0.28
Mercury	0.18	1.1	0.16
Nickel	23	49	0.47
Silver	1	2.2	0.45
Strontium	NG	NG	
Titanium	NG	NG	
Zinc	120	460	0.26
Zircon	NG	NG	
Acenaphthene	6.7	89	0.08
Acenaphthylene	5.9	130	0.05
Anthracene	57	850	0.07
Fluorene	77	540	0.14
Naphthalene	180	560	0.32
Phenanthrene	200	1200	0.17
Benz[a]anthracene	110	1100	0.1
Benzo(a)pyrene	150	1500	0.1
Chrysene	170	1300	0.13
Dibenz[a,h]anthracene	33	140	0.24
Fluoranthene	420	2200	0.19
Pyrene	200	1500	0.13
Total PAHs	1600	23000	0.07
Total PCBs	60	680	0.09
Hexachlorobenzene (HCB)	20	240	0.08
Hexachlorobutadiene (HCBD)	55	550	0.1
Bis(2-ethylhexyl)phthalate	180	2600	0.07
Dimethyl Phthalate	NG	NG	
Diethyl Phthalate	630	NG	
Di-n-butyl Phthalate	NG	43	
Chlordane	3.2	18	0.18
Dieldrin	1.9	62	0.03
Sum DDD	4.9	28	0.18
Sum DDE	3.2	31	0.1
Sum DDT	4.2	63	0.07
Total DDTs	5.3	570	0.01
Endrin	2.2	210	0.01

Table 4 Florida SQAGs and TEC/PEC Ratio

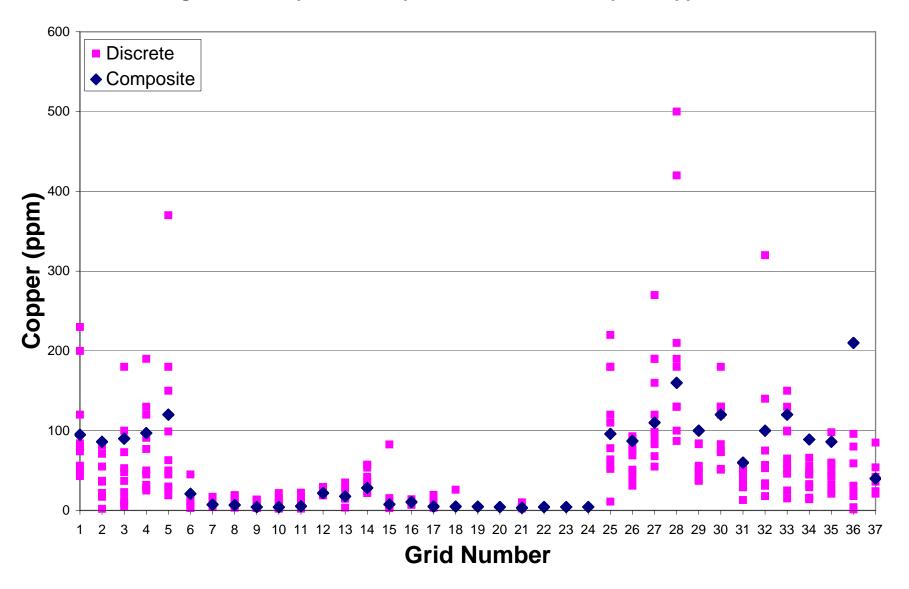
from: Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters. FDEP 2003

Chemical	TEC	PEC	TEC/PEC
Heptachlor Epoxide	2.5	16	0.16
Lindane	2.4	5	0.48
Azinphos-ethyl	0.018	NG	
Azinphos-methyl	0.062	NG	
Diazinon	0.38	NG	
Ethion	NG	NG	
Malathion	0.67	NG	
Methidathion	NG	NG	
Phosmet	NG	NG	
Phosphamidon	NG	NG	
Phoxim	0.06	NG	
Pyrazophos	0.015	NG	

Figures



Figure 1. Examples of Composite and Discrete Aliquot Copper Data



Attachment A Exerpted Tables from:

Development and Evaluation of Numerical Sediment Quality Assessment Guidelines for Florida Inland Waters. (FDEP 2003)



Table 4.8. Incidence of toxicity within ranges of contaminant concentrations defined by the sediment quality guidelines (SQGs; from MacDonald *et al.* 2000a)

Substance	Number of	Incidence of Toxicity (number of samples in parenthesis)				
Sussume	Samples Evaluated	<u>≤TEC</u>	TEC-PEC	>PEC		
Metals						
Arsenic	150	25.9% (15 of 58)	57.6% (38 of 66)	76.9% (20 of 26)		
Cadmium	347	19.6% (20 of 102)	44.6% (29 of 65)	93.7% (118 of 126)		
Chromium	347	28% (37 of 132)	64.4% (38 of 59)	91.7% (100 of 109)		
Copper	347	17.7% (28 of 158)	64.0% (48 of 75)	91.8% (101 of 110)		
Lead	347	18.4% (28 of 152)	53.6% (37 of 69)	89.6% (112 of 125)		
Mercury	79	65.7% (23 of 35)	70.0% (28 of 40)	100% (4 of 4)		
Nickel	347	27.7% (51 of 184)	62.7% (32 of 51)	90.6% (87 of 96)		
Zinc	347	18.4% (30 of 163)	60.9% (39 of 64)	90.0% (108 of 120)		
Polycyclic Aromatic Hydi	rocarbons (PAHs)					
Anthracene	129	17.3% (13 of 75)	92.9% (26 of 28)	100% (13 of 13)		
Fluorene	129	29% (27 of 93)	85.7% (12 of 14)	100% (13 of 13)		
Naphthalene	139	24.7% (21 of 85)	94.1% (16 of 17)	92.3% (24 of 26)		
Phenanthrene	139	17.7% (14 of 79)	88.2% (30 of 34)	100% (25 of 25)		
Benz[a]anthracene	139	17.1% (13 of 76)	70% (14 of 20)	100% (20 of 20)		
Benzo(a)pyrene	139	18.5% (15 of 81)	75.7% (28 of 37)	100% (24 of 24)		
Chrysene	139	20% (16 of 80)	68.1% (32 of 47)	95.8% (23 of 24)		
Fluoranthene	139	25% (24 of 96)	82.5% (33 of 40)	100% (15 of 15)		
Pyrene	139	20.5% (16 of 78)	63.0% (29 of 46)	96.4% (27 of 28)		
Total PAHs	167	18.5% (15 of 81)	65.1% (43 of 66)	100% (20 of 20)		
Polychlorinated Bipheny	ls (PCBs)					
Total PCBs	120	11.1% (3 of 27)	31.0% (9 of 29)	82.3% (42 of 51)		
Organochlorine Pesticide	es					
Chlordane	193	14.9% (15 of 101)	75.0% (15 of 20)	73.0% (27 of 37)		
Dieldrin	180	16.5% (18 of 109)	95.2% (20 of 21)	100% (10 of 10)		
Sum DDD	168	19.8% (20 of 101)	33.3% (1 of 3)	83.3% (5 of 6)		
Sum DDE	180	18.1% (19 of 105)	33.3% (1 of 3)	96.7% (29 of 30)		
Sum DDT	96	23% (23 of 100)	0.0% (0 of 1)	91.7% (11 of 12)		
Total DDT	110	17.4% (16 of 92)	100% (23 of 23)	100% (10 of 10)		
Endrin	170	29.4% (37 of 126)	40.0% (4 of 10)	NA% (0 of 0)		
Heptachlor Epoxide	138	17.8% (16 of 90)	85.0% (17 of 20)	37.5% (3 of 8)		
Lindane	180	28.1% (34 of 121)	65.9% (29 of 44)	82.4% (14 of 17)		

NA = not applicable; TEC = threshold effect concentration; PEC = probable effect concentration.

Table 4.10. Incidence of sediment toxicity within ranges of mean PEC-Qs for sediments from Florida and elsewhere in the southeastern portion of the United States.

	n	Avg	Incidence of Toxicity (number of samples in parentheses)					
Toxicity Test - Endpoint		mean Q	<0.1	0.1 to <0.5	0.5 to <1.0	1.0 to <5.0	<u>≥</u> 1.0	<u>></u> 5.0
10-d <i>Hyalella azteca</i> survival	522	0.379	13% (15 of 116)	15% (51 of 339)	30% (14 of 46)	33% (6 of 18)	38% (8 of 21)	67% (2 of 3)
10-d Hyalella azteca survival or growth	522	0.379	13% (15 of 116)	16% (54 of 339)	37% (17 of 46)	39% (7 of 18)	48% (10 of 21)	100% (3 of 3)
28-42-d <i>Hyalella azteca</i> survival	174	0.549	8% (4 of 53)	13% (11 of 87)	43% (10 of 23)	38% (3 of 8)	45% (5 of 11)	67% (2 of 3)
28-42-d Hyalella azteca survival or growth	174	0.549	13% (7 of 53)	24% (21 of 87)	52% (12 of 23)	38% (3 of 8)	45% (5 of 11)	67% (2 of 3)
10-d Chironomus tentans survival	133	0.391	19% (5 of 26)	7% (7 of 94)	0% (0 of 9)	0% (0 of 3)	0% (0 of 4)	0% (0 of 1)
10-d Chironomus tentans survival or growth	133	0.391	23% (6 of 26)	9% (8 of 94)	33% (3 of 9)	67% (2 of 3)	75% (3 of 4)	100% (1 of 1)
Overall Toxicity	643	0.381	18% (27 of 150)	18% (73 of 406)	43% (26 of 61)	36% (8 of 22)	42% (11 of 26)	75% (3 of 4)

n = number of samples; PEC-Q = probable effects concentration quotient.

3/14/08 FINAL VERSION

ATTACHMENT 1

PROTOCOL FOR ASSESSMENT, REMEDIATION AND POST-REMEDIATION MONITORING FOR ENVIRONMENTAL CONTAMINANTS ON EVERGLADES RESTORATION PROJECTS

A. Contamination Assessment

1. Phase I Environmental Site Assessment

The Phase I Environmental Site Assessment (Phase I) is performed in accordance with the American Society of Testing and Materials (ASTM) Standard Practice E1527-00, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process." The purpose of the Phase I is to identify the presence or likely presence of any hazardous substance or petroleum product on the property. Phase I should provide all available information on current and past land use, and consists of the following elements:

a. Site Inspection

The site inspection usually consists of walking, driving, and/or flying over the property to visually ascertain the presence of features or indicators of past land uses and possible environmental contaminants. A checklist of such indicators includes, but is not limited to, dumps, drums, construction debris, fills, unusual chemical odors, above ground and underground storage tanks, chemical storage buildings, asbestos evidence, "stressed" vegetation or bare ground, "sterile" water bodies, oiled roads, stained or discolored ground or stream banks, oil slicks, air strips, maintenance areas, pipelines, transformers or other electrical equipment, oil and gas drilling, and mining activities.

b. Historical Considerations

The historical review should include interviews with current owners, previous owners, and neighbors to obtain an accurate history of past land uses, farming practices, pesticide usage, etc. Aerial photographs should be reviewed for evidence of row crops and other agricultural, commercial or industrial activities. At a minimum, the historical review should include reliable information on (1) farming practices (e.g., row crops, sugarcane, citrus, sod farm, ornamentals, grazing), (2) exact location of these practices on the property, and (3) farming chronology. For example, row cropping on a portion of the property during the period from the 1940s to the mid-1980s is strong suggestive evidence for the presence of organochlorine (OC) pesticides at that location.

c. Review of Environmental Databases

An extensive review of environmental databases (Comprehensive Environmental Response, Compensation, and Liability Information System; Resource Conservation and Recovery Information System; National Priorities List; Emergency Response Notification System;

state Above Ground and Underground Storage Tank records; Solid Waste Facility and Landfill Report; Florida State Hazardous Waste Site list; Facility Index System/Identification Initiative Program Summary Report; Formerly Used Defense Sites; and local mosquito control districts) should be conducted.

Information gleaned from the Phase I assessment is used to determine the necessity of a Phase II assessment.

2. Phase II Environmental Site Assessment

Should information from the Phase I or other credible sources (i.e., previous investigations) indicate the presence of contamination or that the potential for contamination exists, a Phase II Environmental Site Assessment (Phase II) should be initiated. Coordination between FWS and the agency performing the assessment is important starting at this point and throughout the rest of the process. Coordination will be facilitated by providing FWS with a Phase II Scope of Work (SOW) or proposal for review. The proposal should describe in detail the sampling plan (number, media, and location of samples), sample collection methods, analytical parameters, quality control/quality assurance (QA/QC) plan, standards and/or ecological screening criteria to be used for comparison, contingency for expanded sampling, and screening level risk assessment procedures, if applicable. The environmental laboratory to perform chemical analyses should be EPA certified, maintain a rigorous QA/QC program, and achieve laboratory detection limits consistent with state and federally approved ecological screening values and water/soil quality standards. More detail on sampling procedures and analytical requirements is provided in the following section. The selection of a credible laboratory is one of the highest priorities in the site assessment process.

The purpose of the Phase II is to identify sources and locations of contamination, specify contaminants of potential concern (both human health and ecological), and provide recommendations for additional sampling, testing, or risk assessment; and corresponding corrective actions. The focus of the Phase II is generally on facilities and potential point sources on the property, which includes: mixing/loading areas, storage sheds, vehicle turn-around areas, airstrips, cattle dip tanks, pumping stations, and burn areas.

In addition, sampling may be conducted in other areas, such as canals and agricultural fields, in order to identify contaminants that have a more widespread distribution or to establish background levels of contaminants. Media sampled may include soils, sediments, groundwater and occasionally surface water. The most commonly encountered types of contaminants at agricultural sites include pesticides, petroleum hydrocarbons, and various metals.

Chemical concentrations in the various sampled media should be compared with the appropriate ecological screening values to determine if remediation and/or additional sampling or assessment is required. Ecological screening values to be used include the following: (1) Florida Department of Environmental Protection (FDEP) Sediment Quality Assessment Guidelines (SQAGs); (2) Florida Surface Water Quality Standards; or (3) USEPA Ambient Water Quality Criteria, among others. Ecological screening values are discussed in more detail in the next section.

Generally, any point sources identified can be remediated based on the results of the Phase II, with some additional delineation work. If remediation of the point source(s) removes all ecological concerns (i.e., all contaminant concentrations are reduced below screening values), no further assessment work is required on the site. However, if the results of the Phase I and/or Phase II indicate that widespread contamination at levels of ecological concern may be present, then more extensive sampling in the agricultural fields may be required (see next section).

3. Agricultural Field Sampling and Screening Level Ecological Risk Assessment (SLERA)

Generally, contaminant information obtained during a standard Phase I/Phase II Environmental Site Assessment (Phase I/II) is not detailed or comprehensive enough to be suitable for use in an ecological risk assessment (ERA). The methods described in this section are designed to provide detailed information on the distribution and concentrations of contaminants of concern (COCs) identified in the Phase I/II, for use in food chain models to predict risks to FWS's trust resources. A major purpose of this section is to determine whether concentrations of contaminants in the farmed areas are uniformly distributed in the fields, or are present as "hot spots¹" that can be remediated. The method allows for sampling coverage of a large area while keeping assessment costs at manageable levels. If there is sufficient evidence to expect that pesticide contamination is likely at a site, it may be advantageous to conduct this sampling protocol concurrently with the Phase II assessment.

Sample site selection should be biased to maximize detection of agrochemicals in cultivated soils by sampling the entire cultivated area when possible. Random sampling on properties characterized by mixed land use is not likely to provide the greatest degree of representation regarding contamination commonly associated with agricultural production (i.e., insecticides, herbicides, fungicides, fertilizers, etc.). Prior to developing a sampling strategy, each property's land use should be reviewed in terms of spatial and temporal variables, placing the greatest sampling priority on those areas which were intensively managed for agricultural production (e.g., cultivated fields). Conversely, a lesser priority should be given to rangelands and abandoned or vacant lots which have limited or no historical agricultural land uses. Some exceptions to this rationale would include commercial and industrial land uses which are sparsely distributed within the geographic areas currently under consideration for incorporation into CERP projects. In most cases, the use of random sampling is limited to those properties demonstrating homogeneous land use across the majority of the property.

a. Sample Collection

Soil samples will be collected using a stainless steel spoon or hand auger from 0-6 inches below land surface. This interval represents the biologically relevant depth for interaction with surface water and biological receptors. It is important that care is taken not to include sample material from more than 6 inches deep, as this may result in dilution and underestimation of contaminant concentrations. Between samples, sampling equipment should be decontaminated using standard procedures to prevent cross-contamination between samples. (Decontamination between subsamples (see below) will not be necessary

-

¹ Hot spots are referred to isolated areas of elevated contaminant concentrations.

because subsamples will be mixed together to form a composite.) Immediately following collection, samples should be placed on ice and submitted as soon as possible to the laboratory for analysis.

At all properties except citrus groves, discrete soil samples and subsamples for compositing (see below) should be composed of five aliquots of equal volumes collected from the center point located at the nominal sampling location, and from four additional points located 5 feet from the center point in each of the cardinal directions. The sample should be thoroughly homogenized in a stainless steel mixing bowl. These "close proximity composite samples" are intended to reduce the effects of small scale soil heterogeneity.

At properties used for citrus farming, discrete soil samples should be composed of three equal-volume subsamples; one subsample each from (1) the drip line of the tree nearest to the nominal sampling point; (2) the nearest drainage swale to the tree; and (3) the nearest crown of the road between rows of the trees. The sample is, therefore, expected to be representative of the average concentration of the areas most likely to be affected by the application of agricultural chemicals used in citrus farming. The sample should be thoroughly homogenized in a stainless steel mixing bowl.

Before being placed in the sample jar, all soil samples (discrete and composites) should be thoroughly homogenized until they appear completely uniform in texture and color. Analytical laboratories should be instructed that samples received from the field should be thoroughly homogenized again in the jar before an aliquot is removed for extraction.

b. Analytical Parameters

If it has been determined during the Phase I/II that a property has a history of agricultural activity prior to 1985, then each soil analysis should include, at a minimum, organochlorine pesticides (EPA Method 8081), metals (including mercury and copper), and total organic carbon (TOC). If the history of the property or more recent use suggests that other contaminants may be present, then the list of analytes should be expanded as appropriate. The best available detection limits should be requested of the analytical laboratory, but at a minimum, detection limits (practical quantitation limits) for each chemical should be as low as the corresponding screening value (see below). That is not possible in all cases; however, since some screening benchmarks are lower than quantitation limits defined by the Florida Department of Environmental Protection. As a general rule, TOC analysis should be done for all soil and sediment samples. TOC is essential for food chain modeling and interpretation of individual sample results, bioassay results, etc.

c. Discrete Sampling for Small Properties (<500 acres)

Discrete sampling will be required for agricultural areas less than 500 acres in size. Discrete sample sites should be established at regular intervals across the property, at a density of at least one sample per 10-20 acres. The actual sampling density will depend on the size of the property, analytical cost per sample, likelihood of contamination, and other factors, and will

be specified in the proposed sampling plan and agreed to by consensus between the SFWMD and FWS. A minimum of 10 samples will be necessary for most properties. Some exceptions to this minimum sample size will occur where parcels are small (<100 acres) or demonstrate a combination of land uses (i.e., residential "ranchettes," small scale livestock/garden/nursery properties, rock mining pits, etc.) where only a small percentage of the overall area was cultivated. Careful consideration should be given prior to using a sample size smaller than 10. As sample size decreases, statistical variation tends to increase, thereby increasing the size of confidence intervals used to determine the 95 percent UCL of the mean for any given analyte. Higher UCL values may increase the probability that samples will exceed ecological screening values, thereby necessitating expanded sampling, risk assessment, and subsequent clean up. Also, higher UCL values will generate correspondingly higher Hazard Quotients (HQ) in food chain modeling exercises associated with Ecological Risk Assessments (ERA).

Within this framework, actual sample location is at the discretion of the project manager. This agricultural field sampling is in addition to, and separate from, Phase II sampling that may be focusing on facilities with a high likelihood of contamination, such as pump stations, storage sheds, mixing/loading areas, airstrips, vehicle turn-arounds, cattle dip tanks, etc. The exact location of each sample should be recorded using GPS.

d. Composite Sampling for Large Properties (>500 acres-1000 acres)

In large properties, discrete sampling at short intervals would be at best cost prohibitive, if not impracticable. Reducing the sample density, however, can lead to under-representation of large portions of the property, as well as elevated likelihood of missing hot spots. In order to address this problem, composite sampling is used. Composite sampling is a compromise, under which large numbers of discrete samples are collected, but composited prior to laboratory analyses. The following composite sampling strategy has been developed jointly by FWS and SFWMD.

Using aerial photographs, a 50-acre grid pattern will be established on each property or agricultural area greater than 500 acres in size. The grids should be located and confirmed in the field using GPS. For properties between 500 acres and 1,000 acres, all of the 50 acre grids will be sampled. For example, for a 1000-acre parcel, all 20 of the 50-acre grids would be sampled.

Each of the 50-acre grids will be subdivided into ten 5-acre subgrids. One close proximity composite soil sample will be collected from each of the 5-acre subgrids in the 50-acre grid. The location of each subsample should be exactly determined using GPS. The ten subsamples are then composited into one sample and thoroughly mixed. This composite sample, representing the entire 50-acre grid, is then submitted to the laboratory for analysis and/or testing. (For copper, discrete samples will be maintained separate (i.e., not composited) and analyzed individually.)

e. Composite Sampling for Very Large Properties (>1000 acres)

For very large properties, where complete composite sample coverage is not possible due to budget constraints, a pre-arranged fraction of the 50-acre grids should be selected. For example, a 5000-acre parcel would be divided into 100, 50-acre grids. Perhaps half (50) of these grids would be selected for sampling. The number of grids to be selected will be predetermined for each site by consensus between the SFWMD and FWS, based on site-specific factors. Grids will be selected for sampling using a stratified random approach.

For stratified random sampling, the agricultural area will be divided into a number of equally-sized supergrids, each consisting of group of adjacent 50-acre grids. From each supergrid, the pre-arranged fraction of grids will be selected randomly for sampling. For this purpose, a random number generator will be used to select 50-acre grids from each supergrid for sampling. The stratified random approach is recommended over a purely random approach. In random sampling there is always a chance of clustering, as well as over- and under-representation of segments of the agricultural area. The stratified random approach will assure that all segments of the agricultural area are equally represented.

f. Screening-Level Ecological Risk Assessment

Following the collection of Phase II data and sampling of the cultivated areas, each site will be evaluated using a SLERA. The SLERA is intended to identify contaminants of potential ecological concern (COPECs) and provide screening-level conclusions regarding the potential for risk to the ecological receptors at the site. The conclusions of the SLERA will primarily indicate which COPECs are likely to show a low potential for elevated risk and those that may require further evaluation either through the collection of additional data for use in an expanded ecological risk assessment or through remediation.

Screening is conducted for two general sets of ecological receptors and the screening values are used to identify areas that may require further attention for each receptor. For the aquatic community receptor, the FDEP's Sediment Quality Assessment Guidelines (SQAGs) for Florida Inland Waters (MacDonald et al. 2003) should be used as screening values whenever possible. The SQAGs were developed for assessing sediment quality in Florida waters, based on the probability of effects on sediment-dwelling organisms. For each contaminant there are two SQAGs: Threshold Effect Concentration (TEC) and Probable Effect Concentration (PEC). TECs were formulated to define concentrations of contaminants below which adverse effects on sediment-dwelling organisms are unlikely to occur. PECs were developed to define ranges of concentrations above which adverse effects are likely to occur.

In most cases the TEC will serve as the initial screening value, especially when using a composite sampling design. Use of PECs as screening values may be justified under some circumstances for certain contaminants. For some contaminants, SQAGs have not yet been developed. The U.S. Environmental Protection Agency's Ecotox Thresholds, the National Oceanic and Atmospheric Administration's Effects Range Low and Effects Range Median, or other ecologically-based guidelines should be used when SQAGs are not available. For

some chemicals such as metals, information on natural background levels may have to be considered. Human health-based guidelines for cleanup of contaminated sites, such as FDEP's Soil Cleanup Target Levels, should not be used for this purpose. Chemicals exceeding either the TEC or the PEC, or their equivalent benchmark where SQAGs are not available, will be identified as COPECs and will be further discussed in the SLERA.

When more than one chemical is present in the sediments, the risk associated with exposure of the aquatic community to the mixture may be greater than to a single chemical. Risks associated with exposure to multiple chemicals in any one chemical group (e.g., metals, organochlorine pesticides, etc.) are generally considered to be additive. In order to account for the potential effects of multiple chemicals, a PEC-quotient (PEC-q) approach will be utilized, when more than one chemical in a group is detected on a site. The PEC-q for each chemical is calculated by dividing the chemical concentration by the PEC for that chemical. The mean of the PEC-q's for all of the chemicals in the group will then be calculated. If the mean PEC-q is greater than 0.5, the combined effects of the multiple chemicals in the sediment may be toxic and should be further evaluated. Specific tests and methods to be used for further risk-based evaluation are discussed in the following sections.

Since TECs/PECs are specific to benthic macroinvertebrates, screening is also conducted for aquatic-feeding wildlife (birds and mammals) that are FWS trust wildlife species (i.e. MBTA and ESA species). Generally, the bald eagle (*Haliaeetus leucocephalus*), white pelican (*Pelecanus erythrorhynchos*), snail kite (Rostrhamus sociabilis), osprey (*Pandion haliaetus*), clapper rail (*Rallus longirostris*), great blue heron (*Ardea herodias*), and wood stork (*Mycteria americana*) are federal trust species that have been used as representative target species in exposure and risk calculations.

For wildlife, the screening-level risk is expressed by calculating a screening-level hazard quotient (HQ), which is simply the ratio of the modeled exposure (numerator) and TRV (denominator). Screening-level HQs for wildlife species are calculated using the site-specific reasonable maximum exposure (numerator) compared to a TRV based on the No Observed Adverse Effects Level (NOAEL)(denominator). Exposures are generally calculated using the fugacity-based foodweb exposure model that was developed jointly by FWS and SFWMD (Goodrich 2002 and NewFields 2006), but other exposure models can be used if needed and approved by FWS. A screening-level HQ greater than one indicates that the chemical should be retained as a COPEC for further risk analysis in the SLERA and potentially as a basis for risk management actions.

g. Sites Which Exceed the PEC and/or with Wildlife HQs Greater than 1.0

Sediments with concentrations of contaminants above the PEC potentially represent significant and immediate hazards to exposed aquatic life. If any of the 50-acre composite samples, described above, exceeds the PEC or other appropriate probable effect-level screening value, it will be necessary to return to that 50-acre grid and obtain individual samples from each of the ten aliquot locations. These samples should be taken as close as possible to the original sample locations. These discrete samples should then be submitted to the laboratory for analysis.

The purpose of this follow-up sampling is to determine the spatial distribution of contaminants within the 50-acre grid; i.e., do the data indicate the presence of one or more isolated hot spots, or widespread contamination above the PEC? If only one or a few of the individual (5-acre) samples are elevated, SFWMD may choose to attempt to remediate these areas in order to reduce the average contaminant levels of the 50-acre grid to below PEC. This will require additional sampling in order to confirm that the sub-grids in question were indeed responsible for the PEC exceedance, and to delineate the extent of the hotspot(s). Due to possible small scale variability in contaminant concentrations, one sample is not sufficient as a basis for remediation decisions. As discussed in Section C (Remediation), the SFWMD may chose to conduct a more detailed analysis, including geostatistical analyses, to attempt to identify areas in need of remediation.

Conversely, follow-up sampling may indicate that large portions of the site contain elevated levels of contaminants. Remediation of widespread contamination over such a large area may not be practical. In such a case, further testing and completion of an ecological risk assessment (ERA) will be necessary in order to refine our understanding of the hazards to federal trust resources associated with contaminants on the site. These tests and assessments should include: (1) desorption studies, (2) sediment bioassays, and (3) ERA with food chain modeling. In addition, if any of the contaminants have a tendency to accumulate in aquatic organisms or biomagnify in the food chain, such as organochlorine pesticides, PCBs, PCDDs/PCDFs, and some metals, bioaccumulation studies are recommended. Specific tests and methods to be used are discussed in the following sections.

As stated above, follow-up sampling of discrete locations within a 50-acre grid is intended to determine the spatial distribution of contaminants within the grid, and should not constitute an attempt to confirm or refute the original composite result. If widely disparate results are obtained upon follow-up (discrete) sampling compared with the original composite, this suggests either small-scale variability in the COPEC concentrations or that some error has occurred in sampling, homogenization, or laboratory analysis. In these cases, the original composite result will represent the 50-acre grid in question, barring some evidence to the contrary suggesting that the follow-up result is actually more representative of contaminant concentrations in the grid.

In order to avoid the above situation, consideration will be given on a project-by-project basis, that discrete samples collected in the field, following homogenization, be split into two jars. One sample jar will be used for producing the composite by mixing with the other samples representing a particular 50-acre grid; the other jar of each pair would be stored at 4 degrees centigrade for possible future analyses. If screening levels for any analytes of interest are exceeded in the composite sample analyses, then all 10 of the subsample aliquots used to make that sample will be reanalyzed for the observed compounds to identify more precisely the location of the observed contaminants. Use of this methodology may be problematic for very large properties due to limited storage space.

h. Sites Which Exceed Only the TEC

In general, a few scattered exceedances of a TEC by an individual contaminant at a site, when there are no PECs exceeded, is not considered to be a significant cause for concern. However, if enough samples exceed the TEC, such that the mean (estimated by the 95 percent upper confidence limit (UCL) of the mean) for the entire site (i.e., the mean of all discrete samples for a small site, or the mean of all 50-acre composites for a large site) is above the TEC, widespread ecological effects are possible. To evaluate this, the mean and the 95 percent UCL of the mean should be calculated for each COPEC. In most cases, if the 95 percent UCL for all contaminants is below the TEC, the SLERA will indicate that the potential for unacceptable risk is low and no further action will be necessary. However, if the 95 percent UCL for any contaminant exceeds the TEC, then the additional testing and an ERA (as described above for PEC exceedances) or remedial activities may be necessary. These tests and assessments should include: (1) desorption studies, (2) sediment bioassays, (3) ERA with food chain modeling, and (4) bioaccumulation studies for lipophilic contaminants. In addition, if TECs are exceeded by more than one contaminant in the same grid(s), further evaluation will be necessary to address possible synergistic or additive effects of these co-contaminants. Bioassays may be useful in this case to identify potential toxicity from multiple contaminants that would not be predicted by using individual screening values.

i. Evaluation of False Negatives where Composite Samples are Used

[Note: The following procedure for the evaluation of potential false negatives has been added to this MOA at the request of the Florida Department of Environmental Protection (FDEP) and is not required by FWS. This procedure is included in this MOA in order to provide a complete documentation of the sampling and assessment protocol followed by SFWMD.]

The primary disadvantage of composite samples is the possibility of masking hot spots by diluting the elevated discrete samples with cleaner aliquots. This masking can be viewed as a form of a "false negative," i.e., the probability of yielding clean composite results, while certain portions of the grid may exceed ecological benchmarks. In order to minimize the above disadvantage, the following procedure is included.

A representative percentage of "clean" grids (i.e., COPEC concentrations within the grid are all below the SQAG-TEC values) will be selected for further evaluation. The percentage of grids selected for further evaluation will depend upon the variability of the data and the total number of composite samples which were analyzed. When selecting the subset of non-exceeding grids, the following should be considered: (1) the non-exceeding grids targeted for discrete sampling shall not be clustered; and (2) the number of non-exceeding grids targeted for discrete sampling shall be at least 20% of the total number of "clean" grids but not greater than 10.

All of the individual discrete aliquots making up the ten-point composite samples within the selected grids will subsequently be analyzed for the COPECs only. The results for the

discrete samples for selected clean grids will be tabulated, along with the results for individual discrete samples that are analyzed for exceeding grids (per the procedure outlined in section h. below). Both the composite sample and discrete sample values for each grid should be tabulated.

For each grid, the percentage of discrete samples exceeding the ecological benchmark will be calculated. The grids will then be sorted based on ascending COPEC composite concentration. The average aliquot exceedence rate for each grid is then computed by obtaining the average percentage of aliquots exceeding the benchmark in that grid and in all grids with lower composite concentrations.

The average aliquot exceedance rates are then used to determine the composite sample concentration above which the individual sample results exceed the composite value by a pre-determined percentage (e.g., 5%). The largest composite value corresponding to the pre-determined exceedence rate will be defined as the trigger level. If the trigger level is less than the PEC for the given chemical, it shall be used in all subsequent analyses as the substitute for the PEC.

Using this approach, the probability of missing hot spots in clean grids can be maintained below a pre-determined level (e.g. 5%). Trigger levels for individual chemicals that have already been established in certain types of agricultural areas may be used in other similar agricultural areas. In such instances, supplementary area-specific false negative sampling and analyses are not required.

4. Expanded Ecological Risk Assessment

In cases where clear decisions regarding the potential for risk cannot be reached or where remediation to remove potential risks based on screening-level results is impractical, further testing and completion of an ERA will be necessary in order to refine our understanding of the hazards to federal trust resources associated with contaminants on the site. These tests and assessments should include: (1) desorption studies, (2) sediment toxicity tests, and (3) ERA with food chain modeling. In addition, if any of the contaminants have a tendency to accumulate in aquatic organisms or biomagnify in the food chain, such as organochlorine pesticides, PCBs, PCDDs/PCDFs, and some metals, bioaccumulation studies are recommended. The details of the ERA should be agreed upon by SFWMD and FWS prior to the initiation of work.

a. Desorption Studies

Contaminated soils inundated during the process of wetland restoration may release soil bound pollutants into the pore and surface waters. Soil or sediment characteristics governing pollutant desorption (e.g., total organic carbon, grain size, pH) will vary among locations. In addition, weathering or aging of some contaminants may alter their bioavailability from that predicted in the published literature. This necessitates site-specific desorption studies to accurately assess pollutant availability to aquatic organisms. Pollutant desorption is assessed on soils from the location using ASTM method E-1195-01, "Method for Determining a

Sorption Constant (Koc) for an Organic Chemical in Soil and Sediments." This method simulates flooding of site soils and measures release of contaminants from the soil over time. Filtered pore water samples are collected and analyzed for COCs after 3, 7, 14, and 2l days contact time. These results are used to determine a site-specific organic carbon partitioning coefficient (Koc), an estimate of pollutant partitioning between sediments and water. This value can be used in food chain models for predicting aquatic and terrestrial organism exposure to pollutants.

Soils used in the desorption study should represent, as near as possible, the maximum detected concentration of the contaminant on the site, in order to ensure that measurable levels of the particular COC are released into the water. Bulk soil samples collected for this purpose must be thoroughly mixed. To ensure uniform contaminant concentrations, samples should be collected and analyzed from several locations within the bulk soil sample (e.g., top, middle, and bottom of the container). In order to be useful, the water analysis results must show evidence that steady-state concentrations have been reached within the 21-day duration of the test. Contaminant concentrations in water obtained during the desorption study may be compared with Florida Surface Water Quality Standards.

b. Sediment Toxicity Testing

Toxicity testing with representative aquatic invertebrates and vertebrates allows prediction of soil bound pollutant toxicity to aquatic organisms if the location is converted to a wetland. For properties requiring an ecological risk assessment, the following sediment toxicity tests should be conducted: 10-day flow through sediment bioassay with two invertebrate species (e.g., *Hyalella azteca* and *Chironomus tentans*), and 7-day flow through sediment bioassay with one fish species such as the fathead minnow (*Pimephales promelas*) or other suitable species.

"Standard Test Methods for Measuring the Toxicity of Sediment-Associated Contaminants with Freshwater Invertebrates (ASTM E-1706-95)," "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates (USEPA/600-R-99/064)," and "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (USEPA/600/4-91/002)" provide standard methods to assess soil-associated pollutant effects upon aquatic organisms.

Endpoints measured in these tests are survival and growth. Any statistically significant impacts upon these endpoints in any test are considered direct evidence of potential impairment of the prospective benthic/aquatic community in the restored wetland.

As with the other sediment studies, bulk soil samples collected for this purpose must be thoroughly mixed, and uniformity of contaminant concentrations should be confirmed by sampling from several locations within the bulk soil simple. Soils used in the sediment toxicity tests should represent, as near as possible, the maximum detected concentration of the contaminant on the site.

c. Bioaccumulation Studies

Factors affecting pollutant accumulation by aquatic organisms can vary among locations. Accurate prediction of pollutant bioaccumulation at a location requires site-specific bioaccumulation studies, using species representative of those that may exist on the location once flooded. For properties requiring an ecological risk assessment, 28-day bioaccumulation studies should be performed with a representative benthic macro invertebrate (e.g., *Lumbriculus variegatus*) and fish (e.g., *Pimephales promelas*).

Methods described in "Great Lakes Dredged Material Testing and Evaluation Manual (USEPA and Army Corps of Engineers, 1998)" and "Standard Guide for Determination of the Bioaccumulation of Sediment-Associated Contaminants by Benthic Invertebrates (ASTM E-1688)" should be used to determine the bioaccumulation potential of soil-associated pollutants. These results are considered as site-specific measures of the degree to which sediment-associated chemicals may accumulate in biota. Results can be used to generate input variables for food-chain modeling.

Soils used in the bioaccumulation studies should represent, as near as possible, the maximum detected concentration of the contaminant on the site, in order to ensure that measurable levels of the particular COC are released into the water and taken up by the organisms. Bulk soil samples collected for this purpose must be thoroughly mixed. To ensure uniform contaminant concentrations, samples should be collected and analyzed from several locations within the bulk soil sample (e.g., top, middle, and bottom of the container). In order to be useful, the concentration of contaminant(s) in the test organisms must show evidence that steady-state conditions have been reached within the 28-day duration of the test.

d. Exposure and Risk Analysis Using Aquatic Food Chain Models

In the absence of direct measures of effects, it is necessary to estimate or predict the risk of adverse effects upon FWS's trust resources and other organisms that may utilize the created wetland, reservoir, or STA. Food chain models allow prediction of effects on higher level organisms by combining data from the site-specific desorption and bioaccumulation studies with information on dietary composition, consumption rates, body weights, etc. and literature toxicity data. The FWS and SFWMD have jointly developed a food web model for this purpose (Goodrich 2002 and NewFields 2006), and this model is the preferred tool for risk analysis. However, alternative approaches for modeling exposure may be used if they are more applicable to site conditions. FWS must approve the use alternative models, and reports should present details of the model components and input variables.

FWS's trust resources include migratory birds and federally listed threatened or endangered species. Typically, representative Trust species such as the bald eagle (*Haliaeetus leucocephalus*), white pelican (*Pelecanus erythrorhynchos*), snail kite (*Rostrhamus sociabilis*), osprey (*Pandion haliaetus*), clapper rail (*Rallus longirostris*), and wood stork (*Mycteria americana*) have been used in the analysis. Where bioaccumulating pollutants are present, a maximally exposed piscivorous bird must always be included. Generic fish

species (omnivorous and higher level predatory fish) may be used as aquatic focal species. At a minimum, the food chain model should assess risk to the following groups (trophic levels) of target organisms: benthic invertebrates (detritivores), omnivorous fish, first order carnivorous fish (trophic level 3), second order carnivorous fish (trophic level 4), omnivorous bird, first order carnivorous bird, second order carnivorous bird, and all threatened or endangered species that may utilize the site after flooding. The following potential routes of exposure should be included in the model: direct exposure to contaminated water/sediments, sediment ingestion, water ingestion, and food ingestion. The following transfer mechanisms and processes should be included; desorption from sediment to water, bioconcentration from water, bioaccumulation through ingestion of contaminated prey, and biomagnification.

Once the target species exposure to pollutants has been modeled, the potential risk to the species should be assessed by comparing the modeled exposure to a toxicity reference value (TRV). For purposes of this program, the most relevant endpoints for assessing risk are effects upon (1) survival and (2) reproduction. In the absence of toxicity tests performed with the specific target species, TRVs for the pollutant(s) of interest must be obtained from the literature. Where possible, the ideal TRV will have been generated using a similar exposure route for a taxonomically related species. Uncertainties arising from the use of TRVs based on different exposure routes or unrelated species should be discussed in the risk assessment. In general, the most sensitive TRV should be utilized to assess risk to the target species.

As discussed in previous sections, risk is expressed by calculating an HQ, which is simply the ratio of the modeled exposure (numerator) and TRV (denominator). HQs above one indicate a potential for adverse effects to occur in a species under a given exposure scenario. The higher the HQ above one, the greater the risk that adverse effects will occur. HQs below one generally indicate that adverse effects are unlikely. HQs that are greatly different from one provide the greatest level of certainty in their interpretation.

Where appropriate, a probabilistic risk analysis may also be used as a tool for assessing risk at sites where the food chain model is also used in an expanded risk analysis. The details of any probabilistic risk assessment should be discussed and agreed upon by SFWMD and FWS on a site-specific basis prior to initiating any such analysis.

5. Final Reports

a. Phase I/II Environmental Site Assessment and SLERA Report

Upon completion of all sampling, chemical analyses, and screening-level food chain modeling, a Phase I/II and SLERA report should be prepared which identifies all potential hazards to ecological receptors and provides recommendations for additional risk-based data collection and assessment. The Phase I/II/SLERA will also provide all analytical data and corresponding global positioning system (GPS) coordinates for all collected samples in the report. These data and coordinates will also be provided to FWS in an electronic

spreadsheet form (Excel). Finally, the Phase I/II/SLERA may also provide general recommendations for corrective actions and/or management of the project that will reduce the hazards to acceptable levels.

Given the spatial resolution of the data collected for the Phase I/II and the sometimes limited timeframe available for completion of the Phase I/II, SFWMD recognizes that accurate delineation of areas that may require remediation may not possible without further investigation. The Phase I/II will be used to provide a general estimation of the amount of remediation necessary to reduce the potential for risk at a site. More detailed delineation of areas of elevated COPEC concentrations that may occur subsequent to the Phase I/II will be presented in separate reports.

FWS will review the report and provide concurrence or make recommendations for changes or additions. Any recommendations for changes or additions will be handled as addenda to the report.

b. Ecological Risk Assessment Report

If additional risk assessment activities are required, an Ecological Risk Assessment (ERA) report will be provided as a separate document. Following the completion of the expanded ERA, SFWMD will provide FWS with a draft of the ERA report for review. The draft ERA report will include the complete results of all desorption studies, sediment toxicity testing, bioaccumulation studies, and food chain modeling. In addition, it should include a complete and clear description of all methods, assumptions, and inputs used in the laboratory studies and food chain modeling. The report should provide detailed conclusions regarding risks to all trophic groups and species of concern for the entire site or any portion thereof. FWS will review the draft report and make recommendations for changes or additions. Following the resolution of any FWS concerns, a final ERA report will be provided to FWS.

Hazardous.	Tavia	224	Dadiaa	a+ia	\
mazaruous.	TOXIC.	anu	Raulua	cuve	vvaste

H.4 Phase I Environmental Assessment Update Everglades Agricultural Area (EAA) Storage Reservoir



December 14, 2017

Mr. Robert J. Taylor Lead Environmental Engineer South Florida Water Management District 3301 Gun Club Road West Palm Beach, Florida 33406

DRAFT

RE: Memorandum

Phase I Environmental Assessment Update

Everglades Agricultural Area (EAA) Storage Reservoir

Western Palm Beach County, Florida

Job # 60561114

Dear Mr. Taylor:

1.0 INTRODUCTION / BACKGROUND

AECOM Technical Services, Inc. (AECOM) is pleased to present this memorandum to the South Florida Water Management District (District) summarizing the results of the Phase I Environmental Site Assessment update, review and summarize previous investigations at the above referenced project area. The proposed reservoir project is located within the footprint of the existing A-2 Parcel and the adjacent expansion area located in western Palm Beach County, Florida. The A-2 Parcel is located west and adjacent to the A-1 Parcel and adjacent to and north of the Holey Land Wildlife Management Area. The A-2 Parcel is approximately 14,495 acres. In addition to the District owned A-2 lands, the expansion area located immediately west includes approximately 1,263 acres of TIFT owned land, approximately 500 acres that are held in private ownership, and approximately 2,393 acres that are currently owned by the District. Figure 1 illustrates the A-2 Parcel and expansion area.



Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **2** of **17**

1.1 Property Description

The A-2 Parcel and expansion area consist of 20 parcels that were previously used for the cultivation of sugar cane. The tract numbers, current and prior ownership and acreage are given below.

	A-2 Flow Equalization Basin	
Tract No.	Former Owner	Acreage
D7100-044	TALISMAN SUGAR CORPORATION	2
D7100-047	TALISMAN SUGAR CORPORATION	10
D7100-066	TALISMAN SUGAR CORPORATION	12
D7100-067	TALISMAN SUGAR CORPORATION	1
D7100-104	TALISMAN SUGAR CORPORATION	14,371.53 ¹
D7100-139	TALISMAN SUGAR CORPORATION	1
D7100-141	WEINLEIN, JOAN	10
D7200-005	TALISMAN SUGAR CORPORATION	1
A-2 Total		14,408.53
	Expansion Area	
Tract No.	Former / Current Owner	Acreage
D7100-152	Okeelanta Corp (Parker Family Trust)	773.17
D7100-103	Okeelanta Corp (Farm 15)	855.85
D7100-143	Gillespie	9.97
D7100-104	TALISMAN SUGAR CORPORATION	754.17 ¹
D7100-085	TIIF Lands	638.45
D7100-142	TIIF Lands	9.97
D7100-086	TIIF Lands	541.60
D7100-145	TIIF Lands	9.97
D7100-087	TIIF Lands	50.80
D7100-147	TIIF Lands	12.08
D7100-109	New Hope Sugar (Seventh Day Adventist)	489.00
D7100-144	Susan Goggin	9.97
Expansion Area Tota	I	4,155

¹ Acreages shown include only the portion of the tract that is within the proposed limits of construction for the A-2 FEB / Expansion Area project. The total acreage of Tract D7100-104 is 20,525 acres, and includes lands outside the current project footprint.

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **3** of **17**

2.0 OBJECTIVE

The objectives are to conduct a site visit of the A-2 Parcel and expansion area and to formulate a Phase I ESA update on properties that are both owned and not owned by the District within the A-2 Parcel and expansion area, and review readily available environmental reports within the A-2 Parcel and adjacent properties. Identify known point source and non-point source areas of impact which may present potential ecological or human health risk during and after the project has been constructed. Provide recommendations for additional assessment and/or corrective actions that may be required to ensure the land is suitable for the District's intended use. The results of the ESA will be used to support the project feasibility study.

3.0 Regulatory Environmental Database Review

An electronic regulatory environmental database search and review was conducted on the A-2 Parcel and expansion area foot print. AECOM utilized Environmental Data Resources, Inc. (EDR) for compiling the database.

3.1 Contaminated Sites and Regulatory Status

The environmental database report, provided by EDR was reviewed to identify areas within the A-2 Parcel and expansion area where there have been leaking tanks, documented soil and/or groundwater impacts and whether any open regulatory enforcement cases were present on the project areas. Given below is a summary of the contaminated sites and regulatory status.

Talisman Sugar Corporation

T-2 Borrow Pit (COM_170717) – Used to dispose of solid waste, farm related waste, tires, and metal parts. Removed 1,009 tons of metal, 473 tons of tires, 3,895 tons of construction debris, and 3,735 tons of impacted soil and disposed offsite. A groundwater treatment system was installed and subsequently discontinued due to the inability of the system to abate the lead in the groundwater. Received SRCO with non-residential use deed restriction with included soil and groundwater restrictions.

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **4** of **17**

T-3 Labor Camp (COM_216895) – Housed farm laborers, and utilized as an airstrip for crop dusting operations. Excavated approximately 2,928 tons of pesticide, fuels and metal impacted soil. Received SRCO with soil restrictions.

T-8 Pump Station – Diesel pump station used to maintain water levels in an adjacent irrigation canal. Excavated 7 tons of petroleum impacted soils and disposed offsite. Received an SRCO.

T-10 Pump Station (FAC ID 508628252) - Diesel pump station used to maintain water levels in an adjacent irrigation canal. Excavated 293 tons of petroleum impacted soils and disposed offsite. Received and SRCO.

T-21 Mix and Load Area (COM_157269) - Farm equipment staging area and storage shed where pesticides, and fuels were stored, handled and mixed. Excavated 686 tons of arsenic impacted soils and disposed offsite. Install a groundwater remedation system. Reducted arsenic in groundwere to below GCTL. Received SRCO with soil restrictions.

T-24 Pump Station (FAC ID 508628252) - Diesel pump station used to maintain water levels in an adjacent irrigation canal. Excavated 0.68 tons of petroleum impacted soils and disposed offsite. Received an SRCO.

Farm 15 Florida Crystal PS 15-2 (COM_287122). Diesel pump station used to maintain water levels in header canal. Excavated 278 tons of petroleum impacted soils and disposed offsite. Site is currently inactive.

With the exception of the Florida Crystal Farm 15 PS 15-2, the database review did not identify any open spills, leaking underground or aboveground petroleum storage tanks or enforcement cases requiring additional corrective action.



Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **5** of **17**

3.2 Well Search Report

Five permitted wells are identified on the Well Search Report. The depth of the wells range in depth from 225 feet to 27 feet. The wells are not permitted for use as public water supply, and appear to be associated with the U.S.Geological Survey Florida Water Science Center.

The two pump stations located on the western boundary of the expansion area have permits for extraction of water from the District L-24 Canal.

4.0 Site Visit

After reviewing the regulatory environmental database, on December 6, 2017, AECOM, and representatives of the District and US Fish and Wildlife Service (Service) conducted a site visit of the A-2 Parcel and expansion area. Areas that were readily accessible were inspected via a 4-wheel drive vehicle.

The A-2 Parcel and expansion area is currently being used for the cultivation of sugar cane. The District land under cultivation is being subleased. Depending on which tracts of land, the sugarcane is in various stages of growth. Portions of the sugarcane fields were being harvested during the site inspection. Numerous staging areas and portable pump stations were observed. No buildings or structures were observed. Two permanent pump stations were observed; one open air pump station, identified as PS-189, with three pumps and associated aboveground storage tank (AST) located in the northwest corner of the expansion area; and one open air pump station with one pump and associated AST located on the west-central boundary of the expansion area.



Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **6** of **17**

5.0 Review of Environmental Reports for the A-2 Parcel and Expansion Area

AECOM reviewed readily available Environmental Assessment reports on properties within the project areas owned by the District.

5.1 Tract D7100-104 – Former Talisman South Ranch

This property consists of approximately 14,371 acres that has been used for the cultivation of sugar cane since the mid-1960s. Prior to the developed as sugar cane the property was undeveloped. From the 1960's through 2009, the property was continually used for the cultivation of sugar cane, when construction of the EAA Reservoir commenced. Sections of the former Talisman property not included as part of the initial construction have remained in operations for sugar cane cultivation. The Talisman Sugar Corporation Tract # 100-104 lies within portions of Sections 4, 5, and 6, Township 45 South Range 37 East, a portion of Section 13, Township 46 South, Range 35 East, Sections 15 – 36, Township 46 South, Range 36 East, Sections 5 – 9, 16 – 22, 26 – 30, and portions of Sections 4, 10, 14, 23 – 25, 31– 36, Township 46 South, Range 37 East, and a portion of Section 31, Township 46 South, Range 38 East. Soils on portions of the tract have been scraped as part of the construction of the abandoned EAA Reservoir project. The property makes up the east central portion of the proposed A1 Reservoir and the western portion of the proposed A2 Reservoir.

Dames & Moore (D&M) conducted a Phase I Environmental Site Assessment (ESA) of the Talisman South Ranch in 1996. The ESA included site reconnaissance, interviews with the property owner and government officials, review of governmental databases for regulated facilities and spill sites, and a review of available historical resources. The report identified the following 14 areas of concern on Tract 7100-104:

- T-2 Borrow Pit Landfill
- T-3 Labor Camp
 - T-3.1 Pesticide mix/load area
 - T-3.2 Aircraft Refueling Area/Runway
 - T-3.3 Burn Pit

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **7** of **17**

- T-3.4 Drum Storage Area
- T-3.5 Aircraft Maintenance Building
- T-3.6 Water Treatment Plant
- T-3.7 Miscellaneous Area
- T-4 Surface Solid Waste Area
- T-6 Electric Pump Station
- T-7 Diesel Pump Station
- T-8 Diesel Pump Station
- T-9 Staging Area
- T-10 Diesel Pump Station
- T-11 Equipment Staging Area
- T-12 Diesel Pump Station
- T-20 Surface Solid Waste Area
- T-21 Pesticide mix/load area
- T-24 Pump Station
- T-Shed Pesticide Storage Shed

These areas were subsequently investigated during a Phase II ESA performed by D&M in 1998. The Phase II ESA included the collection and analysis of soil and groundwater samples in each of these areas for a broad range of target analytes which included fuels and oils, pesticides, herbicides, and soil addendums. Based on the Phase II investigation, D&M eliminated T-3.5, T-3.6, T-3.7, T-4, T-9, T-11, T-12, and T-24 as concerns. D&M recommended removal of surficial solid waste at T-20 but did not identify any impacts to soil or groundwater. The Phase II ESA identified the presence of constituents of potential concern (COPC) at concentrations exceeding soil and/or groundwater cleanup target levels at eight areas of concern (T-2, T-3, T-6, T-7, T-8, T-10, T-21, T-Shed), and these parcels were identified as "Exclusion Areas". The Exclusion Areas were deferred during the land transfer from Talisman to the District until such time as Talisman obtained Site Rehabilitation Completion Orders (SRCO) on these Exclusion Areas from Florida Department of Environmental Protection (FDEP). Talisman was required to assess and remediate these areas to the lower of the Soil Cleanup Target Level (SCTL) criteria or the Sediment Quality Assessment Guidelines (SQAG) -Threshold Effects Concentration (TEC) criteria, whichever was lower.

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **8** of **17**

Talisman did obtain SRCOs for these Exclusion Areas and these were subsequently transferred to the District.

Between 1999 and 2005, Talisman performed assessment and corrective actions on each of the Exclusion Areas. The assessment and corrective action work was completed under the direction of FDEP. Talisman completed a Site Rehabilitation Completion Report for each of the Exclusion Areas, and FDEP provided separate SRCOs for each Exclusion Area. Most of the impacted areas were minor in extent and consisted of soil impacts only that were remediated by source removal action, with the exception of the Labor Camp (T-3) and the Borrow Pit Landfill (T-2), which are described below.

The Talisman Borrow Pit Landfill (T-2) was a former rock quarry that was filled with vegetative matter, debris, tires, and equipment from farm and sugar mill operations. Low levels of Total Petroleum Hydrocarbons (TRPH) and various Polynuclear Aromatic Hydrocarbons (PAH) were detected in the backfill materials. PSI conducted a source removal to remove the metal debris and petroleum impacted soil from the pit, but the vegetative material was allowed to remain. As a result of the excavation activities, approximately 1,009 tons of steel, 473 tons of tires, 3,895 tons of construction and demolition (C&D) debris, and 3,735 tons of soil which did not meet the clean soil criteria was transported off-site to a disposal facility. Upon completion of the excavation activities, the Borrow Pit Landfill was capped with a clean soil cap to prevent exposure to residual contaminants remaining in place. The FDEP issued an SCRO with non-residential use deed restriction for this exclusion area on July 21, 2006. As part of the deed restriction, the engineered cover over the area must remain in place.

The former Labor Camp (T-3) encompassed 10 acres and formerly operated as housing for farm workers. The labor camp ceased operation in about 1971 and the property was then utilized by a crop dusting operation until 1999. The exclusion area includes four former concrete buildings used as residential quarters, an aircraft landing strip, and a pesticide mixing/loading area for loading agrichemicals into aircraft. Fueling and minor maintenance of single engine aircraft was also performed at the site. Four ASTs were also located within the exclusion area. Other areas of interest on the site included a wastewater

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **9** of **17**

treatment plant for domestic wastes associated with the former labor camp and a concrete burn pit for burning of empty agrichemical containers. All of these areas were assessed by PSI and five areas were identified by PSI which required cleanup: The FDEP issued an SCRO with conditions on June 21, 2006.

Area #1: Pesticide and metals impacted soils in the pesticide mix/load area

Area #2: Atrazine-impacted soils in the pesticide mix/load area

Area #3: Atrazine-impacted soils in the pesticide mix/load area

Area #4: Pesticide and metals impacted soils in the drum storage area

Area #5: Lower concentration pesticide and metals impacted soils around the

north and east sides of Building C

PSI performed source removal activities to address all of these areas. A total of 2,928 tons of pesticide and metal impacted soils were excavated and disposed offsite. With the exception of the concrete slabs, the buildings were demolished.

Upon completion of the excavations, PSI collected confirmation soil samples from the sidewalls and base of each excavation. On July 21, 2006, the FDEP issued an SCRO with a non-residential use deed restriction for this exclusion area.

Talisman was able to obtain SRCOs on the Exclusion Areas and these properties were transferred to District in 2007. Site inspections were performed by the District in 2007 and 2009, at which time no new or unaddressed impacts were identified on these parcels.

The eastern portion of the Talisman South Ranch and all of Tract 100-105 were leased by District to New Hope Corporation and Okeelanta Corporation for continued sugar cane farming during the interim use period after their acquisition until 2009. URS Corporation (URS) conducted an exit audit in June 2009, to verify that the agricultural operations during the interim use period did not adversely impact the site. During this assessment, two composite samples were collected on the Talisman South Ranch and the results indicated that arsenic was present

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **10** of **17**

at concentrations exceeding the FDEP SCTL-Residential Direct Exposure criteria. No other chemicals of potential concern (COPC) were identified, and URS concluded that the agricultural operations had not adversely impacted the site and was suitable for use as a component of the Everglades Agricultural Area Reservoir.

To further evaluate the cultivated areas of the A-2 Parcel, PSI conducted additional soil sampling in 2013. With concurrence of the Service, the sampling density was set at 10 percent of the 50 acre grids rather than the typical 30 to 50 percent typically specified per the Service Protocol. PSI collected and analyzed 30 composite samples from the 13,825 acre site for pesticides, herbicides, total organic carbon and metals following a stratified random approach. The laboratory results indicate that some of the soils have residual arsenic, barium, cadmium, chromium, copper, mercury, selenium, 2-4-D, atrazine, metribuzin, phorate, and dieldrin.

Based on the results of the 2013 soil testing, the Service and FDEP recommend that during the initial operations of the reservoir, the District perform testing of water for several contaminants (2,4-D, atrazine, metribuzin, phorate, dieldrin, chromium, mercury, selenium, copper) as well as testing of periphyton and apple snails for copper. The FDEP also recommended the development of a soil management plan to address the fate of arsenic impacted soils during construction as well as the same start-up operations sampling program as provided by the Service.

5.2 Tract D7100-152 – Parker Family Trust

This property consists of approximately 763 acres located east adjacent to the District L-24 Canal (aka Miami Canal), approximately 10 miles west of US Highway 27, and 15 miles south of Lake Okeechobee. The property lies within Sections 22, 23, and 26, Township 46 South, Range 35 East. The property is currently being leased and operated by the Okeelanta Corporation (Florida Crystals).

Tetra Tech conducted a Phase I and II ESA on the Parker property in 2007. According to the report, the property was historically utilized for agricultural

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **11** of **17**

production (sugarcane and intermittent rice production) for at least 29 years. The Phase I identified four areas of potential concern on the property:

- Cultivated Area (Sugarcane);
- Mix/Load/Staging Areas;
- Irrigation Canal Pump Station, and
- Irrigation/Drainage Canals.

In conjunction with the Phase I, TetraTech performed Phase II activities on these four areas of concern. Composite soil sampling was conducted in the cultivated areas. Point source or discrete soil sampling and groundwater sampling were conducted to address the other three areas. The results of the composite samples from the cultivated areas indicated elevated levels of atrazine, barium, and copper throughout much of the site. Elevated TPH was detected at one of the mix/load areas exceeding the SCTL-RDE and barium in the soil at the point source locations exceeding the SQAG-TEC or SQAG-PEC.

Based on the atrazine, barium, and copper exceedances throughout the cultivated areas, a SLERA was performed by NewFields, Inc. The SLERA had the following conclusions:

- Atrazine and barium pose a low-risk to aquatic receptors.
- Copper exceedances may cause toxicity to benthic invertebrates to occur
 at the property following inundation; however, the copper impacted soil is
 not expected to cause widespread effects that could limit the function of
 the newly created ecosystem.
- Risks to the Service trust species are expected to be low for all species with the exception of the Everglades snail kite. Copper concentrations exceeded the interim benchmark of 85 milligrams per kilogram in several of the 5-acre discrete samples; however, the benchmark was not exceeded in any of the composite samples.

Based on the Phase II results and subsequent SLERA, TetraTech concluded that corrective action is necessary in 15, 5-acre grids located within the cultivated area, to address the copper exceedances of the Service 85 mg/kg interim

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page 12 of 17

benchmark. Corrective action was also recommended to address the TPH exceedance in one of the mix/load staging areas. TetraTech recommended no further corrective action with respect to atrazine based on the findings of SLERA. Regarding barium, TetraTech also recommended no further action based on the SLERA. However, they did recommend additional sampling and ecological risk evaluation to verify that barium is present in an insoluble form and does not pose a risk under future intended land use.

5.3 Tract D7100-103 - Farm 15

This property consists of 892 acres located east adjacent to the Miami Canal and 16 miles south of Lake Okeechobee. The property has been used for cultivation since the mid-1960s. The Farm 15 lies within portions of Sections 26 and 35, Township 46 South, Range 35 East. The property is located to the west of the A2 Reservoir, outside of the footprint, and is currently fallow.

A Phase I and II ESA conducted by D&M in 1999 identified a pump station, and equipment staging area, and the cultivated crop areas as potential environmental concern. These three areas were investigated as part of the Phase II ESA. Soil analytical results indicated petroleum-impacted soils in the vicinity of the pump station. Elevated zinc concentrations were identified in the soil samples collected from the equipment staging area and the cultivated crop area. Atrazine was detected in the groundwater sample above the GCTL in the cultivated crop area.

In 2002, URS conducted additional sampling around the equipment staging area and extensive grid sampling in the cultivated area on Farm 15. The grid sampling was the precursor to the Service's 2008 Protocol. No concerns were identified in the cultivated area or in the equipment staging area that required corrective action. No additional samples were collected at the pump station during the contamination assessment.

PSI performed excavation activities to remediate petroleum impacted soils at the pump station in 2002. The pump station was identified by Okeelanta personnel as Pump Station F15-2. A total of 278.36 tons of petroleum impacted soil was excavated and transported for disposal at an off-site landfill. Subsequent

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **13** of **17**

confirmation sampling indicated that soils exceeding the human health and ecological risk criteria had been removed. PSI recommended that the FDEP issue a SRCO for the subject site. As of this date, the FDEP has not issued a comment letter nor an SRCO.

URS submitted a summary report in 2002 covering Farm 15 and numerous other parcels within the proposed EAA Storage Reservoir. The report summarized the previous assessment and corrective actions on Farm 15. The FDEP issued a comment letter on July 19, 2002 that did not request any further assessment or corrective action on Farm 15. The Service issued a comment letter on November 30, 2007 concurring that Farm 15 is suitable for its intended use.

5.4 Tract D7100-143 – Gillespie Property

This property consists of 10 acres located just east of the Miami Canal and 16 miles south of Lake Okeechobee. The property has been used for cultivation since the mid-1960s. The property lies within Section 25, Township 46 South, Range 35 East. The property is located to the west of the A2 Reservoir, outside of the reservoir footprint, and is currently fallow.

A Phase I-II ESA conducted by URS on the property in 2008 indicated that the entire 10 acres was cultivated in sugar cane at the time of the Phase II ESA. No point sources were identified on the property. Soil and groundwater samples were collected from the cultivated areas for analysis. The results indicated that barium and copper were detected in one soil sample on the northwest corner of the property above the SQAG PEC and the Service's interim value of 85 mg/kg, respectively. Twelve additional close composite discrete soil samples were collected from the northwest corner of the property and analyzed for OCPs, barium and copper. Analytical results of the additional soil samples indicated that barium was detected in all of the additional soil samples at concentrations exceeding the SQAG-PEC of 60 mg/kg. Copper concentrations ranged from 46.7 mg/kg to 80.4 mg/kg, which is below the interim benchmark of 85 mg/kg.

URS recommended that the small area of copper impacted soils represented by the initial sample exceeding 85 mg/kg be excavated and relocated outside the

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **14** of **17**

project. URS concluded that the other chemicals of potential concern (COPC) had not adversely impacted the site and was suitable for use as a component of a reservoir.

6.0 Conclusions and Recommendations

6.1 Conclusions

Based on the site visit regulatory database and review of previous studies performed to date across the project area, the following are AECOM's conclusions:

- The potential point sources located throughout the project area have been identified. Phase I and II Environmental Site Assessments or similar studies have been conducted on the A-2 Parcel and a major portion of the expansion area. The 1,263 acres of TIFF lands and 500 acres under private ownership have not been evaluated in the expansion area.
- The historic use of all of the project parcels appears relatively similar.
 Since the 1960's the area has been in cultivation for sugar cane, with occasional rotational crops of corn and rice. No significant use of the project area for row cropping of vegetables was identified.
- A review of current governmental databases did not identify any open enforcement cases.
- The identified point sources have been assessed to evaluate the extent of soil and groundwater impacts at each point source area.
- Corrective action is still required on the mix/load area on Tract 100-152 to remediate petroleum impacted soils.
- Corrective actions have been completed at all but one of the point source areas and FDEP has issued the necessary SCROs to verify agency concurrence at each of these point source areas.

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **15** of **17**

- Three of the SRCOs issued by FDEP on the Talisman parcel are conditional SRCOs, whereby impacted soils exceeding the SCTL-RDE criteria were allowed to remain in place.
- Approximately 75 acres of copper impacted soils were identified on Tract 100-152 and 5 acres were identified on Tract 100-143 where copper concentrations exceed the 85 mg/kg interim screening level. These areas will require corrective action in order to address copper impacts.
- Barium has been detected at concentrations exceeding the SQAG-TEC across most of the sampled cultivated areas, and exceeds the SQAG-PEC and SCTL-RDE in a few locations. However, the detected barium concentrations appear to be representative of background conditions, and are not likely to pose a significant risk to ecological receptors. Barium concentrations as high as 132 mg/kg were detected on Cabassa Farm, and USFWS has opined that the barium on that tract does not present a significant ecological risk to aquatic-feeding avian fauna.
- Atrazine has been widely detected in the soils across Tract 100-152.
 However, given the limited persistence of atrazine in the environment,
 AECOM does not believe that atrazine presents a significant ecological risk associated with the future construction of the project.
- Limited areas of impacted groundwater remain present across the project areas. The presence of contaminants in groundwater should not impact ecological risks within the project footprint; but the classification of the groundwater as HTRW would prohibit USACE from handling the groundwater. Construction of the reservoir may require limited contact with groundwater.

Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page **16** of **17**

6.2 Recommendations

- Additional sampling is required on portions of the Parker Trust Tract D7100-152 and the Gillespie Property Tract D7100-143. Based on previous assessments, corrective actions may be required to abate these copper impacted soils across 80 acres along the east side of the Miami Canal. Soil inversion is recommended as the preferred remedial technology for these areas, if the sufficient thicknesses of soils are available for inverting. Source removal is recommended to address petroleum impacted soils at the mix/load area on Parker Trust Tract 100-152.
- Conduct Phase II ESA on the 1,263 acres owned by TIFF and on the 500 acres that are privately owned. The Phase II ESA should follow the Service's sampling protocol for agricultural lands. The sampling results will need to be reviewed by the FDEP and Service for review and concurrence. Based on the results of the sampling, correct actions may be warranted.
- Conduct an exit audit on the District and non-District owned lands in the A-2 Parcel and expansion area as the farming leases are terminated. The exit audit should include a windshield survey to identified point source areas, regulatory file review, and review of chemical application lists. The results of the exit audit will forwarded to the FDEP and Service for review and concurrence. The need for additional assessment or corrective action will be addressed in the exit audit.
- In the event reservoir construction requires dewatering, the dewatering plan will need a site specific water quality assessment component to address residual agrochemicals previously detected in the groundwater i.e. atrazine, metals, OCPs.



Mr. Robert Taylor South Florida Water Management District Phase I Environmental Assessment Update Everglades Area Storage Reservoir December 14, 2017 Page 17 of 17

Respectfully Submitted,

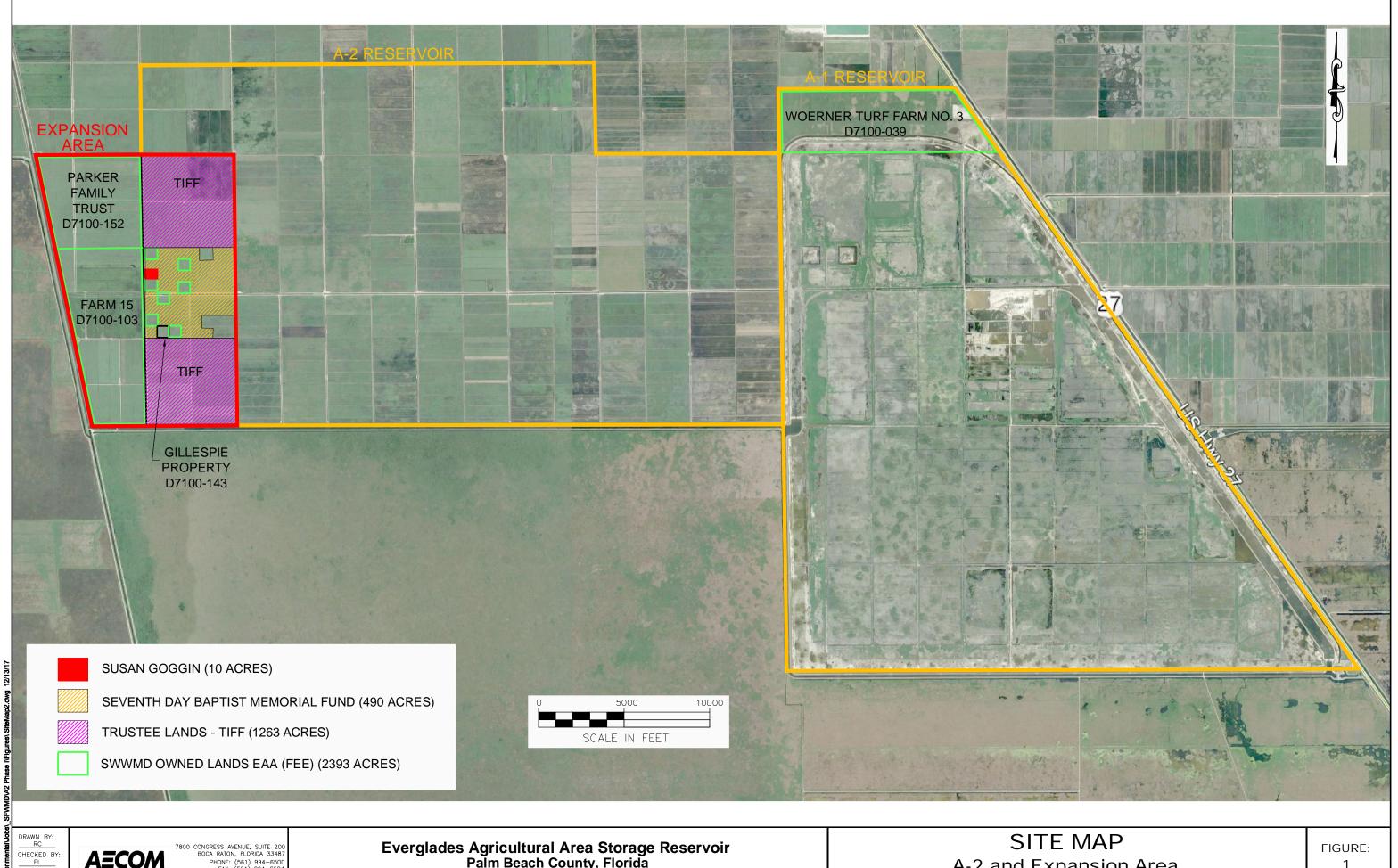
AECOM TECHNICAL SERVICES, INC.

Edward A. Leding, P.G. Project Manager

Jamie Sullivan, P.G. Project Geologist

Attachments

Figure 1 – Site Map – A2 and Expansion Area EDR DataMap[™] Area Survey EDR DataMap[™] Well Search Report USGS Aerial Photography Priority Package



7800 CONGRESS AVENUE, SUITE 200 BOCA RATON, FLORIDA 33487 PHONE: (561) 994-6500 FAX: (561) 994-6524

Everglades Agricultural Area Storage Reservoir Palm Beach County, Florida

A-2 and Expansion Area

1

EAA Storage Reservoir Southwest Palm Beach, FL 33480

Inquiry Number: 5124409.6s

December 06, 2017

EDR DataMap™ Area Study



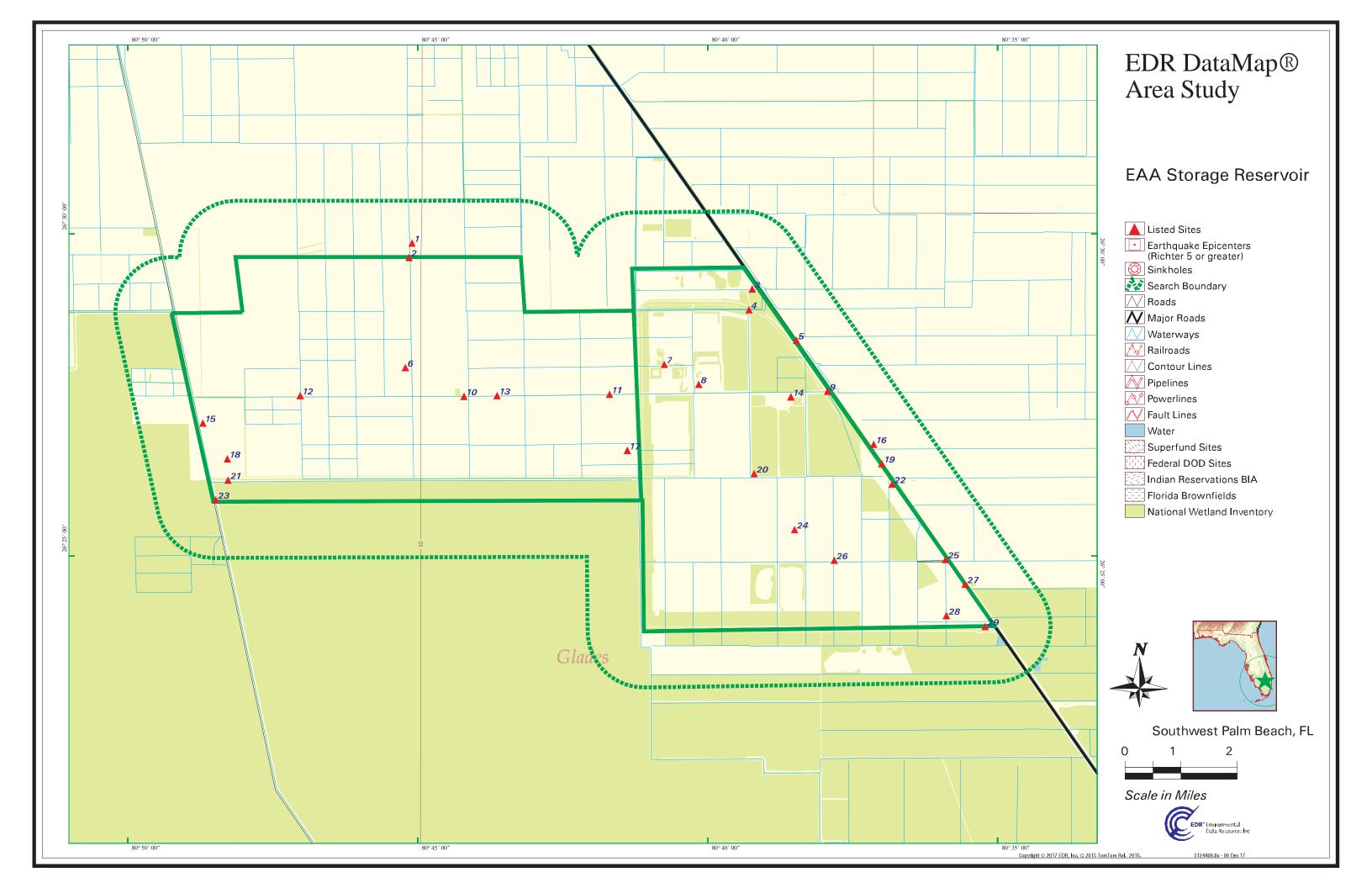
Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.



TARGET PROPERTY INFORMATION

ADDRESS

SOUTHWEST PALM BEACH, FL 33480 SOUTHWEST PALM BEACH, FL 33480

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

NPL	
Proposed NPL	Proposed National Priority List Sites
	National Priority List Deletions
NPL LIENS	
SEMS	Superfund Enterprise Management System
SEMS-ARCHIVE	Superfund Enterprise Management System Archive
LIENS 2	
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-SQG	RCRA - Small Quantity Generators
	RCRA - Conditionally Exempt Small Quantity Generator
	RCRA - Non Generators / No Longer Regulated
	. Engineering Controls Sites List
	Sites with Institutional Controls
	Emergency Response Notification System
	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
	National Clandestine Laboratory Register
	A Listing of Brownfields Sites
	Department of Defense Sites
FUDS	Formerly Used Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD.	
UMTRA	
ODI	
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide
	Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	Act)/TSCA (Toxic Substances Control Act) FIFRA/TSCA Tracking System Administrative Case Listing
99T9	. Section 7 Tracking Systems
0010	Geologia Tracking Gystems

ICIS...... Integrated Compliance Information System

RAATS...... RCRA Administrative Action Tracking System

RMP..... Risk Management Plans

FUELS PROGRAM..... EPA Fuels Program Registered Listing DOCKET HWC..... Hazardous Waste Compliance Docket Listing

UXO...... Unexploded Ordnance Sites

FUSRAP..... Formerly Utilized Sites Remedial Action Program

COAL ASH DOE...... Steam-Électric Plant Operation Data 2020 COR ACTION...... 2020 Corrective Action Program List PRP...... Potentially Responsible Parties EPA WATCH LIST...... EPA WATCH LIST

US FIN ASSUR..... Financial Assurance Information

PCB TRANSFORMER...... PCB Transformer Registration Database

US HIST CDL Delisted National Clandestine Laboratory Register SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing

IHS OPEN DUMPS..... Open Dumps on Indian Land

ABANDONED MINES..... Abandoned Mines

COAL ASH EPA..... Coal Combustion Residues Surface Impoundments List

FEMA UST...... Underground Storage Tank Listing FEDERAL FACILITY...... Federal Facility Site Information listing

US AIRS...... Aerometric Information Retrieval System Facility Subsystem

LEAD SMELTERS..... Lead Smelter Sites

STATE AND LOCAL RECORDS

SHWS...... Florida's State-Funded Action Sites

UIC...... Underground Injection Wells Database Listing

SWRCY...... Recycling Centers

LAST..... Leaking Aboveground Storage Tank Listing

FI Sites List

DEDB..... Ethylene Dibromide Database Results

BROWNFIELDS..... Brownfields Sites Database

FL Cattle Dip. Vats......... Cattle Dipping Vats ASBESTOS................ ASBESTOS

FF TANKS..... Federal Facilities Listing

SITE INV SITES..... Site Investigation Section Sites Listing

TRIBAL RECORDS

INDIAN RESERV..... Indian Reservations

INDIAN ODI______ Report on the Status of Open Dumps on Indian Lands INDIAN LUST_____ Leaking Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

EDR MGP..... EDR Proprietary Manufactured Gas Plants

EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners
RGA HWS	Recovered Government Archive State Hazardous Waste Facilities List
RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 07/23/2017 has revealed that there are 8 FINDS sites within the searched area.

Site	Address	Map ID	Page
BARNARD CONSTRUCTION	17415 SOUTH U.S. 27	3	15
SFWMD TEMPORARY TEST	N OF WESTON, W OF US	7	34
EAA A-1 RESERVOIR SE	17415 SOUTH US-27	20	72
SOUTH FLORIDA WATER	NW CORNER HOLEY LAND	21	73
COMMUNICATIONS LINE	US 27	22	81
G-373 SPILLWAY STRUC	MIAMI CANAL 18 MI S	23	84
G - 373 SPILLWAY STR	MIAMI CANAL 18 MI S	23	84
SR 25/ US 27 INTELLI	UNKNOWN	27	92

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 09/02/2017 has revealed that there are 6 ECHO sites within the searched area.

Site	Address	Map ID	Page
BARNARD CONSTRUCTION	17415 SOUTH U.S. 27	3	15
SFWMD TEMPORARY TEST	N OF WESTON, W OF US	7	34
EAA A-1 RESERVOIR SE	17415 SOUTH US-27	20	72
COMMUNICATIONS LINE	US 27	22	81
G-373 SPILLWAY STRUC	MIAMI CANAL 18 MI S	23	84
SR 25/ US 27 INTELLI	UNKNOWN	27	92

STATE AND LOCAL RECORDS

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Facility Directory (Solid Waste Facilities).

A review of the SWF/LF list, as provided by EDR, has revealed that there is 1 SWF/LF site within the searched area.

Site	Address	Map ID	Page
TALISMAN SUGAR		6	31
Database: LF PALM BEACH, Da	te of Government Version: 09/01/2011		
Site Number: 68			

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Protection's PCTO1--Petroleum Contamination Detail Report.

A review of the LUST list, as provided by EDR, and dated 10/04/2017 has revealed that there are 11 LUST sites within the searched area.

Site	Address	Map ID	Page
CLASSIC TURF FARM #3 Discharge Cleanup Status: NFA - NFA Conficient of Status: CLOSED Facility-Site Id: 8623288	RT 27 11 MI S OF SOU OMPLETE	3	7
BARNARD CONSTRUCTION Discharge Cleanup Status: NFA - NFA Cleanup Status: DELETED Facility-Site Id: 9808833	PO BOX 774 OMPLETE	3	11
SUGAR FARMS COOP SOU Discharge Cleanup Status: NREQ - CLEA Discharge Cleanup Status: NFA - NFA Co Facility Status: OPEN Facility-Site Id: 8623110		5	18
TALISMAN SUGAR CORP- Discharge Cleanup Status: NFAC - NO F Facility Status: CLOSED Facility-Site Id: 8514728	US HWY 27 16 MI S OF URTHER ACTION WITH CONDITIONS	8	40
SUGAR FARMS CO OP Discharge Cleanup Status: NFA - NFA Core Facility Status: CLOSED Facility-Site Id: 9802134	US 27-16 MI S OF SOU OMPLETE	16	61
ZEPHYR EGG CO TRUCK Discharge Cleanup Status: NREQ - CLEA Facility Status: CLOSED Facility-Site Id: 9803835	US HWY 27 @ 17 MI SO ANUP NOT REQUIRED	19	70
LUCKY START TRANSPOR Discharge Cleanup Status: NFA - NFA C	US HWY 27 23 MI NORT OMPLETE	22	82

Facility Status: CLOSED Facility-Site Id: 9803539			
CLASSIC TURF FARM #2 Discharge Cleanup Status: SRCR - SF Facility Status: OPEN Facility-Site Id: 8514657	RT 27-19 MI S OF SOU RCR COMPLETE	27	92
ROTH FARMS INC-GRESS Discharge Cleanup Status: NFA - NFA Facility Status: OPEN Facility-Site Id: 8623294	<i>E SIDE OF BROWNS FAR</i> A COMPLETE	28	99
SOUTH FL WTR MGMT DI Discharge Cleanup Status: SRCR - SF Facility Status: CLOSED Facility-Site Id: 9813885	5.3 MI N BROWARD CO RCR COMPLETE	29	104
SOUTH FL WATER MGMT Discharge Cleanup Status: NFA - NFA Facility Status: CLOSED Facility-Site Id: 9809549	US 27-19 MI SOUTH OF A COMPLETE	29	106

TANKS: This listing includes storage tank facilities that do not have tank information. The tanks have either be closed or removed from the site, but the facilities were still registered at some point in history.

A review of the TANKS list, as provided by EDR, and dated 10/04/2017 has revealed that there are 3 TANKS sites within the searched area.

Site	Address	Map ID	Page
ZEPHYR EGG CO TRUCK Facility Status: CLOSED Facility ID: 9803835	US HWY 27 @ 17 MI SO	19	70
LUCKY START TRANSPOR Facility Status: CLOSED Facility ID: 9803539	US HWY 27 23 MI NORT	22	82
SOUTH FL WTR MGMT DI Facility Status: CLOSED Facility ID: 9813885	5.3 MI N BROWARD CO	29	104

UST: The Underground Storage Tank database contains registered USTs. Shortly after the September 11 event, the DEP was instructed to remove the detail about some of the storage tank facilities in the state from their reports. Federal-owned facilities and bulk storage facilities are included in that set.

A review of the UST list, as provided by EDR, has revealed that there are 4 UST sites within the searched area.

Site	Address	Map ID	Page
CLASSIC TURF FARM #3	RT 27 11 MI S OF SOU	3	7
Database: UST, Date of Government	nt Version: 10/04/2017		
Tank Status: B			

Facility-Site Id: 8623288 Facility Status: CLOSED FL DEPT OF TRANSPORT 6 MI N OF BROWARD/WP 27 99 Database: UST, Date of Government Version: 10/04/2017 Tank Status: B Facility-Site Id: 9401056 Facility Status: CLOSED **ROTH FARMS INC-GRESS** E SIDE OF BROWNS FAR 28 99 Database: UST, Date of Government Version: 10/04/2017 Tank Status: B Facility-Site Id: 8623294 Facility Status: OPEN SOUTH FL WATER MGMT US 27-19 MI SOUTH OF 29 106 Database: UST, Date of Government Version: 10/04/2017 Tank Status: B Facility-Site Id: 9809549

AST: Shortly after the Sept 11 event, the DEP was instructed to remove the detail about some of the storage tank facilities in the state from their reports. Federal-owned facilities and bulk storage facilities are included in that set.

Facility Status: CLOSED

A review of the AST list, as provided by EDR, has revealed that there are 7 AST sites within the searched area.

Site	Address	Map ID	Page
CLASSIC TURF FARM #3 Database: AST, Date of Government Vers Facility-Site Id: 8623288 Facility Status: CLOSED Facility Status: CLOSED	RT 27 11 MI S OF SOU ion: 10/04/2017	3	7
SUGAR FARMS COOP SOU Database: AST, Date of Government Vers Facility-Site Id: 8623110 Facility Status: OPEN Facility Status: OPEN	1550 US HWY 27 ion: 10/04/2017	5	18
TALISMAN SUGAR CORP- Database: AST, Date of Government Vers Facility-Site Id: 8839284 Facility Status: CLOSED Facility Status: CLOSED	US 27 ion: 10/04/2017	6	31
TALISMAN SUGAR CORP- Database: AST, Date of Government Vers Facility-Site Id: 8514728 Facility Status: CLOSED Facility Status: CLOSED	US HWY 27 16 MI S OF ion: 10/04/2017	8	34
SUGAR FARMS CO OP Database: AST, Date of Government Vers Facility-Site Id: 9802134 Facility Status: CLOSED	US 27-16 MI S OF SOU ion: 10/04/2017	16	61

Facility Status: CLOSED

CLASSIC TURF FARM #2 RT 27-19 MI S OF SOU 27 92

Database: AST, Date of Government Version: 10/04/2017

Facility-Site Id: 8514657 Facility Status: OPEN Facility Status: OPEN

ROTH FARMS INC-GRESS E SIDE OF BROWNS FAR 28 99

Database: AST, Date of Government Version: 10/04/2017

Facility-Site Id: 8623294 Facility Status: OPEN Facility Status: OPEN

SPILLS: Fuel Spill Cases from the Department of Environmental resource management

A review of the SPILLS list, as provided by EDR, and dated 10/10/2017 has revealed that there is 1 SPILLS site within the searched area.

Site	Address	Map ID	Page
EAA A-1 FLOW EQUALIZ	13775 SOUTH US 27	3	16
OHMIT Incident Number: 38035			
Incident Status: Closed			

INST CONTROL: The registry is a database of all contaminated sites in the state of Florida which are subject to institutional and engineering controls.

A review of the INST CONTROL list, as provided by EDR, and dated 10/02/2017 has revealed that there are 6 INST CONTROL sites within the searched area.

Site	Address	Map ID	Page
T-21 - TALISMAN SUGA Facility-Site Id: COM_157269	RURAL AREA FARM - 00	2	5
TALISMAN SUGAR CORP Facility-Site Id: COM_216895	T-3 - LABOR CAMP - R	6	32
T-1 & T-5 - TALISMAN Facility-Site Id: COM_209147	RURAL AREA IN FARM -	8	39
SUGAR MILL - TALISMA Facility-Site Id: COM_87499	SUGAR MILL - 0037460	8	44
B-3 - TALISMAN SUGAR Facility-Site Id: COM_157238	B-3 - RURAL AREA IN	8	46
TALISMAN SUGAR CORP Facility-Site Id: COM_170717	T-2 - BORROW PIT - R	10	51

NPDES: Domestic and Industrial Wastewater Facilities

A review of the NPDES list, as provided by EDR, and dated 11/01/2017 has revealed that there is 1 NPDES site within the searched area.

Site	Address	Map ID	Page
EAA A-1 FLOW EQUALIZ Status: A Facility ID: FLG071003	13775 SOUTH US 27	3	16

AIRS: A listing of Air Resources Management permits.

A review of the AIRS list, as provided by EDR, and dated 05/17/2017 has revealed that there is 1 AIRS site within the searched area.

Site	Address	Map ID	Page
SFWMD / PUMP STATION Facility Status: A	NW CORNER HOLEY LAND	18	69
Facility Id: 990615			

TIER 2: A listing of facilities which store or manufacture hazardous materials that submit a chemical inventory report.

A review of the TIER 2 list, as provided by EDR, and dated 12/31/2016 has revealed that there are 6 TIER 2 sites within the searched area.

Site	Address	Map ID	Page
SOUTH FLORIDA WATER Facility Id: 3995036	US HIGHWAY 27 - 10 1	9	47
CEMEX - SOUTH BAY PO Facility Id: 3985954	SOUTH US HIGHWAY 27	14	54
STAR FARMS CORPORATI Facility Id: 5017903 Facility Id: 5416073 Facility Id: 4557656 Facility Id: 4293025 Facility Id: 5865509	COUNTY ROAD 827	17	64
SOUTH FLORIDA WATER Facility Id: 4484666 Facility Id: 4976676 Facility Id: 4094554 Facility Id: 3986264 Facility Id: 5831013 *Additional key fields are available in	NORTHWEST CORNER OF the Map Findings section	21	74
SOUTH FLORIDA WATER SOUTH FLORIDA WATER Facility Id: 3995092	US 27, 6.7 MILES NOR US HIGHWAY 27 - 6 1/	25 25	86 87

CLEANUP SITES: This listing includes the locations of waste cleanup sites from various programs. The source of the cleanup site data includes Hazardous Waste programs, Site Investigation Section, Compliance and Enforcement Tracking, Drycleaning State Funded Cleanup Program (possibly other state funded cleanup), Storage Tank Contamination Monitoring.

A review of the CLEANUP SITES list, as provided by EDR, and dated 08/28/2017 has revealed that there are 6 CLEANUP SITES sites within the searched area.

Site	Address	Map ID	Page
A-2 FLOW EQUALIZATIO DEP Cleanup Site Key: 50439557	WEST SIDE OF HWY 27	1	4
WOERNER TURF FARM 3, DEP Cleanup Site Key: 50440175	STRD 27	3	14
FL. CRYSTALS FARM 21 DEP Cleanup Site Key: 50439235 DEP Cleanup Site Key: 50440351		15	59
A-1 FLOW EQUALIZATIO DEP Cleanup Site Key: 50439703	WEST SIDE OF US 27 S	20	72
FL. CRYSTALS CABASSA DEP Cleanup Site Key: 50439398		25	88
HADLEY, CABASSA #51 DEP Cleanup Site Key: 50440350		26	90

RESP PARTY: Open, inactive and closed responsible party sites

A review of the RESP PARTY list, as provided by EDR, and dated 10/02/2017 has revealed that there are 17 RESP PARTY sites within the searched area.

Site	Address	Map ID	Page
A-2 FLOW EQUALIZATIO Site Status: OPEN	WEST SIDE OF HWY 27	1	4
T-21 TALISMAN FARM Site Status: CLOSED	RURAL AREA FARM - 00	2	6
WOERNER TURF FARM 3, Site Status: INACTIVE	STRD 27	3	14
T-SHED TALISMAN FARM Site Status: CLOSED	RURAL AREA FARM - 00	4	17
T-3 TALISMAN FARM FO Site Status: CLOSED	NONE REMOTE FARM LO	6	33
T-1 / T-5 TALISMAN M Site Status: CLOSED	SUGAR MILL - 0037460	8	44
T-7 TALISMAN FARM Site Status: CLOSED		10	49
T-8 TALISMAN FARM Site Status: CLOSED	NONE REMOTE LOCATION	10	49
T-2 TALISMAN FARM (B Site Status: CLOSED	RURAL AREA IN FARM -	10	50
T-6 TALISMAN FARM		11	52

Site Status: CLOSED			
T-10 TALISMAN FARM Site Status: CLOSED	NONE - REMOTE LOCATI	12	53
T-24 PUMP STATION Site Status: CLOSED	NONE - REMOTE FARM L	13	54
FL. CRYSTALS FARM 21 Site Status: INACTIVE		15	59
A-1 FLOW EQUALIZATIO Site Status: OPEN	WEST SIDE OF US 27 S	20	72
WOERNER TURF TRACT 2 Site Status: CLOSED	US HWY 27	24	85
FL. CRYSTALS CABASSA Site Status: INACTIVE		25	88
HADLEY, CABASSA #51 Site Status: INACTIVE		26	90

DWM CONTAM: A listing of active or known sites. The listing includes sites that need cleanup but are not actively being working on because the agency currently does not have funding (primarily petroleum and drycleaning).

A review of the DWM CONTAM list, as provided by EDR, and dated 04/01/2017 has revealed that there are 7 DWM CONTAM sites within the searched area.

Site	Address	Map ID	Page
WOERNER TURF FARM 3, Program Site Id: 287080	STRD 27	3	14
TALISMAN SUGAR CORP- Program Site Id: 8514728	US HWY 27 16 MI S OF	8	43
FL. CRYSTALS FARM 21 Program Site Id: 287122		15	59
WOERNER TURF TRACT 2 Program Site Id: 287086	US HWY 27	24	85
FL. CRYSTALS CABASSA Program Site Id: 287125		25	88
HADLEY, CABASSA #51 Program Site Id: 287117		26	90
ROTH FARMS INC-GRESS Program Site Id: 8623294	E SIDE OF BROWNS FAR	28	99

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

	Database	Total Plotted
FEDERAL RECORDS		
	NPL Proposed NPL Delisted NPL NPL LIENS SEMS SEMS SEMS-ARCHIVE LIENS 2 CORRACTS RCRA-TSDF RCRA-LQG RCRA-SQG RCRA-CESQG RCRA NonGen / NLR US ENG CONTROLS US INST CONTROL ERNS HMIRS DOT OPS US CDL US BROWNFIELDS DOD FUDS LUCIS CONSENT ROD UMTRA ODI DEBRIS REGION 9 US MINES TRIS TSCA FTTS HIST FTTS SSTS ICIS PADS MLTS RADINFO FINDS RAATS RMP ECHO	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	FUELS PROGRAM DOCKET HWC	0 0
	UXO FUSRAP COAL ASH DOE	0 0 0
	2020 COR ACTION	0

MAP FINDINGS SUMMARY

	Database	Total Plotted
	PRP EPA WATCH LIST US FIN ASSUR PCB TRANSFORMER US HIST CDL SCRD DRYCLEANERS IHS OPEN DUMPS ABANDONED MINES COAL ASH EPA FEMA UST FEDERAL FACILITY US AIRS LEAD SMELTERS	0 0 0 0 0 0 0 0 0
STATE AND LOCAL R	ECORDS	
	SHWS SWF/LF UIC SWRCY LUST TANKS UST LAST AST FI Sites SPILLS ENG CONTROLS INST CONTROL VCP DRYCLEANERS PRIORITYCLEANERS DEDB BROWNFIELDS NPDES AIRS FL Cattle Dip. Vats TIER 2 ASBESTOS CLEANUP SITES FF TANKS RESP PARTY DWM CONTAM SITE INV SITES	0 1 0 0 11 3 4 0 7 0 1 0 6 0 0 0 0 0 1 1 0 6 0 0 1 1 0 0 0 0
TRIBAL RECORDS		
	INDIAN RESERV INDIAN ODI INDIAN LUST INDIAN UST	0 0 0 0

MAP FINDINGS SUMMARY

	Database	Total Plotted
	INDIAN VCP	0
EDR PROPRIETARY RECOR	RDS	
	EDR MGP EDR Hist Auto	0 0
	EDR Hist Cleaner RGA HWS	0
	RGA LF RGA LUST	0

NOTES:

Sites may be listed in more than one database

Map ID Direction Distance Distance (ft.)Site

Direction EDR ID Number

1 A-2 FLOW EQUALIZATION BASIN (FEB) WEST SIDE OF HWY 27 S EVERGLADES, FL

CLEANUP SITES S114040793 RESP PARTY N/A

EPA ID Number

Database(s)

CLEANUP SITES:

DEP Cleanup Site Key: 50439557

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780

Source Database Id: COM_321057

CPAC Program Area Id: CU CLLC Cleanup Category Key: OTHCU RSC2 Remediation Status Key: **ACTIVE** Data Load Date: 08/24/2017 OC3 Office Id: TAL Physical Address Line 2: Not reported OIC Object Of Interest Id: CAP_R **APPRX** PC2 Proximity Id: Calc Coordinates Accuracy Level Id: 6

CMC2 Coordinate Method Id: Address Matching

DC4 Datum Id: North American Datum of 1983

VSC1 Verification Status: NOT REVIEWED
Collect Username: YILMAZ_F
Collect Date: 09/05/2013

Collect Affiliation: Florida Department of Environmental Protection

Map Source: Not reported Map Source Scale: Not reported Interpolation Scale: Not reported Verifier Username: Not reported Verifier Affiliation: Not reported Verification Date: Not reported Verified Coordinate Method Id: Not reported Source Database Name Code: COMET CMC2 Coordinate Method ID Code: ADDM DC4 Datum ID Code: NAD83 Verified Coordinate Method ID CodeNot reported Comments: Not reported Latitude/Longitude (deg/min/sec): 26 29 47 / 13 80 45

RESP PARTY:

 District:
 TAL

 Site Id:
 321057

 Project Id:
 338805

 Site Status:
 OPEN

Project Manager: DOUGHERTY_B OGC Case Number: Not reported Initial Date Received: 09/05/2013 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 Method ID: ADDM Feature: Not reported Object Of Interest: CAP_RAP SITE Proximity To Object: **APPRX** YILMAZ_F Collect Username:

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CL
Collect Date: 09/05/2013
Map Series Used: Not reported

Map ID
Direction

EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

A-2 FLOW EQUALIZATION BASIN (FEB) (Continued)

S114040793

Map Source Scale: Not reported Interpolation Scale: Not reported

Coordinate Accuracy Id: 6

Verify Method Id:

Verifier Username:

Verifier Affiliation:

Verifying Program Id:

Verification Date:

Decode for District:

Not reported

Not reported

Not reported

Tallahassee Office

Decode for Datum: North American Datum of 1983

Decode for Method: Address Matching
Decode for Off Site COC: Not reported
Decode for V_Method: Not reported
Latitude/Longitude (deg/min/sec): 26 29 47 / 80 45 13

T-21 - TALISMAN SUGAR CORP (THE ST. JOE COMPANY)
RURAL AREA FARM - 00364617000001020

INST CONTROL \$111761728 N/A

Inst Control:

Distance

Facility Id: COM_157269

Inst Control Type: DIGGING RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

SOUTHWEST PALM BEACH COUTY, FL 53

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 29 33.5642 / 80 45 16.0943

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Inspection Date:

Legal Description:

Not reported

WASTE CLEANUP

06/21/2006

Not reported

Not reported

Not reported

Comments: Part of Talisman Sugar Corp settlement; See OGC Case#99-0339

Township: 44S Range: 36E

Parcel ID: 00364617000001020

 Section:
 17

 Book Number:
 20532

 Page Number:
 476-482

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_157269

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 29 33.5642 / 80 45 16.0943

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Mot reported

WASTE CLEANUP

Mochanism - Date Order Issued:

Date Removed:

Mot reported

Not reported

Inspection Date: Not reported Legal Description: Not reported

Comments: Part of Talisman Sugar Corp settlement; See OGC Case#99-0339

Township: 44S Range: 36E

MAP FINDINGS

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

T-21 - TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S111761728

Parcel ID: 00364617000001020

 Section:
 17

 Book Number:
 20532

 Page Number:
 476-482

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Click here for Florida Oculus:

2 T-21 TALISMAN FARM RURAL AREA FARM - 00364617000001020 BELLE GLADE, FL 33430

RESP PARTY S117898804 N/A

RESP PARTY:

District: Southeast District

Site Id: 157269
Project Id: 230205
Site Status: CLOSED
Project Manager: WIERZBICKI_P
OGC Case Number: 99-0339
Initial Date Received: 09/30/1998

Contaminants: Farm equipment area where pesticides, fuels and oils stored and

handled.

Offsite Cont Impact: N

Priority Score: Not reported Datum: NAD83
Method ID: DPHO

Feature: Pesticide Mix/Load Area

Object Of Interest: CAP_RAP SITE Proximity To Object: EXACT

Collect Username: WILLIAMS_CA
Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 07/21/2011

Map Series Used: 2004_DOQQ

Map Source Scale: 4618

Interpolation Scale: 4618

Coordinate Accuracy Id: 3

Verify Method Id: DPHO

Verifier Username: WILLIAMS_CA
Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CL

Verification Date: 07/21/2011
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: No, the best available evidence (such as completed SAR) demonstrates

that contamination above applicable standards or criteria DOES NOT

extend offsite.

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 29 33.5642 / 80 45 16.0943

Map ID Direction Distance Distance (ft.)Site

irection EDR ID Number

Database(s)

EPA ID Number

3 CLASSIC TURF FARM #3 TIMCO LUST U001366571
RT 27 11 MI S OF SOUTH BAY UST N/A
SOUTH BAY, FL 33430 AST

LUST:

STATE Region: Facility Id: 8623288 Facility Status: **CLOSED** Facility Type: M - Agricultural Facility Phone: (561)996-1538 Facility Cleanup Rank: Not reported District: Southeast District 26 29 4.6 / 80 39 16.69 Lat/Long (dms):

 Section:
 037

 Township:
 047

 Range:
 007

 Feature:
 Not reported

 Method:
 AGPS

 Datum:
 0

 Score:
 6

Score Effective Date: 11/04/1997
Score When Ranked: Not reported
Operator: BILLY RAY BREWER

Name Update: 11/25/2003 Address Update: 05/25/2006

Discharge Cleanup Summary:

Discharge Date: 04/25/1989
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11/11/1992
Cleanup Work Status: COMPLETED

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Tank Office:

Not reported

Not reported

Not reported

Tank Onico.

Petroleum Cleanup Program Eligibility:

Facility ID: 8623288
Discharge Date: 25-APR-89
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11/11/1992
Cleanup Work Status: COMPLETED

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description: Not reported Application Received Date: 28-JUN-89

Cleanup Program: A - ABANDONED TANK RESTORATION PROGRAM

Eligibility Status: 20-NOV-90
Elig Status Date: 20-NOV-90
Letter Of Intent Date: 09/13/1990
Redetermined: No
Inspection Date: 10/18/1990
Site Manager: Not reported

Site Mgr End Date: Not reported

Tank Office:

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #3 TIMCO (Continued)

U001366571

EDR ID Number

Deductible Amount: 500
Deductible Paid To Date: 500
Co-Pay Amount: 0
Co-Pay Paid To Date: 0

Cap Amount: Not reported

Task Information:

District: SED
Facility ID: 8623288
Facility Status: CLOSED
Facility Type: M - Agricultural County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: E

Source Effective Date: 11-11-1992 Discharge Date: 04-25-1989

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11-11-1992

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 10-02-1992 SRC Review Date: 10-29-1992 SRC Completion Status: A - APPROVED SRC Issue Date: 11-11-1992 SRC Comment: Not reported Cleanup Work Status: **COMPLETED** Site Mgr: Not reported Site Mgr End Date: Not reported

Tank Office:

SR Task ID: 38648
SR Cleanup Responsible: SR Funding Eligibility Type: -

SR Actual Cost:

SR Completion Date:

SR Payment Date:

SR Oral Date:

SR Written Date:

SR Written Date:

SR Soil Removal:

Not reported

Not reported

SR Free Product Removal: Not reported

SR Soil Tonnage Removed: 28

SR Soil Tonnage Removed: 28
SR Soil Treatment: Not reported
SR Other Treatment: Not reported
SR Alternate Proc Received Date: Not reported
SR Alternate Procedure Status: Not reported
SR Alternate Procedure Status Date:Not reported
SR Alternate Procedure Comments: Not reported
SA Task ID: 38649

SA Cleanup Responsible: SA Funding Eligibility Type: -

SA Actual Cost: \$43,945.42
SA Completion Date: Not reported
SA Payment Date: 02-26-1993
RAP Task ID: 38650

RAP Cleanup Responsible ID: NA - NOT APPLICABLE

RAP Funding Eligibility Type:

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

Not reported

Not reported

Not reported

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #3 TIMCO (Continued)

EDR ID Number

U001366571

RA Task ID: 38651

RA Cleanup Responsible: RP - RESPONSIBLE PARTY

Not reported

RA Funding Eligibility Type:

RAP Last Order Approved:

RA Years to Complete: Not reported RA Actual Cost: Not reported

Click here for Florida Oculus:

UST:

Facility Id: 8623288
Facility Status: CLOSED
Type Description: Agricultural
Facility Phone: (561) 996-1538
Region: STATE
Positioning Method: AGPS

Lat/Long (dms): 26 29 1 / 80 39 18

Owner:

Owner Id: 44684

Owner Name: WOERNER SOUTH INC
Owner Address: 275 SW 3RD AVE
Owner Address 2: Not reported
Owner City,St,Zip: SOUTH BAY, FL 33493
Owner Contact: DAVE WILLIAMS
Owner Phone: (561) 996-8500

Tank Info:

Tank Id: 10
Status: Removed
Status Date: 31-JAN-1990
Install Date: Not reported

Substance: Unknown/Not reported Content Description: Unknown/Not Reported

Gallons: 1000 Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: P

Tank ld:

Status: Removed
Status Date: 31-JAN-1990
Install Date: Not reported
Substance: Unleaded gas
Content Description: Unleaded Gas
Gallons: 1000

Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: F

Click here for Florida Oculus:

AST:

Facility ID: 8623288
Facility Status: CLOSED

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #3 TIMCO (Continued)

Type Description: Agricultural Facility Phone: (561) 996-1538

DEP Contractor Own: P

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 29 1 / 80 39 18

Owner:

Owner Id: 44684

Owner Name: WOERNER SOUTH INC
Owner Address: 275 SW 3RD AVE
Owner Address 2: Not reported
Owner City,St,Zip: SOUTH BAY, FL 33493
Owner Contact: DAVE WILLIAMS

Owner Phone: DAVE WILLIAM (561) 996-8500

Tank ld: 1

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 2000

Tank Location: ABOVEGROUND

Tank ld: 2

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 1000

Tank Location: ABOVEGROUND

Tank ld: 3

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 150

Tank Location: ABOVEGROUND

Tank ld: 5

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 1500

Tank Location: ABOVEGROUND

Tank ld: 6

Status: Removed
Status Date: 06-MAR-1997
Install Date: 01-JUL-1980

Substance: Diesel-generator,pump

EDR ID Number

U001366571

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #3 TIMCO (Continued)

Generator/Pump Diesel

Gallons: 1000

Tank Location: ABOVEGROUND

Tank ld:

Content Description:

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 1000

Tank Location: ABOVEGROUND

Tank Id: 8
Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 1500

Tank Location: ABOVEGROUND

Tank ld: 9

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 1000

Tank Location: ABOVEGROUND

Tank ld: 11

Status: Moved to New Site
Status Date: 07-AUG-2006
Install Date: 01-JUN-1996

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 1000

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

3 BARNARD CONSTRUCTION PO BOX 774 SOUTH BAY, FL 33493

LUST S108971507 N/A

EDR ID Number

U001366571

LUST:

Region: STATE
Facility Id: 9808833
Facility Status: DELETED

Facility Type: C - Fuel user/Non-retail

Facility Phone: (561)996-9972
Facility Cleanup Rank: Not reported
District: Southeast District

Lat/Long (dms): 26 29 3.8062 / 80 39 15.7358

Section: Not reported Township: Not reported

MAP FINDINGS

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

BARNARD CONSTRUCTION (Continued)

S108971507

Range: Not reported Not reported Feature: Method: Not reported Datum: Not reported Score: Not reported Score Effective Date: Not reported Score When Ranked: Not reported Operator: **NEILVAN AMBURG** Name Update: Not reported Address Update: Not reported

Discharge Cleanup Summary:

Discharge Date: 09/11/2007
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12/17/2007
Cleanup Work Status: COMPLETED
Information Source: Z - OTHER

Other Source Description: phone call from 3rd party

Eligibility Indicator: I - INELIGIBLE
Site Manager: GIBSON_D
Site Mgr End Date: 09/24/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Contaminated Media:

Discharge Date: 09/11/2007
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12/17/2007
Cleanup Work Status: COMPLETED
Information Source: Z - OTHER

Other Source Description: phone call from 3rd party

Elig Indicator: I - INELIGIBLE
Site Manager: GIBSON_D
Site Mgr End Date: 09/24/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: Not reported Contaminated Monitoring Well: No Contaminated Soil: Yes

Contaminated Soil: Yes
Contaminated Surface Water: Yes
Contaminated Ground Water: No

Pollutant: H - Generator/Pump Diesel

Pollutant Other Description: Not reported

Gallons Discharged: 300

Task Information:

District: SED
Facility ID: 9808833
Facility Status: DELETED

Facility Type: C - Fuel user/Non-retail -

County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: I

Source Effective Date: 11-06-2007 Discharge Date: 09-11-2007

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Distance (ft.)Site Database(s) EPA ID Number

BARNARD CONSTRUCTION (Continued)

S108971507

EDR ID Number

Disch Cleanup Status Date: 12-17-2007

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 11-02-2007 SRC Review Date: 11-06-2007 SRC Completion Status: A - APPROVED SRC Issue Date: 12-17-2007 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mar: GIBSON D Site Mgr End Date: 09-24-2008

Tank Office: PCLP50 - Palm Beach County

SR Task ID: Not reported

SR Cleanup Responsible: SR Funding Eligibility Type: -

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date: Not reported SR Alternate Procedure Comments: Not reported SA Task ID: Not reported

SA Cleanup Responsible: - SA Funding Eligibility Type: -

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

RAP Last Order Approved:

RAT Task ID:

RA Cleanup Responsible:

Not reported

81909

RA Cleanup Responsible: RA Funding Eligibility Type: RA Years to Complete: 0

RA Actual Cost: Not reported

Click here for Florida Oculus:

Map ID **EDR ID Number** Direction Distance

Distance (ft.)Site Database(s) **EPA ID Number**

3 **WOERNER TURF FARM 3, TRACT D7-100-039 STRD 27** SOUTH BAY, FL 53

DWM CONTAM CLEANUP SITES RESP PARTY

S113721830 N/A

DWM CONTAM:

287080 Program Site Id: Lat DD: Not reported Lat MM: Not reported Lat SS: Not reported Long DD: Not reported Long MM: Not reported Long SS: Not reported Office/ District: SED

Program Area: Responsible Party Offsite Contamination: Not reported Project Manager: WIERZBICKI_P Priority Score: Not reported Remediation Status: **OPEN** Date Known Offsite: Not reported Datum: Not reported Method: Not reported Program Eligible: Not reported Ineligible: Not reported

CLEANUP SITES:

DEP Cleanup Site Key: 50440175

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780

Source Database Id: COM 287080

CPAC Program Area Id: CU CLLC Cleanup Category Key: OTHCU RSC2 Remediation Status Key: **PENDING** Data Load Date: 08/24/2017 OC3 Office Id: SED Physical Address Line 2: Not reported OIC Object Of Interest Id: CAP_R **EXACT** PC2 Proximity Id: Calc Coordinates Accuracy Level Id: 3

Digital Aerial Photography With Ground Control CMC2 Coordinate Method Id:

DC4 Datum Id: North American Datum of 1983

REVIEWED VSC1 Verification Status: Collect Username: WILLIAMS_CA Collect Date: 11/30/2010

Collect Affiliation: Florida Department of Environmental Protection

Map Source: 2004 DOQQ Map Source Scale: 4618 Interpolation Scale: Not reported Verifier Username: WILLIAMS CA

Verifier Affiliation: Florida Department of Environmental Protection

Verification Date: 11/30/2010

Verified Coordinate Method Id: Digital Aerial Photography With Ground Control

Source Database Name Code: COMET CMC2 Coordinate Method ID Code: DPHO DC4 Datum ID Code: NAD83 Verified Coordinate Method ID CodeDPHO Comments: Not reported

Latitude/Longitude (deg/min/sec): 26 29 4.5983 / 16.6484 80 39 Map ID Direction Distance Distance (ft.)Site

EDR ID Number

Database(s) EPA ID Number

WOERNER TURF FARM 3, TRACT D7-100-039 (Continued)

S113721830

RESP PARTY:

District: Southeast District

Site Id: 287080 Project Id: 311593 Site Status: **INACTIVE** WIERZBICKI_P Project Manager: OGC Case Number: Not reported Initial Date Received: 06/21/2006 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 **DPHO** Method ID: Feature: Not reported Object Of Interest: CAP_RAP SITE

Proximity To Object: EXACT
Collect Username: WILLIAMS_CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 11/30/2010

Map Series Used: 2004_DOQQ

Map Source Scale: 4618

Interpolation Scale: 4618

Coordinate Accuracy Id: 3

Verify Method Id: DPHO

Verifier Username: WILLIAMS_CA
Verifier Affiliation: Florida Department of

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 11/30/2010
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 29 4.59830000 / 80 39 16.6483999

3 BARNARD CONSTRUCTION COMPANY, INC. 17415 SOUTH U.S. 27 SOUTH BAY, FL 33493 FINDS 1012237415 ECHO N/A

FINDS:

Registry ID: 110039625064

Environmental Interest/Information System

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

MAP FINDINGS

Map ID Direction Distance Distance (ft.)Site

Direction EDR ID Number
Distance

BARNARD CONSTRUCTION COMPANY, INC. (Continued)

1012237415

EPA ID Number

Database(s)

AIR SYNTHETIC MINOR

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1012237415 Registry ID: 110039625064

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110039625064

3 EAA A-1 FLOW EQUALIZATION BASIN 13775 SOUTH US 27 SOUTH BAY, FL

SPILLS S108969998 NPDES N/A

SPILLS:

OHMIT Incident Number: 38035 Incident Legacy: Not reported

On-Scene Response: Yes
Criminal Indicator: No
Hurricane Indicator: No

Incident Date: 09/11/2007
Incident Status: Closed
Incident Report Date: 09/11/2007
Pollutant: Diesel fuel
Pollutants Category: Petroleum
Substance Spilled: Diesel fuel
Amount Spilled (Gallons): 10.00
Pollutant - Unit Measure: gallon

Incident Party Name: Barnard Construction

Description: Inland

Incident Party Name: Cliff Berry Description: Inland

Incident Party Name: Southwest Florida Water Management District

Description: Inland

WASTEWATER:

Facility ID: FLG071003 Facility Type: Dewatering GP

Status: Active - Existing, permitted facility/site for which effluent,

reclaimed water or wastewater residual discharge into the environment

and/or monitoring is taking place.

District Office: SED NPDES Permitted Site: Yes

Environmental Interest: Industrial Wastewater Program

Owner Type: Unknown
Permit Capacity: Not reported
Party Name: Miguel Vila, PMTE

Company Name: Central Florida Equipment Rentals Inc

RP Address: 9030 NW 97th Ter RP Address 2: Not reported

RP City,Stat,Zip: Medley FL 33178-1429

Telephone: 3058883344

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

EAA A-1 FLOW EQUALIZATION BASIN (Continued)

S108969998

Email: miguelv@centralfloridaequip.com

01/10/2014 Issue Date: 01/10/2014 Effective Date: **Expiration Date:** 01/09/2019 DOC Description: Generic Permit Latitude Degrees: Not reported Latitude Minutes: Not reported Latitude Seconds: Not reported Not reported Longitude Degrees: Longitude Minutes: Not reported Longitude Seconds: Not reported Treatment: Not reported Decode For Fstatus: Active

4 T-SHED TALISMAN FARM (FORMER)
RURAL AREA FARM - 00374604000001030
BELLE GLADE, FL 33430

RESP PARTY S117898805 N/A

RESP PARTY:

District: Southeast District

Site Id: 209147
Project Id: 265107
Site Status: CLOSED
Project Manager: WIERZBICKI_P
OGC Case Number: 99-0339
Initial Date Received: 05/06/1999

Contaminants: Small Farm Pesticide Mix / load area. Pesticides. Fuels, oils, metals.

Offsite Cont Impact: N

Priority Score: Not reported Datum: NAD83
Method ID: DPHO

Feature: Fmr Pest. Mix/Load Area

Object Of Interest: CAP_RAP SITE
Proximity To Object: EXACT
Collect Username: WILLIAMS_CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 05/13/2015
Map Series Used: IMAGERY_11_13

Map Source Scale: 5000
Interpolation Scale: 5000
Coordinate Accuracy Id: 3
Verify Method Id: DPHO
Verifier Username: WILLIAMS_CA

Verifier Affiliation: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Verifying Program Id: CR
Verification Date: 05/13/2015
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC:

No, the best available evidence (such as completed SAR) demonstrates

that contamination above applicable standards or criteria DOES NOT

extend offsite.

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 28 44.7700999 / 80 39 24.2745

Distance (ft.)Site Database(s) EPA ID Number

5 SUGAR FARMS COOP SOUTHERN DIV 1550 US HWY 27 SOUTH BAY, FL 33493

LUST S103588813 AST N/A

EDR ID Number

LUST:

Region: STATE
Facility Id: 8623110
Facility Status: OPEN
Facility Type: M - Agricultural
Facility Phone: (561)942-4455
Facility Cleanup Rank: Not reported
District: Southeast District

Lat/Long (dms): 26 28 19.164 / 80 38 31.6674

Section: Not reported Township: Not reported Range: Not reported Feature: Not reported Method: AGPS Datum: 0

Score: Not reported Score Effective Date: Not reported Score When Ranked: Not reported

Operator: JOAQUIN FERNANDEZ

Name Update: 12/22/1998 Address Update: 03/11/2004

Discharge Cleanup Summary:

Discharge Date: 03/15/1997
PCT Discharge Combined: Not reported

Cleanup Required: N - NO CLEANUP REQUIRED

Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED

Disch Cleanup Status Date: 05/29/2001 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Tank Office:

Not reported

Not reported

Not reported

Not reported

Discharge Date: 06/02/1993
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11/17/1995 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Not reported

Not reported

Not reported

Not reported

Not reported

Tank Office: -

Discharge Date: 06/03/1993
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11/17/1995 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description: Not reported Eligibility Indicator: I - INELIGIBLE

MAP FINDINGS

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

Site Manager: Not reported Site Mgr End Date: Not reported

Tank Office: -

Discharge Date: 06/09/1992
PCT Discharge Combined: Not reported

Cleanup Required: N - NO CLEANUP REQUIRED
Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED

Disch Cleanup Status Date: 01/18/2006 Cleanup Work Status: 01/18/2006

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Tank Office:

Not reported

Not reported

Not reported

Discharge Date: 06/14/2010
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 08/19/2010
Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Not reported

I - INELIGIBLE

RIAL_S

08/19/2010

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Discharge Date: 10/25/2000 PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/02/2001 Cleanup Work Status: 02/02/2001

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Cut fuel line!

I - INELIGIBLE

GIBSON_D

02/02/2001

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Contaminated Media:

Discharge Date: 06/14/2010
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 08/19/2010
Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Elig Indicator:

Site Manager:

Site Mgr End Date:

Not reported

I - INELIGIBLE

RIAL_S

08/19/2010

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: Not reported

Contaminated Monitoring Well: No
Contaminated Soil: Yes
Contaminated Surface Water: Yes
Contaminated Ground Water: No

MAP FINDINGS

Map ID
Direction
Distance

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

Pollutant: H - Generator/Pump Diesel

Pollutant Other Description:

Gallons Discharged:

Discharge Date:

Pct Discharge Combined With:

Not reported

Not reported

Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/02/2001 Cleanup Work Status: 02/02/2001

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Elig Indicator:

Site Manager:

Site Mgr End Date:

Cut fuel line!

I - INELIGIBLE

GIBSON_D

02/02/2001

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: Not reported Contaminated Monitoring Well: Not reported Contaminated Soil: Yes Contaminated Surface Water: Yes

Contaminated Ground Water: Not reported

Pollutant: H - Generator/Pump Diesel
Pollutant Other Description: FROM 2000 GALLON AST!

Gallons Discharged: 50

Task Information:

District: SED
Facility ID: 8623110
Facility Status: OPEN

Facility Type: M - Agricultural - County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: I

Source Effective Date: Not reported Discharge Date: 03-15-1997

Cleanup Required: N - NO CLEANUP REQUIRED
Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED

Disch Cleanup Status Date: 05-29-2001 SRC Action Type: -

SRC Submit Date: Not reported SRC Review Date: Not reported

SRC Completion Status:

SRC Issue Date:

SRC Comment:

Cleanup Work Status:

Site Mgr:

Not reported

COMPLETED

Not reported

Not reported

Not reported

Not reported

Not reported

Tank Office:

SR Task ID: Not reported

SR Cleanup Responsible: - SR Funding Eligibility Type: -

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

SR Soil Treatment:

SR Other Treatment:

SR Alternate Proc Received Date:

SR Alternate Procedure Status:

SR Alternate Procedure Status:

SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID:

Not reported

Not reported

SA Cleanup Responsible: -

SA Funding Eligibility Type: -

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RA Years to Complete:

RA Actual Cost:

District:

Facility ID:

Not reported

Not reported

SED

8623110

Facility ID: 8623110
Facility Status: OPEN
Facility Type: M - Agricultural -

County: PALM BEACH
County ID: 50
Cleanup Eligibility Status: I

Source Effective Date: 11-17-1995 Discharge Date: 06-02-1993

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11-17-1995

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 01-23-1995 SRC Review Date: 11-01-1995 SRC Completion Status: A - APPROVED SRC Issue Date: 11-17-1995 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: Not reported Site Mgr End Date: Not reported Tank Office:

SR Task ID: Not reported

SR Cleanup Responsible: SR Funding Eligibility Type:

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

SA Actual Cost: Not reported SA Completion Date: 09-29-1995 SA Payment Date: Not reported RAP Task ID: 36941

RAP Cleanup Responsible ID: NA - NOT APPLICABLE

RAP Funding Eligibility Type: -

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

RAP Last Order Approved:

RA Task ID:

Not reported

Not reported

Not reported

Not reported

36942

RA Cleanup Responsible: RP - RESPONSIBLE PARTY

RA Funding Eligibility Type:

RA Years to Complete:

RA Actual Cost:

District:

Facility ID:

Not reported

Not reported

Not reported

Not reported

Not reported

Not reported

OPEN

Facility Type: M - Agricultural - County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: 11-17-1995 Discharge Date: 06-03-1993

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 11-17-1995

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 01-23-1995 SRC Review Date: 11-01-1995 SRC Completion Status: A - APPROVED SRC Issue Date: 11-17-1995 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: Not reported Site Mgr End Date: Not reported Tank Office:

SR Task ID: Not reported

SR Cleanup Responsible: SR Funding Eligibility Type:

SR Actual Cost:

SR Completion Date:

SR Payment Date:

SR Oral Date:

SR Written Date:

SR Soil Removal:

Not reported

SR Soil Tonnage Removed: Not reported

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

36938

RAP Cleanup Responsible ID: NA - NOT APPLICABLE

RAP Funding Eligibility Type:

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

RAP Last Order Approved:

RA Task ID:

Not reported

Not reported

Not reported

Not reported

36939

RA Cleanup Responsible: RP - RESPONSIBLE PARTY

RA Funding Eligibility Type: RA Years to Complete: 0

RA Actual Cost:

District:

Facility ID:

Facility Status:

Not reported
SED
8623110
PEN

Facility Type: M - Agricultural - County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: Not reported Discharge Date: 06-09-1992

Cleanup Required: N - NO CLEANUP REQUIRED
Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED

Disch Cleanup Status Date: 01-18-2006

SRC Action Type:

SRC Submit Date: Not reported SRC Review Date: Not reported

SRC Completion Status:

SRC Issue Date:

SRC Comment:

Cleanup Work Status:

Site Mgr:

Not reported

COMPLETED

Not reported

Not reported

Not reported

Not reported

Tank Office:

SR Task ID: 36943

SR Cleanup Responsible: RP - RESPONSIBLE PARTY

SR Funding Eligibility Type:

SR Actual Cost:

SR Completion Date:

SR Payment Date:

Not reported

Not reported

Not reported

SR Oral Date:

Not reported

SR Soil Removal: Y
SR Free Product Removal: Y
SR Soil Tonnage Removed: 77

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

SR Soil Treatment:

SR Other Treatment:

SR Alternate Proc Received Date:

SR Alternate Procedure Status:

SR Alternate Procedure Status:

SR Alternate Procedure Status Date:Not reported

SR Alternate Procedure Comments: Not reported

SA Task ID:

36944

SA Cleanup Responsible: RP - RESPONSIBLE PARTY

SA Funding Eligibility Type:

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

36945

RAP Cleanup Responsible ID: NA - NOT APPLICABLE

RAP Funding Eligibility Type: -

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

RAP Last Order Approved:

RA Task ID:

Not reported

Not reported

Not reported

Not reported

Not reported

Not reported

RA Cleanup Responsible: NA - NOT APPLICABLE

RA Funding Eligibility Type: RA Years to Complete: 0

Facility Type: M - Agricultural - County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: 07-30-2010 Discharge Date: 06-14-2010

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 08-19-2010

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 07-19-2010 SRC Review Date: 07-30-2010 SRC Completion Status: A - APPROVED SRC Issue Date: 08-19-2010 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: RIAL_S Site Mgr End Date: 08-19-2010

Tank Office: PCLP50 - Palm Beach County

SR Task ID: 86569

SR Cleanup Responsible:

SR Funding Eligibility Type:

SR Actual Cost:

SR Completion Date:

Not reported

Not reported

SR Payment Date:

SR Oral Date:

SR Written Date:

SR Soil Removal:

Not reported

Not reported

Not reported

Not reported

Not reported

Not reported

SR Soil Tonnage Removed: Not reported

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

SR Soil Treatment:
SR Other Treatment:
Not reported
SR Alternate Proc Received Date:
SR Alternate Procedure Status:
Not reported
SR Alternate Procedure Status Date:Not reported
SR Alternate Procedure Comments: Not reported
SA Task ID:
Not reported

SA Cleanup Responsible:

SA Funding Eligibility Type: -

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RA Years to Complete: 0
RA Actual Cost: Not reported
District: SED

Facility ID: 8623110
Facility Status: OPEN

Facility Type: M - Agricultural - County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: 01-24-2001 Discharge Date: 10-25-2000

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02-02-2001

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 01-22-2001 SRC Review Date: 01-24-2001 SRC Completion Status: A - APPROVED SRC Issue Date: 02-02-2001 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: GIBSON_D Site Mgr End Date: 02-02-2001

Tank Office: PCLP50 - Palm Beach County

SR Task ID: Not reported

SR Cleanup Responsible: - SR Funding Eligibility Type: -

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported Map ID Direction Distance Distance (ft.)Site

irection EDR ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

EPA ID Number

S103588813

Database(s)

SR Soil Treatment:

SR Other Treatment:

SR Alternate Proc Received Date:

SR Alternate Procedure Status:

SR Alternate Procedure Status:

SR Alternate Procedure Status Date: Not reported SR Alternate Procedure Status Date: Not reported SR Alternate Procedure Comments: Not reported SA Task ID:

Not reported
Not reported
Not reported
For 174

SA Cleanup Responsible: - SA Funding Eligibility Type: -

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RA Cleanup Responsible: RA Funding Eligibility Type: RA Years to Complete: 0

RA Actual Cost: Not reported

Click here for Florida Oculus:

AST:

Facility ID: 8623110
Facility Status: OPEN
Type Description: Agricultural
Facility Phone: (561) 942-4455

DEP Contractor Own: C

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 28 16.3999999 / 80 38 35.2999999

Owner:

Owner Id: 51682

Owner Name: SUGAR FARMS CO OP

Owner Address: PO BOX 408

Owner Address 2: ATTN: STORAGE TANK REGIS
Owner City, St, Zip: LOXAHATCHEE, FL 33470

Owner Contact: MARK HOWELL / EXT 25401 | JAIME VEGA 561-924-4465

Owner Phone: (561) 996-9072

Tank Id:

Status: Removed
Status Date: 30-NOV-1993
Install Date: Not reported

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 5500

Tank Location: ABOVEGROUND

Tank ld: 10

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

Status: Removed
Status Date: 30-SEP-1990
Install Date: Not reported
Substance: Leaded gas
Content Description: Leaded Gas
Gallons: 2000

Tank Location: ABOVEGROUND

Tank Id: 11
Status: In service
Status Date: Not reported
Install Date: 01-OCT-1991
Substance: Unleaded gas
Content Description: Unleaded Gas
Gallons: 4000

Tank Location: ABOVEGROUND

Construction:

Tank ld:

Construction Category: Secondary Containment Construction Description: AST containment

Tank ld: 1

Construction Category: Primary Construction

Construction Description: Steel

Tank ld: 11

Construction Category: Overfill/Spill

Construction Description: Level gauges/alarms

Monitoring:

Tank ID: 1

Monitoring Description: Visual inspection of ASTs

Piping:

Tank ID: 11

Piping Category: Miscellaneous Attributes
Piping Description: Abv, no soil contact

Tank Id: 12
Status: In service
Status Date: Not reported
Install Date: 01-OCT-1991
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 12000

Tank Location: ABOVEGROUND

Construction:

Tank ld: 12

Construction Category: Secondary Containment Construction Description: AST containment

Tank ld: 12

Construction Category: Primary Construction

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

S103588813

EDR ID Number

Construction Description: Steel

Tank Id: 12

Construction Category: Overfill/Spill
Construction Description: Level gauges/alarms

Monitoring:

Tank ID:

Monitoring Description: Visual inspection of ASTs

Piping:

Tank ID: 12

Piping Category: Miscellaneous Attributes
Piping Description: Abv, no soil contact

Tank Id: 2

Status: Removed
Status Date: Not reported
Install Date: Not reported
Substance: Leaded gas
Content Description: Leaded Gas

Gallons: 2000

Tank Location: ABOVEGROUND

Tank Id: S100
Status: In service
Status Date: 01-AUG-1983
Install Date: 01-AUG-1983

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 2000

Tank Location: ABOVEGROUND

Construction:

Tank Id: S100

Construction Category: Primary Construction

Construction Description: Steel

Tank Id: S100

Construction Category: Secondary Containment Construction Description: AST containment

Tank Id: S100
Construction Category: Overfill/Spill

Construction Description: Spill containment bucket

Monitoring:

Tank ID: S100

Monitoring Description: Visual inspection of ASTs

Piping:

Tank ID: S100

Piping Category: Miscellaneous Attributes
Piping Description: Abv, no soil contact

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

Tank ld: 4

Status: Removed
Status Date: 30-NOV-1993
Install Date: 01-SEP-1990
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 4000

Tank Location: ABOVEGROUND

Tank ld: 5

Status: Removed
Status Date: 30-NOV-1993
Install Date: 01-SEP-1990
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 4000

Tank Location: ABOVEGROUND

Tank ld: 6

Status: Removed
Status Date: 30-NOV-1993
Install Date: 01-SEP-1990
Substance: Vehicular diesel
Content Description: Vehicular Diesel
Gallons: 4000

Tank Location: ABOVEGROUND

Tank Id:

Status: Removed
Status Date: 30-NOV-1993
Install Date: Not reported
Substance: Leaded gas
Content Description: Leaded Gas
Gallons: 1000

Tank Location: ABOVEGROUND

 Tank Id:
 9

 Status:
 Deleted

 Status Date:
 01-MAY-1994

 Install Date:
 01-JUL-1991

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 10000

Tank Location: ABOVEGROUND

Tank Id: 13
Status: Removed
Status Date: 30-NOV-1991
Install Date: 01-SEP-1990
Substance: Leaded gas
Content Description: Leaded Gas

Gallons: 3000

Tank Location: ABOVEGROUND

Tank Id: 14
Status: Removed
Status Date: 30-NOV-1993

TC5124409.6s Page 29 of 109

S103588813

EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS COOP SOUTHERN DIV (Continued)

Install Date: 01-JUL-1991

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 10000

Tank Location: ABOVEGROUND

Tank Id: S102
Status: Removed
Status Date: 01-FEB-2010
Install Date: 01-NOV-1993

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 2000

Tank Location: ABOVEGROUND

 Tank Id:
 16

 Status:
 Removed

 Status Date:
 01-DEC-2000

 Install Date:
 01-NOV-1993

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 2000

Tank Location: ABOVEGROUND

Tank Id: 17
Status: In service
Status Date: 01-SEP-1999
Install Date: 01-SEP-1999
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 1500

Tank Location: ABOVEGROUND

Construction:

Tank ld:

Construction Category: Primary Construction
Construction Description: Steel

Tank ld: 17

Construction Category: Secondary Containment
Construction Description: AST containment

Monitoring:

Tank ID:

Monitoring Description: Visual inspection of ASTs

Piping:

Tank ID: 17

Piping Category: Miscellaneous Attributes
Piping Description: Abv, no soil contact

 Tank Id:
 18

 Status:
 Deleted

 Status Date:
 01-OCT-2000

 Install Date:
 01-OCT-2000

Substance: Diesel-generator,pump

EDR ID Number

S103588813

Map ID Direction Distance Distance (ft.)Site

irection EDR ID Number

Generator/Pump Diesel

S103588813

A100148879

N/A

AST

EPA ID Number

Database(s)

SUGAR FARMS COOP SOUTHERN DIV (Continued)

Gallons: 2000

Content Description:

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

6 TALISMAN SUGAR SWF/LF S111220793
N/A

, FL

LF PALM BEACH:

Site Number: 68

Permit Number: FLD 078464799
Owner Of Site: Talisman Sugar, Inc.
Quad: Everglades, 2 NE

Pbc Street Atlas 2000: NA

Latitude: 26,27,45.00 80,45,15.00 Longitude: Township: 46 S Range: 36 E Section: 20 Class: 500 Open: Not reported Closed: Not reported

Operation: Petroleum products contamination of soil, reported release of

hydrochloric acid onto land between 1987-89 to US EPA.

Site Size In Acres: Not reported

Location: 9.8 mi S of intersection of SR 80 & US 27.

6 TALISMAN SUGAR CORP-ABELS FLYING
US 27

BELLE GLADE, FL 33430

AST:

Facility ID: 8839284 Facility Status: CLOSED

Type Description: Fuel user/Non-retail Facility Phone: Not reported

DEP Contractor Own: P

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 27 55 / 80 45 21

Owner:

Owner Id: 120

Owner Name: ABELS FLYING SERVICE
Owner Address: 18390 SW 156TH ST
Owner Address 2: Not reported
Owner City,St,Zip: MIAMI, FL 33187
Owner Contact: MABEL SERNA

Owner Phone: (305) 551-3785

Tank ld: 1

Status: Removed Status Date: 01-FEB-2000 Map ID
Direction
EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

TALISMAN SUGAR CORP-ABELS FLYING (Continued)

A100148879

Install Date: 01-JUL-1985
Substance: Aviation gas
Content Description: Aviation Gas
Gallons: 4000

Tank Location: ABOVEGROUND

Tank Id: 2
Status: Removed
Status Date: 01-FEB-2000
Install Date: 01-JUL-1985
Substance: Aviation gas
Content Description: Aviation Gas
Gallons: 4000

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

6 TALISMAN SUGAR CORP (THE ST. JOE COMPANY) T-3 - LABOR CAMP - RURAL AREA IN FARM SOUTHWEST PALM BEACH COUTY, FL 53

INST CONTROL S111761736 N/A

Inst Control:

Distance

Facility Id: COM_216895

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 55.7271 / 80 45 17.945
Date Amended: Not reported

Mechanism - Date IC Removed: /2/06/06/2

Mechanism - Program Area: WASTE CLEANUP

Mechanism - Date Order Issued: 06/21/2006

Date Removed: Not reported

Inspection Date: Not reported

Legal Description: Not reported

Comments: Part of Talisman Sugar Corp Settlement; See OGC case #99-0339

Township: 46S Range: 36E

Parcel ID: 00364620000005010

 Section:
 20

 Book Number:
 20479

 Page Number:
 216-223

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_216895

Inst Control Type: DIGGING RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 55.7271 / 80 45 17.945

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Not reported

/2/06/06/2

WASTE CLEANUP

06/21/2006

Not reported

Date Removed: Not reported Inspection Date: Not reported Legal Description: Not reported

MAP FINDINGS

Map ID Direction **EDR ID Number**

Distance (ft.)Site Database(s) **EPA ID Number**

TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S111761736

Comments: Part of Talisman Sugar Corp Settlement; See OGC case #99-0339

Township: 46S 36E Range:

Parcel ID: 00364620000005010

Section: 20 Book Number: 20479 Page Number: 216-223

DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL Acquisition:

Click here for Florida Oculus:

6 T-3 TALISMAN FARM FORMER LABOR CAMP AND AIR STRIP NONE REMOTE FARM LOCATION BELLE GLADE, FL 33430

RESP PARTY S117361227

N/A

RESP PARTY:

Distance

District: Southeast District

Site Id: 216895 269825 Project Id: Site Status: CLOSED Project Manager: WIERZBICKI P OGC Case Number: 99-0339 Initial Date Received: 09/30/1998

Former Residential Labor Camp and later crop dusting airstrip. Contaminants:

Pesticides, fuels, oils, metals.

Offsite Cont Impact: Ν

Priority Score: Not reported Datum: NAD83 Method ID: **DPHO**

Fmr Labor Camp & crop Dtr Feature:

Object Of Interest: CAP_RAP SITE Proximity To Object: **EXACT** Collect Username: WILLIAMS CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

07/21/2011 Collect Date: Map Series Used: 1999 doqs Map Source Scale: 4999 Interpolation Scale: Not reported

Coordinate Accuracy Id: Verify Method Id: **DPHO**

Verifier Username: THORNTON A

DEPARTMENT OF ENVIRONMENTAL PROTECTION Verifier Affiliation:

Verifying Program Id: CL 08/22/2005 Verification Date: Decode for District: Southeast District

North American Datum of 1983 Decode for Datum:

Digital Aerial Photography With Ground Control Decode for Method:

Decode for Off Site COC: No, the best available evidence (such as completed SAR) demonstrates

that contamination above applicable standards or criteria DOES NOT

extend offsite.

Digital Aerial Photography With Ground Control Decode for V_Method:

Latitude/Longitude (deg/min/sec): 26 27 55.7271 / 80 45 17.945

Distance (ft.)Site Database(s) EPA ID Number

7 SFWMD TEMPORARY TEST CELLS N OF WESTON, W OF US 2 N/A, FL 00000

FINDS:

Registry ID: 110020733054

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1008172749 Registry ID: 110020733054

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110020733054

8 TALISMAN SUGAR CORP-MILLING PLANT US HWY 27 16 MI S OF SOUTH BAY SOUTH BAY, FL 33430

U004035061 N/A

EDR ID Number

1008172749

N/A

FINDS

ECHO

AST:

Facility ID: 8514728 Facility Status: CLOSED

Type Description: Fuel user/Non-retail Racility Phone: Not reported

DEP Contractor Own: P

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 27 27 / 80 40 22

Owner:

Owner Id: 21488

Owner Name: TALISMAN SUGAR CORP

Owner Address: PO BOX 814
Owner Address 2: Not reported

Owner City,St,Zip: BELLE GLADE, FL 33430
Owner Contact: MIGUEL CERVERA
Owner Phone: (561) 996-5527

Tank ld:

Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Vehicular diesel

Distance (ft.)Site Database(s) **EPA ID Number**

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

Content Description: Vehicular Diesel

Gallons: 10000

ABOVEGROUND Tank Location:

Tank Id: 10 Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported Substance: Unleaded gas

Gallons: 5000

Content Description:

ABOVEGROUND Tank Location:

Unleaded Gas

Tank Id: 11 Status: Removed Status Date: 01-FEB-2000 Not reported Install Date: Substance: Unleaded gas Content Description: Unleaded Gas

Gallons: 5000

ABOVEGROUND Tank Location:

Tank Id: 12 Status: Removed 01-FEB-2000 Status Date: Install Date: Not reported Substance: Unleaded gas Content Description: **Unleaded Gas**

Gallons: 2000

ABOVEGROUND Tank Location:

Tank Id: 13 Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported

Substance:

Residual oils, 5&6 Content Description:

Gallons: 100600

ABOVEGROUND Tank Location:

Tank Id: 14 Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported Substance: Vehicular diesel Content Description: Vehicular Diesel

Gallons:

ABOVEGROUND Tank Location:

Tank Id: 15 Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported

Diesel-generator,pump Substance: Content Description: Generator/Pump Diesel

Gallons: 3000

Tank Location: **ABOVEGROUND** **EDR ID Number**

U004035061

Distance (ft.)Site Database(s) **EPA ID Number**

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

U004035061

EDR ID Number

Tank Id: 16 Removed Status: Status Date: 01-FEB-2000 Install Date: Not reported Substance: New/lube oil New/Lube Oil Content Description: Gallons: 8000

ABOVEGROUND Tank Location:

Tank Id: 17 Status: Removed 01-FEB-2000 Status Date: Install Date: Not reported Substance: New/lube oil Content Description: New/Lube Oil

Gallons: 8000

ABOVEGROUND Tank Location:

Tank Id: 18 Removed Status: 01-FEB-2000 Status Date: Install Date: Not reported Substance: New/lube oil Content Description: New/Lube Oil 10000

Gallons:

Tank Location: **ABOVEGROUND**

Tank Id: 19 Status: Removed 01-FEB-2000 Status Date: Install Date: Not reported Substance: New/lube oil Content Description: New/Lube Oil Gallons: 10000

ABOVEGROUND Tank Location:

Tank Id: 2 Status: Removed 01-FEB-2000 Status Date: Install Date: Not reported Substance: Vehicular diesel Content Description: Vehicular Diesel

Gallons: 10000

ABOVEGROUND Tank Location:

Tank Id: 20 Status: Removed 01-FEB-2000 Status Date: Install Date: Not reported Substance: New/lube oil Content Description: New/Lube Oil Gallons:

ABOVEGROUND Tank Location:

Tank Id: 21 Status: Removed Status Date: 01-FEB-2000

Distance (ft.)Site Database(s) **EPA ID Number**

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

U004035061

EDR ID Number

Install Date: Not reported New/lube oil Substance: Content Description: New/Lube Oil Gallons: 8000

ABOVEGROUND Tank Location:

Tank Id: 3 Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported Vehicular diesel Substance: Content Description: Vehicular Diesel

Gallons: 10000

Tank Location: **ABOVEGROUND**

Tank Id: 4 Removed Status: 01-FEB-2000 Status Date: Install Date: Not reported Substance: Vehicular diesel Content Description: Vehicular Diesel

Gallons: 10000

Tank Location: **ABOVEGROUND**

Tank Id: Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported Substance: Vehicular diesel Content Description: Vehicular Diesel

10000 Gallons:

Tank Location: **ABOVEGROUND**

Tank Id: Status: Removed 01-FEB-2000 Status Date: Not reported Install Date: Substance: Vehicular diesel Content Description: Vehicular Diesel

Gallons: 10000

Tank Location: **ABOVEGROUND**

Tank Id: 7

Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported Substance: Vehicular diesel Content Description: Vehicular Diesel

Gallons: 5000

Tank Location: **ABOVEGROUND**

Tank Id: Status: Removed Status Date: 01-FEB-2000 Install Date: Not reported Vehicular diesel Substance: Content Description: Vehicular Diesel

Distance (ft.)Site Database(s) EPA ID Number

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

U004035061

EDR ID Number

Gallons: 5000

Tank Location: ABOVEGROUND

Tank Id: 9

Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 5000

Tank Location: ABOVEGROUND

Tank Id: 22
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Waste oil
Content Description: Waste Oil
Gallons: 900

Tank Location: ABOVEGROUND

Tank Id: 23
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Waste oil
Content Description: Waste Oil
Gallons: 1000

Tank Location: ABOVEGROUND

Tank Id: 24
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Waste oil
Content Description: Waste Oil
Gallons: 1000

Tank Location: ABOVEGROUND

Tank Id: 25
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Waste oil
Content Description: Waste Oil
Gallons: 1000

Tank Location: ABOVEGROUND

Tank Id: 26
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Mineral acid
Content Description: Mineral Acid
Gallons: 8000

Tank Location: ABOVEGROUND

Map ID Direction Distance Distance (ft.)Site

ection EDR ID Number

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

U004035061

EPA ID Number

Database(s)

Tank Id: 27
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported

Substance: Hazardous substance Content Description: Hazardous Substance

Gallons: 900

Tank Location: ABOVEGROUND

Tank Id: 28
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported

Substance: Hazardous substance Content Description: Hazardous Substance

Gallons: 900

Tank Location: ABOVEGROUND

Tank Id: 29
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: New/lube oil
Content Description: New/Lube Oil
Gallons: 4100

Tank Location: ABOVEGROUND

Tank Id: 30
Status: Removed
Status Date: 01-FEB-2000
Install Date: Not reported
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 2640

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

T-1 & T-5 - TALISMAN SUGAR CORP (THE ST. JOE COMP RURAL AREA IN FARM - 00374608000001020 SOUTHWEST PALM BEACH COUTY, FL 53 INST CONTROL \$111761734 N/A

Inst Control:

8

Facility Id: COM_209147

Inst Control Type: DIGGING RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 29.8000000 / 80 40 18.9699999

Date Amended:
Mechanism - Date IC Removed:
Mechanism - Program Area:
Mechanism - Date Order Issued:
Date Removed:
Inspection Date:

Not reported
WASTE CLEANUP
06/21/2006
Not reported
Not reported

Legal Description: Not reported

Comments: Part of Talisman Corp; See OgC case # 99-0339

virection EDR ID Number

T-1 & T-5 - TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S111761734

EPA ID Number

Database(s)

Township: 46S Range: 37E

Parcel ID: 0037460400001030

 Section:
 04

 Book Number:
 20479

 Page Number:
 0216

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM 209147

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 29.8000000 / 80 40 18.9699999

Date Amended:
Mechanism - Date IC Removed:
Mechanism - Program Area:
Mechanism - Date Order Issued:
Date Removed:
Inspection Date:
Legal Description:
Not reported
WASTE CLEANUP
WASTE CLEANUP
WASTE CLEANUP
Not reported
Not reported
Not reported
Not reported

Comments: Part of Talisman Corp; See OgC case # 99-0339

Township: 46S Range: 37E

Parcel ID: 0037460400001030

 Section:
 04

 Book Number:
 20479

 Page Number:
 0216

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Click here for Florida Oculus:

8 TALISMAN SUGAR CORP-MILLING PLANT US HWY 27 16 MI S OF SOUTH BAY SOUTH BAY, FL 33430

LUST S108979166 N/A

LUST:

Datum:

Region: STATE
Facility Id: 8514728
Facility Status: CLOSED

Facility Type: C - Fuel user/Non-retail

Facility Phone: Not reported Facility Cleanup Rank: 11086

District: Southeast District
Lat/Long (dms): 26 27 29.88 / 80 40 18.84

 Section:
 008

 Township:
 46S

 Range:
 36E

 Feature:
 Not reported

 Method:
 AGPS

Score: 5 Score Effective Date: 05/09/2008

Score When Ranked: 9
Operator: Not reported
Name Update: Not reported
Address Update: 02/23/1999

MAP FINDINGS

Map ID Direction Distance Distance (ft.)Site

Distance
Distance (ft.)Site Database(s) EPA ID Number

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

S108979166

EDR ID Number

Discharge Cleanup Summary:

Discharge Date: 04/15/1991
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED

Discharge Cleanup Status: NFAC - NO FURTHER ACTION WITH CONDITIONS

Disch Cleanup Status Date: 07/21/2006 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Tank Office:

Discharge Date:

Not reported

Not reported

Not reported

Not reported

Not reported

Od/25/1994

PCT Discharge Combined: 04/25/1994

Not reported

Cleanup Required: C - COMBINED CLEANUP REQUIRED

Discharge Cleanup Status: NFAC - NO FURTHER ACTION WITH CONDITIONS

Disch Cleanup Status Date: 07/21/2006 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Not reported

Not reported

Tank Office: -

Task Information:

District: SED
Facility ID: 8514728
Facility Status: CLOSED

Facility Type: C - Fuel user/Non-retail -

County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: 07-21-2006 Discharge Date: 04-15-1991

Cleanup Required: R - CLEANUP REQUIRED

Discharge Cleanup Status: NFAC - NO FURTHER ACTION WITH CONDITIONS

Disch Cleanup Status Date: 07-21-2006

SRC Action Type: NFAC - NO FURTHER ACTION WITH CONDITIONS

 SRC Submit Date:
 03-26-2003

 SRC Review Date:
 03-26-2003

 SRC Completion Status:
 A - APPROVED

 SRC Issue Date:
 07-21-2006

SRC Comment: ISSUED BY SE DIST WCU

Cleanup Work Status: COMPLETED
Site Mgr: Not reported
Site Mgr End Date: Not reported
Tank Office: -

SR Task ID: Not reported

SR Cleanup Responsible:

SR Funding Eligibility Type: -

SR Actual Cost:

SR Completion Date:

SR Payment Date:

SR Oral Date:

Not reported

rection EDR ID Number

Database(s) EPA ID Number

S108979166

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

SR Soil Removal:

SR Free Product Removal:

SA Funding Eligibility Type:

Not reported
Not reported
Not reported

SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: 37587

SA Cleanup Responsible: -

SA Actual Cost:
SA Completion Date:
Not reported
Not reported
Not reported
Not reported
RAP Task ID:
Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RAP Actual Cost: Not reported
RAP Completion Date: Not reported
RAP Payment Date: Not reported
RAP Last Order Approved: Not reported

RA Task ID: 88582

RA Cleanup Responsible: RP - RESPONSIBLE PARTY

RA Funding Eligibility Type: - RA Years to Complete: 0

RA Actual Cost:

District:

Facility ID:

Racility Status:

Not reported
SED
8514728
CLOSED

Facility Type: C - Fuel user/Non-retail -

County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: 07-21-2006 Discharge Date: 04-25-1994

Cleanup Required: C - COMBINED CLEANUP REQUIRED

Discharge Cleanup Status: NFAC - NO FURTHER ACTION WITH CONDITIONS

Disch Cleanup Status Date: 07-21-2006

SRC Action Type: NFAC - NO FURTHER ACTION WITH CONDITIONS

 SRC Submit Date:
 03-26-2003

 SRC Review Date:
 03-26-2003

 SRC Completion Status:
 A - APPROVED

 SRC Issue Date:
 07-21-2006

SRC Comment: ISSUED BY SE DIST WCU

Cleanup Work Status: COMPLETED
Site Mgr: Not reported
Site Mgr End Date: Not reported
Tank Office: -

SR Task ID: Not reported

SR Cleanup Responsible:

SR Funding Eligibility Type:

SR Actual Cost:

SR Completion Date:

SR Payment Date:

SR Oral Date:

Not reported

EDR ID Number

Database(s) **EPA ID Number**

TALISMAN SUGAR CORP-MILLING PLANT (Continued)

SR Soil Removal: Not reported Not reported SR Free Product Removal: SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: 65806

SA Cleanup Responsible: SA Funding Eligibility Type:

SA Actual Cost: Not reported SA Completion Date: Not reported SA Payment Date: Not reported RAP Task ID: Not reported

RAP Cleanup Responsible ID: RAP Funding Eligibility Type:

RAP Actual Cost: Not reported RAP Completion Date: Not reported **RAP Payment Date:** Not reported RAP Last Order Approved: Not reported

RA Task ID: 88584

RA Cleanup Responsible: **RP - RESPONSIBLE PARTY**

RA Funding Eligibility Type: RA Years to Complete: 0

RA Actual Cost: Not reported

Click here for Florida Oculus:

8 TALISMAN SUGAR CORP-MILLING PLANT US HWY 27 16 MI S OF SOUTH BAY SOUTH BAY, FL 33430

DWM CONTAM:

Program Site Id: 8514728 Lat DD: 26 Lat MM: 27 Lat SS: 31.76 Long DD: 80 Long MM: 40 Long SS: 18.08 PCLP50 Office/ District: Program Area: Petroleum Offsite Contamination:

Project Manager: Not reported

Priority Score: 5

Remediation Status: WAITING Date Known Offsite: Not reported Datum: HARN **AGPS** Method: Program Eligible: Not reported

Ineligible: Yes S108979166

DWM CONTAM S109418631 N/A

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

8 T-1 / T-5 TALISMAN MILL SUGAR MILL - 00374608000001020 BELLE GLADE, FL 33430 RESP PARTY S117898800 N/A

RESP PARTY:

District: Southeast District

 Site Id:
 87499

 Project Id:
 229038

 Site Status:
 CLOSED

 Project Manager:
 WIERZBICKI_P

 OGC Case Number:
 99-0339

 Initial Date Received:
 09/30/1998

Contaminants: Site of former Sugar Mill, pesticides, metals, petroleum, oils,

bagasse, etc.

Offsite Cont Impact: N

Priority Score: Not reported Datum: NAD83 Method ID: DPHO

Feature: Former Sugar Mill
Object Of Interest: CAP_RAP SITE
Proximity To Object: APPRX
Collect Username: WILLIAMS_CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 05/13/2015
Map Series Used: IMAGERY_11_13

Map Source Scale: 5000
Interpolation Scale: 5000
Coordinate Accuracy Id: 3
Verify Method Id: DPHO
Verifier Username: WILLIAMS_CA

Verifier Affiliation: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Verifying Program Id: CR
Verification Date: 05/13/2015
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: No, the best available evidence (such as completed SAR) demonstrates

that contamination above applicable standards or criteria DOES NOT

extend offsite.

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 27 36.1918999 / 80 40 16.3867000

8 SUGAR MILL - TALISMAN SUGAR CORP (THE ST. JOE COM SUGAR MILL - 0037460800001020 INST CONTROL S117898780 N/A

BELLE GLADE, FL 3340

Inst Control:

Facility Id: COM_87499

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PETROLEUM (INCLUDES BTEX AND MTBE)
Lat/Long (dms): 26 27 36.1918999 / 80 40 16.3867000

Date Amended: Not reported Mechanism - Date IC Removed: /2/06/06/2

Mechanism - Program Area: WASTE CLEANUP
Mechanism - Date Order Issued: 07/21/2006
Date Removed: Not reported
Inspection Date: Not reported

Map ID

Direction

EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

SUGAR MILL - TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S117898780

Legal Description: Not reported Comments: Not reported Township: 46S

Township: 46S Range: 37E

Distance

Parcel ID: 00374608000001020

 Section:
 08

 Book Number:
 20532

 Page Number:
 460-475

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_87499

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 36.1918999 / 80 40 16.3867000

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Not reported
/2/06/06/2
WASTE CLEANUP

Mechanism - Date Order Issued: 07/21/2006
Date Removed: Not reported
Inspection Date: Not reported
Legal Description: Not reported
Comments: Not reported
Township: 46S
Range: 37E

Parcel ID: 00374608000001020

 Section:
 08

 Book Number:
 20532

 Page Number:
 460-475

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_87499

Inst Control Type: DIGGING RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 36.1918999 / 80 40 16.3867000

Date Amended: Not reported Mechanism - Date IC Removed: /2/06/06/2 Mechanism - Program Area: WASTE CLEANUP Mechanism - Date Order Issued: 07/21/2006 Date Removed: Not reported Inspection Date: Not reported Not reported Legal Description: Not reported Comments: Township: 46S

Range: 37E Parcel ID: 00374608000001020

 Section:
 08

 Book Number:
 20532

 Page Number:
 460-475

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_87499

Inst Control Type: DIGGING RESTRICTION

Eng Control Type: NONE

MAP FINDINGS

Map ID Direction **EDR ID Number**

Distance (ft.)Site Database(s) **EPA ID Number**

SUGAR MILL - TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S117898780

SOIL Contaminated Media:

PETROLEUM (INCLUDES BTEX AND MTBE) Contamination: 26 27 36.1918999 / 80 40 16.3867000 Lat/Long (dms):

Date Amended: Not reported Mechanism - Date IC Removed: /2/06/06/2 WASTE CLEANUP Mechanism - Program Area: Mechanism - Date Order Issued: 07/21/2006 Date Removed: Not reported Not reported Inspection Date: Legal Description: Not reported Not reported Comments:

Township: 46S Range: 37E

Parcel ID: 00374608000001020

Section: 80 Book Number: 20532 Page Number: 460-475

DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL Acquisition:

Click here for Florida Oculus:

8 B-3 - TALISMAN SUGAR CORP (THE ST. JOE COMPANY)

INST CONTROL S111761720

N/A

B-3 - RURAL AREA IN FARM BELLE GLAGE, FL 33430

Inst Control:

Distance

Facility Id: COM 157238

Inst Control Type: DIGGING RESTRICTION

NONE Eng Control Type: Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 41.9896999 / 80 40 14.7624

Date Amended: Not reported /2/01/02/1 Mechanism - Date IC Removed: Mechanism - Program Area: WASTE CLEANUP Mechanism - Date Order Issued: 04/06/2001 Date Removed: Not reported Inspection Date: 05/03/1999 Legal Description: Not reported

Part of Talisman Sugar Corp settlement; see OGC Case #99-0339 1.3 acre Comments:

in size

Township: 46S Range: 37E

Parcel ID: 00384337010060061

Section: 80 Book Number: 12319 Page Number:

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_157238

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES) Contamination:

Lat/Long (dms): 26 27 41.9896999 / 80 40 14.7624

Date Amended: Not reported Mechanism - Date IC Removed: /2/01/02/1

Mechanism - Program Area: WASTE CLEANUP

irection EDR ID Number

B-3 - TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S111761720

EPA ID Number

Database(s)

Mechanism - Date Order Issued: 04/06/2001
Date Removed: Not reported
Inspection Date: 05/03/1999
Legal Description: Not reported

Comments: Part of Talisman Sugar Corp settlement; see OGC Case #99-0339 1.3 acre

in size

Township: 46S Range: 37E

Parcel ID: 00384337010060061

 Section:
 08

 Book Number:
 12319

 Page Number:
 1181-1191

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Click here for Florida Oculus:

SOUTH FLORIDA WATER MANAGEMENT DISTRICT - TALISMAN US HIGHWAY 27 - 10 1/2 MILES NORTH OF BROWARD COUNTY LINE SOUTH BAY, FL

2011

TIER 2 S113388217 N/A

TIER 2:

Year:

9

3995036 Facility Id: Active Date: Not reported Not reported Inactive Date: Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: 26.458055 Longitude: -80.63417 LEPC District: Not reported Not reported Counties: SERC: Not reported Not reported Program Level: PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Last Modified Date: 11/12/2012 First Submit Date: 11/09/2012

Data Submitted By: Florida Division of Emergency Management

Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2011 Facility Id: 3995036

Contact Type: Tier II Emergency Contact

Contact Name: Jeffrey Smith Not reported Contact Title: Contact Phone: 5616822516 Contact 24Hr Phone: Not reported Not reported Contact Telephone 2: Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported

MAP FINDINGS

Map ID Direction Distance

Distance (ft.)Site Database(s) **EPA ID Number**

SOUTH FLORIDA WATER MANAGEMENT DISTRICT - TALISMAN STATION (Continued)

S113388217

EDR ID Number

Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011 3995036 Facility Id:

Contact Type: Tier II Secondary 24 Hour Contact

Contact Name: Jeffrey Smith Contact Title: Not reported Contact Phone: 5616822516 Not reported Contact 24Hr Phone: Not reported Contact Telephone 2: Contact Telephone 3: Not reported Contact Telephone 4: Not reported Not reported Contact Telephone 5: Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011 Facility Id: 3995036

Contact Type: Tier II Secondary Contact

Contact Name: Jeffrey Smith Contact Title: Not reported 5616822516 Contact Phone: Not reported Contact 24Hr Phone: Contact Telephone 2: Not reported Contact Telephone 3: Not reported Not reported Contact Telephone 4: Contact Telephone 5: Not reported Contact Telephone 6: Not reported jesmith@sfwmd.gov Contact Email:

Contact ID: Not reported Year: 2011 Facility Id: 3995036

Tier II Emergency 24 Hour Contact Contact Type:

Contact Name: Jeffrey Smith Not reported Contact Title: 5616822516 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Not reported Contact Telephone 4: Not reported Contact Telephone 5: Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

ection EDR ID Number

Database(s) EPA ID Number

10 T-7 TALISMAN FARM

RESP PARTY S117361229 N/A

, FL

RESP PARTY:

District: Southeast District

Site Id: 157259 Project Id: 230212 Site Status: **CLOSED** Project Manager: WIERZBICKI_P OGC Case Number: 99-0339 Initial Date Received: 09/30/1998 Not reported Contaminants: Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 DPHO Method ID: Feature: Pump Station CAP_RAP SITE Object Of Interest:

Proximity To Object: VICIN

Collect Username: WIERZBICKI_P

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 06/15/2012
Map Series Used: IMAGERY 04 09

Map Source Scale:5000Interpolation Scale:5000Coordinate Accuracy Id:3Verify Method Id:DPHO

Verifier Username: WIERZBICKI_P

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CL

Verification Date: 06/15/2012
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 27 18.6179999 / 80 44 14.1145999

10 T-8 TALISMAN FARM NONE REMOTE LOCATION , FL

RESP PARTY S117361230 N/A

RESP PARTY:

District: Southeast District

157261 Site Id: Project Id: 230211 CLOSED Site Status: WIERZBICKI P Project Manager: OGC Case Number: 99-0339 Initial Date Received: 09/30/1998 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 Method ID: **DPHO** Feature: **Pump Station** Object Of Interest: CAP_RAP SITE

Proximity To Object: VICIN

MAP FINDINGS

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

T-8 TALISMAN FARM (Continued)

S117361230

Collect Username: WIERZBICKI_P

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 06/18/2012
Map Series Used: IMAGERY_04_09

Map Source Scale: 1250
Interpolation Scale: 1250
Coordinate Accuracy Id: 3
Verify Method Id: DPHO
Verifier Username: WIERZBICKI_P

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 06/18/2012
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 27 26.2462000 / 80 44 14.2601

10 T-2 TALISMAN FARM (BORROW PIT) RURAL AREA IN FARM - 00364628000001020 SOUTHWEST PALM BEACH COUTY, FL 53

RESP PARTY S117898803 N/A

RESP PARTY:

District: Southeast District

 Site Id:
 170717

 Project Id:
 238934

 Site Status:
 CLOSED

 Project Manager:
 WIERZBICKI_P

 OGC Case Number:
 99-0339

 Initial Date Received:
 09/30/1998

Contaminants: Borrow Pit used for disposal of solid waste and farm related waste:

tires, metal parts. Metals. (Waste has been removed.)

Offsite Cont Impact:

Priority Score: Not reported Datum: NAD83
Method ID: DPHO

Feature: Borrow Pit landfill
Object Of Interest: CAP_RAP SITE
Proximity To Object: EXACT

Collect Username: WIERZBICKI_P

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR
Collect Date: 01/25/2012
Map Series Used: IMAGERY_04_09

Map Source Scale: 1250
Interpolation Scale: 1250
Coordinate Accuracy Id: 3
Verify Method Id: DPHO

Verifier Username: WIERZBICKI_P

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 01/25/2012
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: No, the best available evidence (such as completed SAR) demonstrates

MAP FINDINGS

Map ID
Direction

EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

T-2 TALISMAN FARM (BORROW PIT) (Continued)

Distance

S117898803

that contamination above applicable standards or criteria DOES NOT

extend offsite.

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 27 28.7061999 / 80 44 25.5223000

10 TALISMAN SUGAR CORP (THE ST. JOE COMPANY) T-2 - BORROW PIT - RURAL AREA IN FARM

INST CONTROL S111761733

N/A

SOUTHWEST PALM BEACH COUTY, FL 53

Inst Control:
Facility Id: COM_170717

Inst Control Type: GROUNDWATER USE RESTRICTION

Eng Control Type: NONE

Contaminated Media: GROUND WATER

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 28.7061999 / 80 44 25.5223000

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Inspection Date:

Legal Description:

Not reported

WASTE CLEANUP

06/21/2006

Not reported

Not reported

Not reported

Not reported

Comments: part of Talisman Sugar Corp Settlement; See OGC Case# 99-039

Township: 46S Range: 37E

Parcel ID: 00364628000001020

 Section:
 28

 Book Number:
 20532

 Page Number:
 450-459

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_170717

Inst Control Type: LAND USE RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 28.7061999 / 80 44 25.5223000

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Inspection Date:

Legal Description:

Not reported

WASTE CLEANUP

06/21/2006

Not reported

Not reported

Not reported

Comments: part of Talisman Sugar Corp Settlement; See OGC Case# 99-039

Township: 46S Range: 37E

Parcel ID: 00364628000001020

 Section:
 28

 Book Number:
 20532

 Page Number:
 450-459

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_170717

Inst Control Type: GROUNDWATER USE RESTRICTION

Eng Control Type: NONE

Contaminated Media: SURFACE WATER

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

TALISMAN SUGAR CORP (THE ST. JOE COMPANY) (Continued)

S111761733

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 28.7061999 / 80 44 25.5223000

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Inspection Date:

Legal Description:

Not reported

WASTE CLEANUP

06/21/2006

Not reported

Not reported

Not reported

Not reported

Comments: part of Talisman Sugar Corp Settlement; See OGC Case# 99-039

Township: 46S Range: 37E

Parcel ID: 00364628000001020

 Section:
 28

 Book Number:
 20532

 Page Number:
 450-459

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Facility Id: COM_170717

Inst Control Type: DIGGING RESTRICTION

Eng Control Type: NONE Contaminated Media: SOIL

Contamination: PESTICIDES (INCLUDES HERBICIDES, FUNGICIDES AND INSECTICIDES)

Lat/Long (dms): 26 27 28.7061999 / 80 44 25.5223000

Date Amended:

Mechanism - Date IC Removed:

Mechanism - Program Area:

Mechanism - Date Order Issued:

Date Removed:

Inspection Date:

Legal Description:

Not reported

WASTE CLEANUP

06/21/2006

Not reported

Not reported

Not reported

Not reported

Comments: part of Talisman Sugar Corp Settlement; See OGC Case# 99-039

Township: 46S Range: 37E

Parcel ID: 00364628000001020

 Section:
 28

 Book Number:
 20532

 Page Number:
 450-459

Acquisition: DPHO-DIGITAL ARIAL PHOTOGRAPHY WITH GROUND CONTROL

Click here for Florida Oculus:

11 T-6 TALISMAN FARM RESP PARTY S117361228 N/A

, FL

RESP PARTY:

District: Southeast District

Site Id: 157258 Project Id: 230213 Site Status: **CLOSED** Project Manager: WIERZBICKI_P OGC Case Number: 99-0339 Initial Date Received: 09/30/1998 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83

Distance (ft.)Site Database(s) **EPA ID Number**

T-6 TALISMAN FARM (Continued)

S117361228

EDR ID Number

Method ID: **DPHO Pump Station** Feature: CAP_RAP SITE Object Of Interest:

Proximity To Object: VICIN

Collect Username: WIERZBICKI_P

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR

Collect Date: 06/12/2012 IMAGERY_04_09 Map Series Used:

Map Source Scale: 5000 Interpolation Scale: 5000 Coordinate Accuracy Id: 3 Verify Method Id: **DPHO**

Verifier Username: WIERZBICKI_P

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: Verification Date: 06/12/2012 Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

26 27 26.0903999 / 80 41 48.625 Latitude/Longitude (deg/min/sec):

12 T-10 TALISMAN FARM **NONE - REMOTE LOCATION** , FL

RESP PARTY S117361219 N/A

RESP PARTY:

District: Southeast District

Site Id: 157262 Project Id: 230210 Site Status: **CLOSED** WIERZBICKI_P Project Manager: OGC Case Number: 99-0339 Initial Date Received: 09/30/1998 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 Method ID: **DPHO** Feature: Pump Station CAP_RAP SITE Object Of Interest:

Proximity To Object: VICIN

Collect Username: WIERZBICKI P

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR 06/18/2012 Collect Date: Map Series Used: IMAGERY 04 09

5000 Map Source Scale: Interpolation Scale: 5000 Coordinate Accuracy Id: 3 Verify Method Id: **DPHO**

WIERZBICKI P Verifier Username:

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR 06/18/2012 Verification Date: Decode for District: Southeast District

irection EDR ID Number

T-10 TALISMAN FARM (Continued) S117361219

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 27 24.9825000 / 80 47 8.65670000

13 T-24 PUMP STATION NONE - REMOTE FARM LOCATION , FL

RESP PARTY S117361226 N/A

Database(s)

EPA ID Number

RESP PARTY:

District: Southeast District

Site Id: 162359 Project Id: 231694 Site Status: **CLOSED** Project Manager: WIERZBICKI P OGC Case Number: 99-0339 Initial Date Received: 09/30/1998 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 **DPHO** Method ID: Feature: pump station Object Of Interest: CAP RAP SITE

Proximity To Object: APPRX
Collect Username: WIERZBICKI P

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR
Collect Date: 06/29/2012
Map Series Used: IMAGERY_04_09

Map Source Scale: 2500
Interpolation Scale: 2500
Coordinate Accuracy Id: 3
Verify Method Id: DPHO

Verifier Username: WIERZBICKI P

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 06/29/2012

Decode for District: Southeast District
Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 27 24.8446 / 80 43 45.0082999

14 CEMEX - SOUTH BAY PORTABLE READY MIX SOUTH US HIGHWAY 27 AT MILE MARKER 50 SOUTH BAY, FL 33493

TIER 2 S111750644 N/A

TIER 2:

Year: 2011
Facility Id: 3985954
Active Date: Not reported Inactive Date: Not reported

ection EDR ID Number

Database(s)

EPA ID Number

S111750644

CEMEX - SOUTH BAY PORTABLE READY MIX (Continued)

Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: 26.4566 Longitude: -80.644700 LEPC District: Not reported Not reported Counties: SERC: Not reported Not reported Program Level: PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported

NAICS Code: Not reported Last Modified Date: 11/12/2012 First Submit Date: 11/09/2012

Data Submitted By: Florida Division of Emergency Management

Company Name: CEMEX CONSTRUCTION MATERIALS FLORIDA LLC

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2011 Facility Id: 3985954

Contact Type: Tier II Secondary Contact JEFFREY PORTER Contact Name: Contact Title: Not reported Contact Phone: 561-820-8415 Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Not reported Contact Telephone 4: Contact Telephone 5: Not reported

Contact Email: jeffreyr.porter@cemex.com

Not reported

Contact ID: Not reported Year: 2011 Facility Id: 3985954

Contact Telephone 6:

Contact Type: Regulatory Contact
Contact Name: DENISE CORRALES

Not reported Contact Title: 813-968-3274 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: denise.corrales@cemex.com

Year: 2010
Facility Id: Not reported
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: Not reported

Distance (ft.)Site Database(s) EPA ID Number

CEMEX - SOUTH BAY PORTABLE READY MIX (Continued)

S111750644

EDR ID Number

Original Date: Not reported PLOT Source: Not reported 26.4566 Latitude: Longitude: -80.64 LEPC District: Not reported Not reported Counties: Not reported SERC: Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported Not reported NAICS Code: Last Modified Date: Not reported First Submit Date: Not reported Data Submitted By: Not reported Company Name: Not reported Comments: Not reported

Chemical Code: 68131748

Chemical Name: FLY ASH [COAL ASH]
Chemical State: SOLID POWDER
Location Name: Entire Facility

Container Code: H
Pressure Code: 1
Temperature Code: 4
Average Quantity: 103000
Maximum Quantity: 137000
Days On Site: 365

2010 Year: Facility Id: Not reported Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: 26.4566 Longitude: -80.64 LEPC District: Not reported Counties: Not reported Not reported SERC: Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Last Modified Date: Not reported First Submit Date: Not reported Not reported Data Submitted By: Company Name: Not reported Comments: Not reported

Chemical Code: WRDA 60

Chemical Name: WRDA 60 (Lignosulfonate, Amine and Carbohydrates Solution)

Chemical State: LIQUID SOLUTION Location Name: Entire Facility

Distance (ft.)Site Database(s) EPA ID Number

CEMEX - SOUTH BAY PORTABLE READY MIX (Continued)

S111750644

EDR ID Number

Container Code: A
Pressure Code: 1
Temperature Code: 4
Average Quantity: 15000
Maximum Quantity: 20000
Days On Site: 365

Year: 2010 Facility Id: Not reported Active Date: Not reported Not reported Inactive Date: Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: 26.4566 Longitude: -80.64 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Last Modified Date: Not reported First Submit Date: Not reported Data Submitted By: Not reported Company Name: Not reported Not reported Comments:

Chemical Code: ADVA 120

Chemical Name: ADVA 120 - carboxylated polyether

Chemical State: LIQUID SOLUTION

Location Name: Entire Facility

Container Code: A
Pressure Code: 1
Temperature Code: 4
Average Quantity: 20600
Maximum Quantity: 27400
Days On Site: 365

Year: 2010 Facility Id: Not re

Not reported Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Not reported Original Date: PLOT Source: Not reported 26.4566 Latitude: Longitude: -80.64 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported

Distance (ft.)Site Database(s) EPA ID Number

CEMEX - SOUTH BAY PORTABLE READY MIX (Continued)

S111750644

EDR ID Number

SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Last Modified Date: Not reported First Submit Date: Not reported Not reported Data Submitted By: Company Name: Not reported Comments: Not reported

Chemical Code: 65997151

Chemical Name: PORTLAND CEMENT
Chemical State: SOLID POWDER
Location Name: Entire Facility

Container Code: H
Pressure Code: 1
Temperature Code: 4
Average Quantity: 98700
Maximum Quantity: 131600
Days On Site: 365

Year: 2010 Facility Id: Not reported Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported 26.4566 Latitude: -80.64 Longitude: LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Last Modified Date: Not reported First Submit Date: Not reported Data Submitted By: Not reported Not reported Company Name: Comments: Not reported

Chemical Code: Aggregate

Chemical Name: Aggregate Products (Limestone/Dolomite, Granite/Basalt, Sand, or Gravel)

Chemical State: SOLID
Location Name: Entire Facility

Container Code: R
Pressure Code: 1
Temperature Code: 4
Average Quantity: 225

Average Quantity: 2250000
Maximum Quantity: 3000000
Days On Site: 365

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

15 FL. CRYSTALS FARM 21 PS 21-6

DWM CONTAM S113720434
CLEANUP SITES N/A
RESP PARTY

SOUTH BAY, FL 53

DWM CONTAM:

287122 Program Site Id: Lat DD: Not reported Lat MM: Not reported Lat SS: Not reported Long DD: Not reported Long MM: Not reported Long SS: Not reported Office/ District: SED

Program Area: Responsible Party Offsite Contamination: Not reported Project Manager: WIERZBICKI_P Priority Score: Not reported Remediation Status: **OPEN** Date Known Offsite: Not reported Datum: Not reported Method: Not reported Program Eligible: Not reported Ineligible: Not reported

CLEANUP SITES:

DEP Cleanup Site Key: 50439235

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780

Source Database Id: COM_287122

CPAC Program Area Id: CU CLLC Cleanup Category Key: OTHCU RSC2 Remediation Status Key: **PENDING** Data Load Date: 08/24/2017 OC3 Office Id: SED Physical Address Line 2: Not reported OIC Object Of Interest Id: CAP_R **PROMF** PC2 Proximity Id:

Calc Coordinates Accuracy Level Id:3

CMC2 Coordinate Method Id: Digital Aerial Photography With Ground Control

DC4 Datum Id: North American Datum of 1983

VSC1 Verification Status: REVIEWED
Collect Username: WILLIAMS_CA
Collect Date: 11/23/2010

Collect Affiliation: Florida Department of Environmental Protection

Map Source:2004_DOQQMap Source Scale:4618Interpolation Scale:Not reportedVerifier Username:WILLIAMS_CA

Verifier Affiliation: Florida Department of Environmental Protection

Verification Date: 11/23/2010

Verified Coordinate Method Id: Digital Aerial Photography With Ground Control

Source Database Name Code: COMET
CMC2 Coordinate Method ID Code: DPHO
DC4 Datum ID Code: NAD83
Verified Coordinate Method ID CodeDPHO
Comments: Not reported

Latitude/Longitude (deg/min/sec): 26 26 59.3036 / 49.3108 80 48

DEP Cleanup Site Key: 50440351

MAP FINDINGS

Map ID Direction Distance

Distance (ft.)Site Database(s) **EPA ID Number**

FL. CRYSTALS FARM 21 PS 21-6 (Continued)

S113720434

EDR ID Number

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780 COM_287126 Source Database Id:

CPAC Program Area Id: CU CLLC Cleanup Category Key: **OTHCU** RSC2 Remediation Status Key: **PENDING** Data Load Date: 08/24/2017 OC3 Office Id: SED Physical Address Line 2: Not reported OIC Object Of Interest Id: CAP_R **PROMF** PC2 Proximity Id: Calc Coordinates Accuracy Level Id: 3

CMC2 Coordinate Method Id: Digital Aerial Photography With Ground Control

DC4 Datum Id: North American Datum of 1983

VSC1 Verification Status: **REVIEWED** Collect Username: WILLIAMS_CA Collect Date: 11/23/2010

Collect Affiliation: Florida Department of Environmental Protection

Map Source: 2004_DOQQ

Map Source Scale: 4618 Not reported Interpolation Scale: Verifier Username: WILLIAMS_CA

Verifier Affiliation: Florida Department of Environmental Protection

Verification Date: 11/23/2010

Verified Coordinate Method Id: Digital Aerial Photography With Ground Control

Source Database Name Code: COMET CMC2 Coordinate Method ID Code: DPHO DC4 Datum ID Code: NAD83 Verified Coordinate Method ID CodeDPHO Comments: Not reported

26 23 6.4695 / 39.8749 80 34 Latitude/Longitude (deg/min/sec):

RESP PARTY:

Southeast District District:

Site Id: 287122 Project Id: 311635 Site Status: **INACTIVE** Project Manager: WIERZBICKI_P OGC Case Number: Not reported Initial Date Received: 09/19/2002 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 Method ID: **DPHO** Feature: Not reported Object Of Interest: CAP_RAP SITE Proximity To Object: **PROMF** Collect Username: WILLIAMS_CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR Collect Date: 11/23/2010 2004_DOQQ Map Series Used:

Map Source Scale: 4618 Interpolation Scale: 4618 Coordinate Accuracy Id: Verify Method Id: **DPHO**

rection EDR ID Number stance

FL. CRYSTALS FARM 21 PS 21-6 (Continued)

S113720434

EPA ID Number

Database(s)

Verifier Username: WILLIAMS_CA

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 11/23/2010
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 26 59.3036000 / 80 48 49.3108

District: Southeast District

Site Id: 287126 Project Id: 311639 Site Status: **INACTIVE** WIERZBICKI_P Project Manager: Not reported OGC Case Number: Initial Date Received: 09/06/2002 Contaminants: Not reported Offsite Cont Impact: Not reported Not reported Priority Score: Datum: NAD83 **DPHO** Method ID: Feature: Not reported CAP_RAP SITE Object Of Interest: Proximity To Object: **PROMF**

Collect Username: WILLIAMS_CA
Collect Affiliation: Florida Department of Environmental Protection

Collect Affiliation: Floric Collect Program Id: CR

Collect Date: 11/23/2010
Map Series Used: 2004_DOQQ
Map Source Scale: 4618

Interpolation Scale:

Coordinate Accuracy Id:

Verify Method Id:

Verifier Username:

4618

3

Verifier Username:

WILLIAMS_CA

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 11/23/2010
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 23 6.4695 / 80 34 39.8748999

16 SUGAR FARMS CO OP US 27-16 MI S OF SOUTH BAY SOUTH BAY, FL 33430

LUST S104412096 AST N/A

LUST:

Region: STATE
Facility Id: 9802134
Facility Status: CLOSED
Facility Type: M - Agricultural
Facility Phone: (561)924-4455
Facility Cleanup Rank: Not reported
District: Southeast District

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS CO OP (Continued)

S104412096

EDR ID Number

Lat/Long (dms): 26 27 27.58 / 80 38 1.47

Section: Not reported Not reported Township: Not reported Range: Feature: Not reported **AGPS** Method: Datum: Not reported Score: Not reported Score Effective Date: Not reported

Operator: JOAQUIN FERNANDEZ

Not reported

Name Update: 02/06/2006 Address Update: 02/06/2006

Discharge Cleanup Summary:

Score When Ranked:

Discharge Date: 04/04/2000 PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12/14/2000 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Not reported

Not reported

Not reported

Not reported

Not reported

Tank Office: -

Task Information:

District: SED
Facility ID: 9802134
Facility Status: CLOSED
Facility Type: M - Agricultural County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: I

Source Effective Date: 12-14-2000 Discharge Date: 04-04-2000

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12-14-2000

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 09-01-2000 SRC Review Date: 12-05-2000 SRC Completion Status: A - APPROVED SRC Issue Date: 12-14-2000 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: Not reported Site Mgr End Date: Not reported Tank Office:

SR Task ID: Not reported

SR Cleanup Responsible: -

SR Funding Eligibility Type:

SR Actual Cost:

SR Completion Date:

SR Payment Date:

Not reported

Not reported

Not reported

Not reported

Not reported

Not reported

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS CO OP (Continued)

S104412096

EDR ID Number

SR Written Date: Not reported SR Soil Removal: Not reported Not reported SR Free Product Removal: SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported Not reported SR Alternate Procedure Status: SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: 67020 SA Cleanup Responsible: SA Funding Eligibility Type:

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

RAP Last Order Approved:

RA Task ID:

RA Cleanup Responsible:

RA Funding Eligibility Type:

RA Years to Complete:

Not reported

Not reported

62271

62271

0

RA Actual Cost: Not reported

Click here for Florida Oculus:

AST:

Facility ID: 9802134
Facility Status: CLOSED
Type Description: Agricultural
Facility Phone: (561) 924-4455

DEP Contractor Own: P

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 27 29 / 80 38 2

Owner:

Owner Id: 51682

Owner Name: SUGAR FARMS CO OP

Owner Address: PO BOX 408

Owner Address 2: ATTN: STORAGE TANK REGIS Owner City, St, Zip: LOXAHATCHEE, FL 33470

Owner Contact: MARK HOWELL / EXT 25401 | JAIME VEGA 561-924-4465

Owner Phone: (561) 996-9072

 Tank Id:
 3C

 Status:
 Removed

 Status Date:
 01-APR-2003

 Install Date:
 01-SEP-1999

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Distance (ft.)Site Database(s) EPA ID Number

SUGAR FARMS CO OP (Continued)

S104412096

EDR ID Number

Gallons: 3000

Tank Location: ABOVEGROUND

Tank Id: 1C
Status: Removed
Status Date: 01-MAR-2005
Install Date: 01-SEP-1999
Substance: Unleaded gas
Content Description: Unleaded Gas

Gallons: 2000

Tank Location: ABOVEGROUND

Tank Id: SD-16
Status: Removed
Status Date: 01-FEB-2010
Install Date: 01-SEP-1999

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 3000

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

17 STAR FARMS CORPORATION - SIMON FARM COUNTY ROAD 827 BELLE GLADE, FL 33430

TIER 2 S115596196 N/A

TIER 2:

Year:

Facility Id: 5865509 Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Not reported Latitude: Longitude: Not reported LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: 0133 SIC Code 2: Not reported NAICS Code: 111930 Last Modified Date: 03/16/2017 First Submit Date: 03/16/2017

Data Submitted By: Richard Burns / General Manager

2016

Company Name: Star Farms Corporation

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2016 Facility Id: 5865509

Contact Type: Emergency Contact

Distance (ft.)Site Database(s) EPA ID Number

STAR FARMS CORPORATION - SIMON FARM (Continued)

S115596196

EDR ID Number

Contact Name: Richard Burns Contact Title: Not reported Contact Phone: 954-931-5999 Contact 24Hr Phone: Not reported Contact Telephone 2: 561-996-9800 Not reported Contact Telephone 3: 561-996-2225 Contact Telephone 4: Contact Telephone 5: Not reported Contact Telephone 6: 561-996-9800

Contact Email: StarFarms@bellsouth.net

Year: 2015 Facility Id: 5416073 Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: 26.44275 Longitude: -80.69173 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported 0133 SIC Code: SIC Code 2: Not reported NAICS Code: 111930 Last Modified Date: 02/26/2016 First Submit Date: 02/26/2016

Data Submitted By: Richard Burns / General Manager

Company Name: Star Farms Corporation

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2015
Facility Id: 5416073

Contact Type: **Emergency Contact** Contact Name: Richard Burns Contact Title: Not reported 954-931-5999 Contact Phone: Contact 24Hr Phone: Not reported 561-996-9800 Contact Telephone 2: Contact Telephone 3: Not reported 561-996-2225 Contact Telephone 4: Contact Telephone 5: Not reported 561-996-9800 Contact Telephone 6:

Contact Email: StarFarms@bellsouth.net

Year: 2014 Facility Id: 5017903

Distance (ft.)Site Database(s) EPA ID Number

STAR FARMS CORPORATION - SIMON FARM (Continued)

S115596196

EDR ID Number

Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported **PLOT Source:** Not reported 26.44275 Latitude: -80.69173 Longitude: LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: 0133 SIC Code 2: Not reported NAICS Code: 111930 Last Modified Date: 09/04/2015 02/25/2015 First Submit Date:

Data Submitted By: Richard Burns / General Manager

Company Name: Star Farms Corporation

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2014
Facility Id: 5017903

Emergency Contact Contact Type: Contact Name: Richard Burns Contact Title: Not reported Contact Phone: 954-931-5999 Contact 24Hr Phone: Not reported 561-996-9800 Contact Telephone 2: Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: StarFarms@bellsouth.net

2013 Year: Facility Id: 4557656 Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: 26.44275 -80.69173 Longitude: LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported 0133 SIC Code: SIC Code 2: Not reported

111930

02/25/2014

NAICS Code:

Last Modified Date:

Distance (ft.)Site Database(s) EPA ID Number

STAR FARMS CORPORATION - SIMON FARM (Continued)

S115596196

EDR ID Number

First Submit Date: 02/25/2014

Data Submitted By: Richard Burns / General Manager

Company Name: Star Farms Corporation

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2013
Facility Id: 4557656

Contact Type: **Emergency Contact** Contact Name: Richard Burns Contact Title: Not reported Contact Phone: 561-996-9800 Not reported Contact 24Hr Phone: Contact Telephone 2: 954-931-5999 Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: StarFarms@bellsouth.net

2012 Year: 4293025 Facility Id: Active Date: Not reported Not reported Inactive Date: Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported 26.44275 Latitude: Longitude: -80.69173 LEPC District: Not reported Not reported Counties: SERC: Not reported Not reported Program Level: Not reported PRIME: SIC Code: 0133 SIC Code 2: Not reported NAICS Code: 111930 Last Modified Date: 12/03/2013 First Submit Date: 08/13/2013

Data Submitted By: Richard Burns / General Manager

Company Name: Star Farms Corporation

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2012
Facility Id: 4293025

Contact Type: Owner / Operator
Contact Name: Star Farms Corporation

Contact Title: Not reported
Contact Phone: 561-996-9800
Contact 24Hr Phone: Not reported
Contact Telephone 2: Not reported
Contact Telephone 3: Not reported

Distance (ft.)Site Database(s) EPA ID Number

STAR FARMS CORPORATION - SIMON FARM (Continued)

S115596196

EDR ID Number

Contact Telephone 4: Not reported
Contact Telephone 5: Not reported
Contact Telephone 6: Not reported

Contact Email: StarFarms@bellsouth.net

Contact ID: Not reported Year: 2012 Facility Id: 4293025

Contact Type: Regulatory Point of Contact

Contact Name: Richard Burns Contact Title: Not reported 561-996-9800 Contact Phone: Not reported Contact 24Hr Phone: Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: StarFarms@bellsouth.net

Contact ID: Not reported Year: 2012 Facility Id: 4293025

Contact Type: **Emergency Contact** Richard Burns Contact Name: Contact Title: Not reported 561-996-9800 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: StarFarms@bellsouth.net

Contact ID: Not reported Year: 2012
Facility Id: 4293025
Contact Type: Other

Contact Name: Kathy Kirchman Contact Title: Not reported Contact Phone: 561-996-2225 Contact 24Hr Phone: Not reported 561-996-9800 Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: Star_Farm@bellsouth.net

MAP FINDINGS

Map ID
Direction
Distance

Distance (ft.)Site Database(s) EPA ID Number

18 SFWMD / PUMP STATION G-372 NW CORNER HOLEY LAND TRACT PALM BEACH COUNTY, FL 33493

AIRS \$107798141 N/A

EDR ID Number

AIRS:

Facility ID: 990615

Facility Status: Active One or more emissions units in operation, on standby status,

temporarily shut down (including any shutdown while undergoing modification), or on long-term reserve shutdown. This code indicates an existing facility which has not been permanently shut down, though it may not be operating at the time of, or immediately subsequent to,

permit issuance.

Office: SEPB Category: POINT

Owner Name: South Florida Water Management District

SIC: Admin. Of Environmental, Quality & Housing Program

Title V: Yes

Permit Number: 0990615006AV 12/01/2014 Issue Date: **Expiration Date:** 12/01/2019 Lat/Long (dms): 26 26 4 / 80 48 22 Contact Name: Jeffrey Smith Contact Address1: 3301 Gun Club Rd Contact Address2: Not reported West Palm Beach Contact City:

Contact State: FL
Contact Zip Code: 33406
Contact Zip4: 3007

Contact Phone: 561-682-2516

Contact EMail: JESMITH@SFWMD.GOV

Facility ID: 990615

Facility Status: Active One or more emissions units in operation, on standby status,

temporarily shut down (including any shutdown while undergoing modification), or on long-term reserve shutdown. This code indicates an existing facility which has not been permanently shut down, though it may not be operating at the time of, or immediately subsequent to,

permit issuance.

Office: SEPB Category: POINT

Owner Name: South Florida Water Management District

SIC: Admin. Of Environmental, Quality & Housing Program

Title V: Yes

Permit Number: 0990615005AC Issue Date: 06/12/2012 **Expiration Date:** 06/12/2013 Lat/Long (dms): 26 26 4 / 80 48 22 Contact Name: Jeffrey Smith Contact Address1: 3301 Gun Club Rd Contact Address2: Not reported Contact City: West Palm Beach

Contact State: FL
Contact Zip Code: 33406
Contact Zip4: 3007

Contact Phone: 561-682-2516

Contact EMail: JESMITH@SFWMD.GOV

Distance (ft.)Site Database(s) EPA ID Number

19 ZEPHYR EGG CO TRUCK SPILL
US HWY 27 @ 17 MI SOUTH OF SOUTH BAY
SOUTH BAY, FL 00053

LUST U004146701 TANKS N/A

EDR ID Number

LUST:

Region: STATE
Facility Id: 9803835
Facility Status: CLOSED

Facility Type: Q - Emergency Response Spill Site

Facility Phone: Not reported
Facility Cleanup Rank: Not reported
District: Southeast District

Lat/Long (dms): 26 26 21.3895 / 80 37 6.9907

Not reported Section: Township: Not reported Range: Not reported Feature: Not reported Method: Not reported Not reported Datum: Score: Not reported Score Effective Date: Not reported Score When Ranked: Not reported Operator: Not reported Name Update: Not reported Address Update: Not reported

Discharge Cleanup Summary:

Discharge Date: 10/21/1998
PCT Discharge Combined: Not reported

Cleanup Required: N - NO CLEANUP REQUIRED

Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED

Disch Cleanup Status Date: 11/21/2001 Cleanup Work Status: COMPLETED

Information Source: R - EMERGENCY RESPONSE REPORT

Other Source Description: TRUCK SPILL Eligibility Indicator: I - INELIGIBLE Site Manager: Not reported Site Mgr End Date: Not reported

Tank Office:

Task Information:

District: SED
Facility ID: 9803835
Facility Status: CLOSED

Facility Type: Q - Emergency Response Spill Site -

County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: I

Source Effective Date: Not reported Discharge Date: 10-21-1998

Cleanup Required: N - NO CLEANUP REQUIRED
Discharge Cleanup Status: NREQ - CLEANUP NOT REQUIRED

Disch Cleanup Status Date: 11-21-2001 SRC Action Type: -

SRC Submit Date: Not reported SRC Review Date: Not reported

SRC Completion Status:

SRC Issue Date:

SRC Comment:

Cleanup Work Status:

Not reported

Not reported

COMPLETED

Distance (ft.)Site Database(s) **EPA ID Number**

ZEPHYR EGG CO TRUCK SPILL (Continued)

U004146701

EDR ID Number

Site Mgr: Not reported Site Mgr End Date: Not reported

Tank Office:

SR Task ID: Not reported

SR Cleanup Responsible:

SR Funding Eligibility Type:

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: Not reported

SA Cleanup Responsible:

SA Funding Eligibility Type:

SA Actual Cost: Not reported SA Completion Date: Not reported SA Payment Date: Not reported

RAP Task ID: Not reported RAP Cleanup Responsible ID:

RAP Funding Eligibility Type:

RAP Actual Cost: Not reported RAP Completion Date: Not reported **RAP Payment Date:** Not reported RAP Last Order Approved: Not reported RA Task ID: 65210 RA Cleanup Responsible:

RA Funding Eligibility Type:

RA Years to Complete: Not reported **RA Actual Cost:** Not reported

Click here for Florida Oculus:

TANKS:

Facility ID: 9803835 Facility Phone: Not reported Facility Status: CLOSED

Facility Type:

Type Description: **Emergency Response Spill Site**

Dep Co:

Lat/Lon Deg Min Sec: Not reported

EDR ID Number

20 **EAA A-1 RESERVOIR SEEPAGE CANA** 17415 SOUTH US-27 SOUTH BAY, FL 33493

FINDS:

Registry ID: 110025346203

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Florida Environmental System Today Application (FIESTA) Data Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1009607227 Registry ID: 110025346203

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110025346203

20 A-1 FLOW EQUALIZATION BASIN (FEB) WEST SIDE OF US 27 S **EVERGLADES, FL**

CLEANUP SITES S114040792 **RESP PARTY** N/A

Database(s)

FINDS

ECHO

EPA ID Number

1009607227

N/A

CLEANUP SITES:

50439703 DEP Cleanup Site Key:

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780

Source Database Id: COM_321056

CPAC Program Area Id: CU CLLC Cleanup Category Key: OTHCU RSC2 Remediation Status Key: **ACTIVE** Data Load Date: 08/24/2017 OC3 Office Id: TAL Physical Address Line 2: Not reported CAP_R

OIC Object Of Interest Id: APPRX PC2 Proximity Id: Calc Coordinates Accuracy Level Id: 6

CMC2 Coordinate Method Id: Address Matching

DC4 Datum Id: North American Datum of 1983

VSC1 Verification Status: NOT REVIEWED YILMAZ_F Collect Username: Collect Date: 09/05/2013

Collect Affiliation: Florida Department of Environmental Protection

Map Source: Not reported Map Source Scale: Not reported Interpolation Scale: Not reported Verifier Username: Not reported

EDR ID Number

A-1 FLOW EQUALIZATION BASIN (FEB) (Continued)

Verifier Affiliation: Not reported Verification Date: Not reported Verified Coordinate Method Id: Not reported Source Database Name Code: COMET CMC2 Coordinate Method ID Code: ADDM DC4 Datum ID Code: NAD83 Verified Coordinate Method ID CodeNot reported Comments: Not reported

Latitude/Longitude (deg/min/sec): 26 26 15 / 15 80 39

RESP PARTY:

District: TAL Site Id: 321056 Project Id: 338804 Site Status: **OPEN**

DOUGHERTY_B Project Manager: OGC Case Number: Not reported Initial Date Received: 09/05/2013 Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 Method ID: **ADDM** Feature: Not reported CAP_RAP SITE Object Of Interest: APPRX

Proximity To Object: Collect Username: YILMAZ F

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CL

09/05/2013 Collect Date: Map Series Used: Not reported Map Source Scale: Not reported Interpolation Scale: Not reported

Coordinate Accuracy Id:

Verify Method Id: Not reported Verifier Username: Not reported Verifier Affiliation: Not reported Verifying Program Id: Not reported Verification Date: Not reported Decode for District: Tallahassee Office

Decode for Datum: North American Datum of 1983

Decode for Method: Address Matching Decode for Off Site COC: Not reported Not reported Decode for V_Method: Latitude/Longitude (deg/min/sec): 26 26 15 / 80 39 15

21 SOUTH FLORIDA WATER MANAGEMENT DISTRICT **NW CORNER HOLEY LAND TRACT** SOUTH BAY, FL 33493

FINDS:

Registry ID: 110038037816

Environmental Interest/Information System

CRITERIA AIR POLLUTANT MAJOR

FINDS 1011992323

N/A

Database(s)

EPA ID Number

S114040792

irection EDR ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT (Continued)

1011992323

EPA ID Number

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

21 SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STAT NORTHWEST CORNER OF HOLEY LAND TRACT (JCT L-23/L24 CANALS) UNICORP, FL 34974

TIER 2 \$108634900 N/A

Database(s)

TIER 2:

2016 Year: Facility Id: 5831013 Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported Latitude: Not reported Longitude: Not reported LEPC District: Not reported Not reported Counties: SERC: Not reported Not reported Program Level: PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: 924110 Last Modified Date: 01/31/2017 First Submit Date: 01/31/2017

Data Submitted By: JEFFREY SMITH, LEAD ENVIRONMENTAL SCIENTIST Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2016
Facility Id: 5831013

Contact Type: Emergency Contact

Contact Name: South Florida Water Management District - Control Room

Contact Title: Not reported Contact Phone: 5616826116 Contact 24Hr Phone: Not reported 5616822516 Contact Telephone 2: Contact Telephone 3: Not reported 5616822516 Contact Telephone 4: Contact Telephone 5: 5616822516 Contact Telephone 6: 5612482451

Contact Email: jesmith@sfwmd.gov

Year: 2015
Facility Id: 5384713
Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported

EDR ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

EPA ID Number

Database(s)

PLOT Source: Not reported 26.435474 Latitude: Longitude: -80.806621 LEPC District: Not reported Counties: Not reported Not reported SERC: Not reported Program Level: PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: 924110 01/29/2016 Last Modified Date: First Submit Date: 01/29/2016

Data Submitted By: JEFFREY SMITH, LEAD ENVIRONMENTAL SCIENTIST Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2015 5384713 Facility Id:

Tier II Emergency 24 Hour Contact Contact Type:

Contact Name: N/A South Florida Water Management District - Control Room

Contact Title: Not reported 5616826116 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: 5616822516 Not reported Contact Telephone 3: Contact Telephone 4: 5616822516 Contact Telephone 5: 5616822516 Contact Telephone 6: 5612482451

Contact Email: jesmith@sfwmd.gov

2014 Year: Facility Id: 4976676 Active Date: Not reported Not reported Inactive Date: Sale Pending: Not reported Original Date: Not reported **PLOT Source:** Not reported Latitude: 26.435474 Longitude: -80.806621 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: 924110 Last Modified Date: 01/06/2015 First Submit Date: 01/06/2015

JEFFREY SMITH, LEAD ENVIRONMENTAL SCIENTIST Data Submitted By: Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Distance (ft.)Site Database(s) EPA ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

EDR ID Number

Contact:

Contact ID: Not reported Year: 2014
Facility Id: 4976676

Contact Type: Tier II Emergency 24 Hour Contact

Contact Name: South Florida Water Management District - Control Room

Contact Title: Not reported 5616826116 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: 5616822516 Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: jesmith@sfwmd.gov

2013 Year: Facility Id: 4484666 Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported 26.435474 Latitude: Longitude: -80.806621 LEPC District: Not reported Not reported Counties: SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: 924110 Last Modified Date: 01/02/2014 First Submit Date: 01/02/2014

Data Submitted By: JEFFREY SMITH, LEAD ENVIRONMENTAL SCIENTIST Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2013
Facility Id: 4484666

Contact Type: Owner / Operator Jeffrey Smith Contact Name: Contact Title: Not reported Contact Phone: 5612482451 Not reported Contact 24Hr Phone: Contact Telephone 2: 5616822516 Not reported Contact Telephone 3: Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

rection EDR ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

EPA ID Number

Database(s)

Year: 2012 Facility Id: 4094554 Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported 26.435474 Latitude: Longitude: -80.806621 LEPC District: Not reported Not reported Counties: SERC: Not reported Not reported Program Level: PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: 924110 03/04/2013 Last Modified Date: First Submit Date: 02/22/2013

Data Submitted By: JEFFREY SMITH, LEAD ENVIRONMENTAL SCIENTIST Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2012 Facility Id: 4094554

Contact Type: Owner / Operator Contact Name: Jeffrey Smith Contact Title: Not reported Not reported Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Not reported Contact Telephone 5: Contact Telephone 6: Not reported

Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2012 Facility Id: 4094554

Contact Type: Tier II Emergency 24 Hour Contact

Contact Name: South Florida Water Management District - Control Room

Contact Title: Not reported Contact Phone: Not reported Not reported Contact 24Hr Phone: Contact Telephone 2: Not reported Not reported Contact Telephone 3: Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Year: 2011

Direction EDR ID Number
Distance

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

EPA ID Number

Database(s)

Facility Id: 3986264 Active Date: Not reported Not reported Inactive Date: Not reported Sale Pending: Original Date: Not reported PLOT Source: Not reported 26.43555 Latitude: -80.806660 Longitude: LEPC District: Not reported Counties: Not reported SERC: Not reported Not reported Program Level: Not reported PRIME: SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Last Modified Date: 11/12/2012 First Submit Date: 11/09/2012

Data Submitted By: Florida Division of Emergency Management

Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Contact ID: Not reported Year: 2011 Facility Id: 3986264

Contact Type: Tier II Emergency Contact

Jeffrev Smith Contact Name: Contact Title: Not reported Contact Phone: 5616822516 Not reported Contact 24Hr Phone: Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011 Facility Id: 3986264

Contact Type: Tier II Secondary 24 Hour Contact

Contact Name: Jeffrey Smith Contact Title: Not reported Contact Phone: 5616822516 Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Not reported Contact Telephone 4: Contact Telephone 5: Not reported Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011
Facility Id: 3986264

Contact Type: Tier II Secondary Contact

Contact Name: Jeffrey Smith

Distance
Distance (ft.)Site Database(s) EPA ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

EDR ID Number

Contact Title: Not reported 5616822516 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Not reported Contact Telephone 5: Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011 Facility Id: 3986264

Contact Type: Tier II Emergency 24 Hour Contact

Contact Name: Jeffrey Smith Contact Title: Not reported Contact Phone: 5616822516 Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: jesmith@sfwmd.gov

Year: 2010 Facility Id: Not reported Active Date: Not reported Inactive Date: Not reported Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported 26.43555 Latitude: Longitude: -80.81 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported Not reported Last Modified Date: First Submit Date: Not reported Data Submitted By: Not reported Company Name: Not reported Comments: Not reported

Chemical Code: 68476346

Chemical Name: Diesel Fuel Oil (low sulfur)

Chemical State: LIQUID

Location Name: Fuel Supply Tanks

Container Code: A
Pressure Code: 1

Distance (ft.)Site Database(s) EPA ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

EDR ID Number

Temperature Code: 4
Average Quantity: 682000
Maximum Quantity: 682000
Days On Site: 365

Year: Not reported
Facility Id: Not reported
Active Date: Not reported
Inactive Date: Not reported
Sale Pending: False
Original Date: Not reported

PLOT Source: geocoded using batchgeocode.com 07/06/07

Latitude: 27.186100 Longitude: -80.854600

LEPC District: 7

Counties: Polk,Okeechobee,Highlands,Hardee,DeSoto,

SERC: 34346
Program Level: Not reported
PRIME: 26207
SIC Code: 9511
SIC Code 2: Not reported
NAICS Code: 92411

Other Chemical Data:

 Report Year:
 2006

 Tier 2 Report ID:
 101673

 Chemical ID:
 280476

 CAS Number:
 68476346

Chemical Name: DIESEL FUEL OIL (HIGH SULFUR)

Chemical Date: 2/6/2008

Average Amount: 5

Maximum Amount: 682000

Location ID: 467907

Chemical State: LIQUID

Mixture: True

Mixture Percent: .00

Containter: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE

Average Amount: 5

Maximum Amount: 682000

Days on Site: 365

Site Plan: False

Site Plan Document: Not reported

Private Location: False

Location: AST AT PUMP STATION

 Report Year:
 2005

 Tier 2 Report ID:
 98954

 Chemical ID:
 268930

 CAS Number:
 68476346

Chemical Name: DIESEL FUEL OIL (HIGH SULFUR)

Chemical Date: 6/21/2007
Average Amount: 5
Maximum Amount: 682000
Location ID: 453655
Chemical State: LIQUID

ection EDR ID Number

Database(s) EPA ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT- PUMP STATION G-372 (Continued)

S108634900

Mixture: True Mixture Percent: .00

Containter: A - ABOVE GROUND TANK
Pressure: 1 - AMBIENT PRESSURE
Temperature: 4 - AMBIENT TEMPERATURE

Average Amount: 5

Maximum Amount: 682000

Days on Site: 365

Site Plan: False

Site Plan Document: Not reported

Private Location: False

Location: 5 - AST'S AT PUMP STATION

Company Info:

Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Company Address: 3301 GUN CLUB ROAD
Company City,St,Zip: WEST PALM BEACH, FL 33406

Company Phone: 561-682-2516
Company Fax: Not reported
Company Email: Not reported
FEI Number: 596015290

Comany Contact Name: JEFFERY A. SMITH

Cmpny Contact Phone:Not reportedReduced Fees:FalseExempt Fees:FalseElectronic Filing:TrueEmployee:0Comments:GOV'T

22 COMMUNICATIONS LINE INSTALL - GADSDEN CO - PROJ NO US 27 PALM BEACH, FL 33480

FINDS 1014882300 ECHO N/A

FINDS:

Registry ID: 110044262721

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1014882300

Distance (ft.)Site

Direction EDR ID Number

COMMUNICATIONS LINE INSTALL - GADSDEN CO - PROJ NO. 1E841014 (Continued)

1014882300

EPA ID Number

Registry ID: 110044262721

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110044262721

22 LUCKY START TRANSPORTATION SPILL US HWY 27 23 MI NORTH OF I-595 SOUTH BAY, FL 00053

LUST U004147441 TANKS N/A

Database(s)

LUST:

Region: STATE
Facility Id: 9803539
Facility Status: CLOSED

Facility Type: Q - Emergency Response Spill Site

Facility Phone:
Not reported
Facility Cleanup Rank:
Not reported
Not reported
Southeast District
Lat/Long (dms):
Southeast District
26 26 8.38 / 80 36 56.94

Section: Not reported Township: Not reported Range: Not reported Feature: Not reported Method: **AGPS** Datum: Not reported Score: Not reported Score Effective Date: Not reported Score When Ranked: Not reported Operator: Not reported Name Update: Not reported Address Update: Not reported

Discharge Cleanup Summary:

Discharge Date: 05/25/1999
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/06/2001 Cleanup Work Status: 02/06/2001

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description: truck spill
Eligibility Indicator: I - INELIGIBLE
Site Manager: GIBSON_D
Site Mgr End Date: 05/06/2005

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Contaminated Media:

Discharge Date: 05/25/1999
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/06/2001 Cleanup Work Status: 02/06/2001

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description: truck spill
Elig Indicator: I - INELIGIBLE
Site Manager: GIBSON_D
Site Mgr End Date: 05/06/2005

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: Not reported
Contaminated Monitoring Well: Not reported
Contaminated Soil: Yes

Distance (ft.)Site Database(s) **EPA ID Number**

LUCKY START TRANSPORTATION SPILL (Continued)

U004147441

EDR ID Number

Contaminated Surface Water: Not reported Contaminated Ground Water: Not reported D - Vehicular Diesel Pollutant: Pollutant Other Description: TRUCK SPILL

Gallons Discharged: 100

Task Information:

SED District: Facility ID: 9803539 Facility Status: CLOSED

Facility Type: Q - Emergency Response Spill Site -

PALM BEACH County:

County ID:

50 Cleanup Eligibility Status:

Source Effective Date: 02-06-2001 Discharge Date: 05-25-1999

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02-06-2001

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 01-25-2001 SRC Review Date: 01-29-2001 SRC Completion Status: A - APPROVED SRC Issue Date: 02-06-2001 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: GIBSON D Site Mgr End Date: 05-06-2005

PCLP50 - Palm Beach County Tank Office:

SR Task ID: 76117 SR Cleanup Responsible: SR Funding Eligibility Type:

SR Actual Cost: Not reported SR Completion Date: 06-30-1999 SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal:

SR Free Product Removal: Not reported

SR Soil Tonnage Removed: 545

SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: 67261

SA Cleanup Responsible: SA Funding Eligibility Type:

SA Actual Cost: Not reported SA Completion Date: Not reported SA Payment Date: Not reported RAP Task ID: 64131 RAP Cleanup Responsible ID: RAP Funding Eligibility Type:

RAP Actual Cost: Not reported **RAP Completion Date:** Not reported **RAP Payment Date:** Not reported

LUCKY START TRANSPORTATION SPILL (Continued)

U004147441

Database(s)

FINDS

ECHO

1008160818

N/A

EDR ID Number

EPA ID Number

RAP Last Order Approved: Not reported RA Task ID: 62409 RA Cleanup Responsible: RA Funding Eligibility Type: RA Years to Complete: 0

RA Actual Cost: Not reported

Click here for Florida Oculus:

TANKS:

Facility ID: 9803539 Facility Phone: Not reported Facility Status: CLOSED Q

Facility Type:

Type Description: **Emergency Response Spill Site**

Dep Co: Р

Lat/Lon Deg Min Sec: 26 26 4.55999999 / 80 37 0.01

23 **G-373 SPILLWAY STRUCTURE** MIAMI CANAL 18 MI S OF LAKE HA

LAKE HARBOR, FL 33493

FINDS:

Registry ID: 110020552490

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1008160818 Registry ID: 110020552490

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110020552490

G - 373 SPILLWAY STRUCTURE 23 **MIAMI CANAL 18 MI S OF LAKE HARBOR** LAKE HARBOR, FL 33493

FINDS:

Registry ID: 110035457485

Environmental Interest/Information System

Florida Environmental System Today Application (FIESTA) Data

FINDS

1011414458

N/A

Direction EDR ID Number

G - 373 SPILLWAY STRUCTURE (Continued)

1011414458

EPA ID Number

Maintenance (FDM) system maintains entity, environmental interest and affiliation data for the State of Florida.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

24 WOERNER TURF TRACT 2 US HWY 27 SOUTH BAY, FL 33438 RESP PARTY S117361491 DWM CONTAM N/A

Database(s)

RESP PARTY:

District: Southeast District

Site Id: 287086 Project Id: 311600 CLOSED Site Status: Project Manager: WIERZBICKI_P OGC Case Number: Not reported 03/30/2004 Initial Date Received: Contaminants: Not reported Offsite Cont Impact: Not reported Priority Score: Not reported NAD83 Datum: DPHO Method ID: Feature: Not reported **FACILITY** Object Of Interest: Proximity To Object: **APPRX**

Collect Username: RUECKERT_W

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR
Collect Date: 03/28/2012
Map Series Used: IMAGERY_04_09

Map Source Scale:85000Interpolation Scale:85000Coordinate Accuracy Id:3Verify Method Id:DPHOVerifier Username:RUECKERT_W

Verifier Affiliation: DEPARTMENT OF ENVIRONMENTAL PROTECTION

Verifying Program Id: CR
Verification Date: 03/28/2012
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 25 20.1186000 / 80 38 37.1747999

DWM CONTAM:

287086 Program Site Id: Lat DD: Not reported Not reported Lat MM: Lat SS: Not reported Long DD: Not reported Long MM: Not reported Long SS: Not reported Office/ District: SED

Program Area: Responsible Party

EDR ID Number

Database(s) EPA ID Number

WOERNER TURF TRACT 2 (Continued)

S117361491

Offsite Contamination: Not reported WIERZBICKI_P Project Manager: Priority Score: Not reported Remediation Status: OPEN Date Known Offsite: Not reported Not reported Datum: Method: Not reported Program Eligible: Not reported Ineligible: Not reported

25 SOUTH FLORIDA WATER MANAGEMENT DISTRICT - CABASSA US 27, 6.7 MILES NORTH OF BROWARD COUNTY LINE SOUTH BAY, FL

TIER 2 S111751162 N/A

TIER 2:

Year: 2010 Facility Id: Not reported Not reported Active Date: Not reported Inactive Date: Sale Pending: Not reported Original Date: Not reported PLOT Source: Not reported 26.414167 Latitude: Longitude: 80.6 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported Not reported SIC Code 2: NAICS Code: Not reported Last Modified Date: Not reported Not reported First Submit Date: Data Submitted By: Not reported Company Name: Not reported Not reported Comments:

Chemical Code: 68476346

Chemical Name: Diesel Fuel Oil (low sulfur)

Chemical State: LIQUID

Location Name: Pump Station Storage Tank

Container Code: A
Pressure Code: 1
Temperature Code: 4
Average Quantity: 15000
Maximum Quantity: 15000
Days On Site: 365

istance

25 SOUTH FLORIDA WATER MANAGEMENT DISTRICT - CABASSA US HIGHWAY 27 - 6 1/2 MILES NORTH OF BROWARD COUNTY LINE SOUTH BAY, FL

TIER 2 S113388211 N/A

Database(s)

EDR ID Number

EPA ID Number

TIER 2:

2011 Year: 3995092 Facility Id: Active Date: Not reported Not reported Inactive Date: Sale Pending: Not reported Original Date: Not reported Not reported PLOT Source: 26.414167 Latitude: Longitude: -80.600555 LEPC District: Not reported Counties: Not reported SERC: Not reported Program Level: Not reported PRIME: Not reported SIC Code: Not reported SIC Code 2: Not reported NAICS Code: Not reported 11/12/2012 Last Modified Date: 11/09/2012 First Submit Date:

Data Submitted By: Florida Division of Emergency Management

Company Name: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Comments: Not reported

Contact:

Facility Id:

Contact ID: Not reported Year: 2011 Facility Id: 3995092

Contact Type: Tier II Emergency Contact

Contact Name: Jeffrey Smith Contact Title: Not reported 5616822516 Contact Phone: Contact 24Hr Phone: Not reported Not reported Contact Telephone 2: Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011

Contact Type: Tier II Secondary 24 Hour Contact

3995092

Contact Name: Jeffrey Smith Not reported Contact Title: 5616822516 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Distance (ft.)Site Database(s) EPA ID Number

SOUTH FLORIDA WATER MANAGEMENT DISTRICT - CABASSA STATION (Continued)

S113388211

EDR ID Number

Contact ID: Not reported Year: 2011
Facility Id: 3995092

Contact Type: Tier II Secondary Contact

Contact Name: Jeffrey Smith Contact Title: Not reported Contact Phone: 5616822516 Not reported Contact 24Hr Phone: Contact Telephone 2: Not reported Contact Telephone 3: Not reported Not reported Contact Telephone 4: Contact Telephone 5: Not reported Contact Telephone 6: Not reported Contact Email: jesmith@sfwmd.gov

Contact ID: Not reported Year: 2011 Facility Id: 3995092

Contact Type: Tier II Emergency 24 Hour Contact

Contact Name: Jeffrey Smith Contact Title: Not reported 5616822516 Contact Phone: Contact 24Hr Phone: Not reported Contact Telephone 2: Not reported Contact Telephone 3: Not reported Contact Telephone 4: Not reported Contact Telephone 5: Not reported Contact Telephone 6: Not reported

Contact Email: jesmith@sfwmd.gov

25 FL. CRYSTALS CABASSA FARM PS C-17

DWM CONTAM S113720433 CLEANUP SITES N/A RESP PARTY

SOUTH BAY, FL 53

DWM CONTAM:

Program Site Id: 287125 Lat DD: Not reported Lat MM: Not reported Lat SS: Not reported Long DD: Not reported Long MM: Not reported Long SS: Not reported Office/ District: SED

Responsible Party Program Area: Offsite Contamination: Not reported WIERZBICKI_P Project Manager: Priority Score: Not reported Remediation Status: **OPEN** Date Known Offsite: Not reported Datum: Not reported Method: Not reported Program Eligible: Not reported Ineligible: Not reported

Direction EDR ID Number

FL. CRYSTALS CABASSA FARM PS C-17 (Continued)

S113720433

EPA ID Number

Database(s)

CLEANUP SITES:

DEP Cleanup Site Key: 50439398

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780

Source Database Id: COM_287125

CPAC Program Area Id: CU CLLC Cleanup Category Key: OTHCU RSC2 Remediation Status Key: **PENDING** Data Load Date: 08/24/2017 OC3 Office Id: **SED** Not reported Physical Address Line 2: OIC Object Of Interest Id: CAP_R **PROMF** PC2 Proximity Id: Calc Coordinates Accuracy Level Id: 3

CMC2 Coordinate Method Id: Digital Aerial Photography With Ground Control

DC4 Datum Id: North American Datum of 1983

VSC1 Verification Status: REVIEWED
Collect Username: WILLIAMS_CA
Collect Date: 11/23/2010

Collect Affiliation: Florida Department of Environmental Protection

Map Source: 2004_DOQQ
Map Source Scale: 4618
Interpolation Scale: Not reported
Verifier Username: WILLIAMS_CA

Verifier Affiliation: Florida Department of Environmental Protection

Verification Date: 11/23/2010

Verified Coordinate Method Id: Digital Aerial Photography With Ground Control

287125

Source Database Name Code: COMET
CMC2 Coordinate Method ID Code: DPHO
DC4 Datum ID Code: NAD83
Verified Coordinate Method ID CodeDPHO
Comments: Not reported

Latitude/Longitude (deg/min/sec): 26 24 53.1824 / 1.4238 80 36

RESP PARTY:

Site Id:

District: Southeast District

Project Id: 311638 Site Status: **INACTIVE** Project Manager: WIERZBICKI_P OGC Case Number: Not reported Initial Date Received: 09/19/2002 Not reported Contaminants: Offsite Cont Impact: Not reported Priority Score: Not reported Datum: NAD83 Method ID: **DPHO** Feature: Not reported CAP_RAP SITE Object Of Interest: Proximity To Object: **PROMF** Collect Username: WILLIAMS_CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR
Collect Date: 11/23/2010
Map Series Used: 2004_DOQQ
Map Source Scale: 4618

Direction EDR ID Number
Distance

FL. CRYSTALS CABASSA FARM PS C-17 (Continued)

S113720433

EPA ID Number

Database(s)

Interpolation Scale: 4618
Coordinate Accuracy Id: 3
Verify Method Id: DPHO
Verifier Username: WILLIAMS_CA

Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: CR
Verification Date: 11/23/2010
Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Decode for V_Method: Digital Aerial Photography With Ground Control

Latitude/Longitude (deg/min/sec): 26 24 53.1824000 / 80 36 1.4238

26 HADLEY, CABASSA #51 FARMS

DWM CONTAM S113720694 CLEANUP SITES N/A RESP PARTY

SOUTH BAY, FL 53

DWM CONTAM:

287117 Program Site Id: Lat DD: Not reported Lat MM: Not reported Lat SS: Not reported Long DD: Not reported Long MM: Not reported Long SS: Not reported Office/ District: **SED**

Program Area: Responsible Party Not reported Offsite Contamination: WIERZBICKI_P Project Manager: Priority Score: Not reported Remediation Status: **OPEN** Date Known Offsite: Not reported Not reported Datum: Method: Not reported Program Eligible: Not reported Ineligible: Not reported

CLEANUP SITES:

DEP Cleanup Site Key: 50440350

Source Database Name: Compliance and Enforcement Tracking - Responsible Party waste cleanup

under 62-780

Source Database Id: COM_287117

CPAC Program Area Id: CU CLLC Cleanup Category Key: OTHCU RSC2 Remediation Status Key: **PENDING** Data Load Date: 08/24/2017 OC3 Office Id: SED Physical Address Line 2: Not reported OIC Object Of Interest Id: CAP_R **CENTR** PC2 Proximity Id: Calc Coordinates Accuracy Level Id: 3

CMC2 Coordinate Method Id: Digital Aerial Photography With Ground Control

DC4 Datum Id: North American Datum of 1983

VSC1 Verification Status: REVIEWED
Collect Username: WILLIAMS_CA
Collect Date: 11/23/2010

MAP FINDINGS

Map ID Direction Distance

Distance (ft.)Site Database(s) **EPA ID Number**

HADLEY, CABASSA #51 FARMS (Continued)

S113720694

EDR ID Number

Collect Affiliation: Florida Department of Environmental Protection

2004_DOQQ Map Source: 4618 Map Source Scale: Not reported Interpolation Scale: Verifier Username: WILLIAMS_CA

Florida Department of Environmental Protection Verifier Affiliation:

Verification Date: 11/23/2010

Verified Coordinate Method Id: Digital Aerial Photography With Ground Control

Source Database Name Code: COMET CMC2 Coordinate Method ID Code: DPHO DC4 Datum ID Code: NAD83 Verified Coordinate Method ID CodeDPHO Comments: Not reported

Latitude/Longitude (deg/min/sec): 26 24 51.5519 / 56.0999 80 37

RESP PARTY:

District: Southeast District

Site Id: 287117 Project Id: 311632 Site Status: **INACTIVE** WIERZBICKI_P Project Manager: OGC Case Number: Not reported Initial Date Received: 01/23/2002

Contaminants: CAP Fram 21 Hadley, Cabassa 51, Farm 15 &WPM Farms

Offsite Cont Impact: Not reported Priority Score: Not reported NAD83 Datum: Method ID: **DPHO** Feature: Not reported CAP_RAP SITE Object Of Interest: Proximity To Object: **CENTR** Collect Username: WILLIAMS CA

Collect Affiliation: Florida Department of Environmental Protection

Collect Program Id: CR 11/23/2010 Collect Date: 2004_DOQQ Map Series Used: Map Source Scale: 4618 Interpolation Scale: 4618 Coordinate Accuracy Id: 3 Verify Method Id: DPHO

Verifier Username:

WILLIAMS CA Verifier Affiliation: Florida Department of Environmental Protection

Verifying Program Id: Verification Date: 11/23/2010 Decode for District: Southeast District

Decode for Datum: North American Datum of 1983

Decode for Method: Digital Aerial Photography With Ground Control

Decode for Off Site COC: Not reported

Digital Aerial Photography With Ground Control Decode for V_Method:

26 24 51.5519000 / 80 37 56.0998999 Latitude/Longitude (deg/min/sec):

irection EDR ID Number

27 SR 25/ US 27 INTELLIGENT TRAFFIC SYSTEMS (ITS) PRO UNKNOWN JACKSONVILLE, FL 32204

FINDS 1016388034 ECHO N/A

EPA ID Number

Database(s)

FINDS:

Registry ID: 110055212602

Environmental Interest/Information System

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

<u>Click this hyperlink</u> while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid: 1016388034 Registry ID: 110055212602

DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110055212602

27 CLASSIC TURF FARM #2 RT 27-19 MI S OF SOUTH BAY SOUTH BAY, FL 33493

LUST S102533740 AST N/A

LUST:

Region: STATE
Facility Id: 8514657
Facility Status: OPEN
Facility Type: M - Agricultural
Facility Phone: (561)996-1538
Facility Cleanup Rank: 12937

District: Southeast District
Lat/Long (dms): 26 24 32.43 / 80 35 33.88

 Section:
 025

 Township:
 46S

 Range:
 37E

Feature: Not reported Method: AGPS Datum: 0 Score: 6

Score Effective Date: 11/04/1997

Score When Ranked:

Operator: BILLY BREWER
Name Update: 11/25/2003
Address Update: Not reported

Discharge Cleanup Summary:

Discharge Date: 04/20/1989
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED
Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 06/19/2008 Cleanup Work Status: 06/19/2008

MAP FINDINGS

Map ID
Direction
EDR ID Number

Distance
Distance (ft.)Site
Database(s) EPA ID Number

CLASSIC TURF FARM #2 (Continued)

S102533740

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Not reported

E - ELIGIBLE

GIBSON_D

GIBSON_D

06/19/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Petroleum Cleanup Program Eligibility:

Facility ID: 8514657
Discharge Date: 20-APR-89
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 06/19/2008 Cleanup Work Status: 06/19/2008

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description: Not reported Application Received Date: 13-SEP-90

Cleanup Program: A - ABANDONED TANK RESTORATION PROGRAM

Eligibility Status: 06-MAR-91
Elig Status Date: 06-MAR-91
Letter Of Intent Date: 09/13/1990
Redetermined: No
Inspection Date: 11/28/1990

Site Manager: GIBSON_D
Site Mgr End Date: 06/19/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Deductible Amount: 500
Deductible Paid To Date: 500
Co-Pay Amount: 0
Co-Pay Paid To Date: 0

Cap Amount: Not reported

Contaminated Media:

Discharge Date: 04/20/1989
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 06/19/2008
Cleanup Work Status: COMPLETED

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description:

Elig Indicator:

Site Manager:

Site Mgr End Date:

Not reported

E - ELIGIBLE

GIBSON_D

GIBSON_D

06/19/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: 0
Contaminated Monitoring Well: No
Contaminated Soil: Yes
Contaminated Surface Water: No
Contaminated Ground Water: No

Pollutant: D - Vehicular Diesel
Pollutant Other Description: Not reported
Gallons Discharged: Not reported

Task Information:

District: SED
Facility ID: 8514657
Facility Status: OPEN

MAP FINDINGS

Map ID Direction Distance

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #2 (Continued)

S102533740

EDR ID Number

Facility Type: M - Agricultural - County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: E

Source Effective Date: 06-02-2008 Discharge Date: 04-20-1989

Cleanup Required: R - CLEANUP REQUIRED
Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 06-19-2008

SRC Action Type: SRCR - SITE REHABILITATION COMPLETION REPORT

 SRC Submit Date:
 04-10-2008

 SRC Review Date:
 04-11-2008

 SRC Completion Status:
 A - APPROVED

 SRC Issue Date:
 06-19-2008

SRC Comment: FREE PRODUCT 1/3/95

Cleanup Work Status: COMPLETED
Site Mgr: GIBSON_D
Site Mgr End Date: 06-19-2008

Tank Office: PCLP50 - Palm Beach County

SR Task ID: 84358 SR Cleanup Responsible: -SR Funding Eligibility Type: -

SR Actual Cost:

SR Completion Date:

SR Payment Date:

SR Oral Date:

SR Written Date:

Not reported

Not reported

Not reported

Not reported

Not reported

SR Soil Removal:

SR Free Product Removal: Not reported SR Soil Tonnage Removed: 15805 Not reported SR Soil Treatment: SR Other Treatment: 2596.60 9/28/07 SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: 39301

SA Cleanup Responsible: SA Funding Eligibility Type: -

 SA Actual Cost:
 \$68,625.94

 SA Completion Date:
 02-04-1991

 SA Payment Date:
 08-17-1992

 RAP Task ID:
 39302

RAP Cleanup Responsible ID: RP - RESPONSIBLE PARTY

RAP Funding Eligibility Type: -

RAP Actual Cost:
RAP Completion Date:
RAP Payment Date:
RAP Last Order Approved:
RATask ID:
Not reported
Not reported
Not reported
Not reported
39303

RA Cleanup Responsible: RP - RESPONSIBLE PARTY

RA Funding Eligibility Type: - RA Years to Complete: 3

RA Actual Cost: Not reported

Distance (ft.)Site Database(s) **EPA ID Number**

CLASSIC TURF FARM #2 (Continued)

S102533740

EDR ID Number

Click here for Florida Oculus:

AST:

Facility ID: 8514657 Facility Status: **OPEN** Type Description: Agricultural Facility Phone: (561) 996-1538

DEP Contractor Own:

Region: STATE Positioning Method: **AGPS**

Lat/Long (dms): 26 24 29 / 80 35 37

Owner:

Owner Id: 44684

WOERNER SOUTH INC Owner Name: 275 SW 3RD AVE Owner Address: Owner Address 2: Not reported

Owner City, St, Zip: SOUTH BAY, FL 33493 Owner Contact: DAVE WILLIAMS Owner Phone: (561) 996-8500

Tank Id:

Status: Removed 31-JAN-1990 Status Date: Install Date: Not reported Leaded gas Substance: Content Description: Leaded Gas

Gallons: 2000

ABOVEGROUND Tank Location:

Tank Id: 2

Status: Removed Status Date: 31-JUL-1990 Not reported Install Date: Fuel oil-on site heat Substance: Fuel Oil - Onsite Heat Content Description:

Gallons: 3000

ABOVEGROUND Tank Location:

Tank Id: 3

Status: Removed Status Date: Not reported Install Date: Not reported Leaded gas Substance: Leaded Gas Content Description:

Gallons: 3000

ABOVEGROUND Tank Location:

Tank Id:

Status: Removed Status Date: 31-JUL-1990 Not reported Install Date: Waste oil Substance: Content Description: Waste Oil 1500 Gallons:

ABOVEGROUND Tank Location:

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #2 (Continued)

S102533740

EDR ID Number

Tank ld: 5

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Waste oil
Content Description: Waste Oil
Gallons: 1000

Tank Location: ABOVEGROUND

Tank ld: 6

Status: Removed
Status Date: 31-JUL-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 3000

Tank Location: ABOVEGROUND

Tank ld: 7

Status: Removed
Status Date: 31-JAN-1990
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat
Gallons: 4000

Tank Location: ABOVEGROUND

Tank Id: 8

Status: Removed
Status Date: 31-JAN-1990
Install Date: Not reported
Substance: Unleaded gas
Content Description: Unleaded Gas

Gallons: 4000

Tank Location: ABOVEGROUND

Tank ld: 9

Status: Removed
Status Date: Not reported
Install Date: Not reported
Substance: Fuel oil-on site heat
Content Description: Fuel Oil - Onsite Heat

Gallons: 2000

Tank Location: ABOVEGROUND

Tank ld: 11

Status: Removed
Status Date: 31-MAY-1992
Install Date: 01-JUL-1989
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 1000

Tank Location: ABOVEGROUND

Tank Id: 12 Status: Removed Status Date: 31-MAY-1992

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #2 (Continued)

Install Date: 01-JUL-1989
Substance: Unleaded gas
Content Description: Unleaded Gas

Gallons: 2000

Tank Location: ABOVEGROUND

Tank ld: 3

Status: Removed
Status Date: 31-JAN-1994
Install Date: 01-JUL-1977

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 3000

Tank Location: ABOVEGROUND

 Tank Id:
 14

 Status:
 Removed

 Status Date:
 31-JAN-1994

 Install Date:
 01-JUL-1977

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 3000

Tank Location: ABOVEGROUND

Tank Id: 15
Status: Removed
Status Date: 01-JAN-2004
Install Date: 01-MAY-1992
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 10000

Tank Location: ABOVEGROUND

Tank Id: 16
Status: In service
Status Date: 01-JAN-2004
Install Date: 01-MAY-1992
Substance: New/lube oil
Content Description: New/Lube Oil

Gallons: 250

Tank Location: ABOVEGROUND

Tank Id: 17
Status: In service
Status Date: Not reported
Install Date: 01-MAY-1992
Substance: New/lube oil
Content Description: New/Lube Oil
Gallons: 250

Tank Location: ABOVEGROUND

Tank Id: 18
Status: In service
Status Date: Not reported
Install Date: 01-MAY-1992
Substance: Waste oil
Content Description: Waste Oil

EDR ID Number

S102533740

Distance (ft.)Site Database(s) EPA ID Number

CLASSIC TURF FARM #2 (Continued)

S102533740

EDR ID Number

Gallons: 500

Tank Location: ABOVEGROUND

Tank Id: 19
Status: Removed
Status Date: 01-JAN-2004
Install Date: 01-MAY-1992
Substance: Unleaded gas
Content Description: Unleaded Gas

Gallons: 1000

Tank Location: ABOVEGROUND

 Tank Id:
 13R1

 Status:
 Removed

 Status Date:
 01-SEP-2007

 Install Date:
 01-DEC-1993

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 2000

Tank Location: ABOVEGROUND

 Tank Id:
 14R1

 Status:
 Removed

 Status Date:
 01-SEP-2007

 Install Date:
 01-DEC-1993

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 2000

Tank Location: ABOVEGROUND

Tank Id: 20
Status: Removed
Status Date: 01-JAN-2004
Install Date: 01-SEP-1993
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 1500

Tank Location: ABOVEGROUND

 Tank Id:
 21

 Status:
 Removed

 Status Date:
 01-JAN-2004

 Install Date:
 01-JUN-1996

Substance: Misc. petrol-based product Content Description: Misc Petrol-Based Product

Gallons: 1000

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

ection EDR ID Number

Database(s) EPA ID Number

U001963256

N/A

UST

27 FL DEPT OF TRANSPORTATION-OLD SUGAR MILL BLDG 6 MI N OF BROWARD/WPB CNTY LINE US 27 WEST PALM BEACH, FL 00053

UST:

Facility Id: 9401056
Facility Status: CLOSED
Type Description: State Government
Facility Phone: Not reported

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 33 41 / 80 35 3

Owner:

Owner Id: 24716

Owner Name: FL DEPT OF TRANSPORTATION DIST IV

Owner Address: 3400 W COMMERCIAL BLVD
Owner Address 2: ATTN: DIST FLEET MGR
Owner City,St,Zip: FORT LAUDERDALE, FL 33309

Owner Contact: RICHARD PLAISIR
Owner Phone: (954) 777-4216

Tank Info:

Tank Id:

Status: Removed
Status Date: 01-AUG-1993
Install Date: Not reported

Substance: Unknown/Not reported Content Description: Unknown/Not Reported

Gallons: 2000 Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: P

Tank ld: 2

Status: Removed
Status Date: 01-AUG-1993
Install Date: Not reported

Substance: Unknown/Not reported Content Description: Unknown/Not Reported

Gallons: 2000 Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: P

Click here for Florida Oculus:

28 ROTH FARMS INC-GRESSINGER FARM E SIDE OF BROWNS FARM RD-9 MI S OF SR880 BELLE GLADE, FL 33430

LUST U003656904 UST N/A AST DWM CONTAM

LUST:

Region: STATE
Facility Id: 8623294
Facility Status: OPEN

Facility Type: C - Fuel user/Non-retail

Facility Phone: Not reported Facility Cleanup Rank: 14364

Map ID
Direction
EDR ID Number
Distance

Distance (ft.)Site Database(s) EPA ID Number

ROTH FARMS INC-GRESSINGER FARM (Continued)

District: Southeast District

Lat/Long (dms): 26 32 26.3232 / 80 34 2.9517

 Section:
 020

 Township:
 45S

 Range:
 38E

 Feature:
 Not reported

 Method:
 AGPS

 Datum:
 0

 Score:
 5

Score Effective Date: 11/04/1997

Score When Ranked: 5

Operator: Not reported Name Update: Not reported Address Update: 02/03/2000

Discharge Cleanup Summary:

Discharge Date: 03/26/1991
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/17/2012 Cleanup Work Status: 02/17/2012

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Not reported

E - ELIGIBLE

TRUEBLOOD_K

02/17/2012

Tank Office: PCTM5 - PETROLEUM CLEANUP TEAM 5

Petroleum Cleanup Program Eligibility:

Facility ID: 8623294
Discharge Date: 26-MAR-91
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/17/2012 Cleanup Work Status: 02/17/2012

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description: Not reported Application Received Date: 07-JUL-92

Cleanup Program: A - ABANDONED TANK RESTORATION PROGRAM

Eligibility Status: 11-DEC-92
Elig Status Date: 11-DEC-92
Letter Of Intent Date: 07/07/1992
Redetermined: No
Inspection Date: 04/29/1991
Site Manager: TRUEBLOOD_K

Site Mgr End Date: 02/17/2012
Tank Office: PCTM5 - PETROLEUM CLEANUP TEAM 5

Deductible Amount: 500
Deductible Paid To Date: 500
Co-Pay Amount: 0
Co-Pay Paid To Date: 0

Cap Amount: Not reported

Contaminated Media:

Discharge Date: 03/26/1991
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED

U003656904

Distance (ft.)Site Database(s) EPA ID Number

ROTH FARMS INC-GRESSINGER FARM (Continued)

U003656904

EDR ID Number

Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02/17/2012 Cleanup Work Status: 02/17/2012

Information Source: A - ABANDONED TANK RESTORATION

Other Source Description:

Elig Indicator:

Site Manager:

Site Mgr End Date:

Not reported

E - ELIGIBLE

TRUEBLOOD_K

02/17/2012

Tank Office: PCTM5 - PETROLEUM CLEANUP TEAM

Contaminated Drinking Wells: 0
Contaminated Monitoring Well: No
Contaminated Soil: Yes
Contaminated Surface Water: No
Contaminated Ground Water: No

Pollutant: D - Vehicular Diesel

Pollutant Other Description: Not reported Gallons Discharged: Not reported

Task Information:

District: SED
Facility ID: 8623294
Facility Status: OPEN

Facility Type: C - Fuel user/Non-retail -

County: PALM BEACH

County ID: 50
Cleanup Eligibility Status: E

Source Effective Date: 02-16-2012 Discharge Date: 03-26-1991

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 02-17-2012

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 09-26-2011 SRC Review Date: 10-26-2011 A - APPROVED SRC Completion Status: SRC Issue Date: 02-17-2012 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: TRUEBLOOD_K Site Mgr End Date: 02-17-2012 Tank Office: PCTM5 - Team 5

SR Task ID: 37712

SR Cleanup Responsible: RP - RESPONSIBLE PARTY

SR Funding Eligibility Type:

SR Actual Cost:

SR Completion Date:

SR Payment Date:

SR Oral Date:

SR Written Date:

Not reported

Not reported

Not reported

Not reported

Not reported

SR Written Date:

12-13-1991

SR Soil Removal:

SR Soil Removal: Y
SR Free Product Removal: Y
SR Soil Tonnage Removed: 980

SR Soil Treatment:
SR Other Treatment:
Not reported
SR Alternate Proc Received Date:
SR Alternate Procedure Status:
Not reported
SR Alternate Procedure Status:
Not reported
SR Alternate Procedure Status Date:Not reported
SR Alternate Procedure Comments: Not reported

Distance (ft.)Site Database(s) EPA ID Number

ROTH FARMS INC-GRESSINGER FARM (Continued)

37713

SA Cleanup Responsible: RP - RESPONSIBLE PARTY

SA Funding Eligibility Type:

SA Task ID:

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

37714

RAP Cleanup Responsible ID: RP - RESPONSIBLE PARTY

RAP Funding Eligibility Type:

RAP Actual Cost: Not reported RAP Completion Date: 03-30-1994 RAP Payment Date: Not reported

RAP Last Order Approved: 1994-03-30 00:00:00

RA Task ID: 3771

RA Cleanup Responsible: RP - RESPONSIBLE PARTY

RA Funding Eligibility Type: - RA Years to Complete: 0

RA Actual Cost: Not reported

Click here for Florida Oculus:

UST:

Facility Id: 8623294 Facility Status: OPEN

Type Description: Fuel user/Non-retail
Facility Phone: Not reported
Region: STATE
Positioning Method: AGPS

Lat/Long (dms): 26 24 0 / 80 36 0

Owner:

Owner Id: 18716

Owner Name: ROTH FARMS INC
Owner Address: PO BOX 1300
Owner Address 2: Not reported

Owner City,St,Zip: BELLE GLADE, FL 33430
Owner Contact: DENNIS LECROY

Owner Phone: (561) 996-2991

Tank Info:

Tank Id: 10
Status: Removed
Status Date: 31-DEC-1988
Install Date: 01-AUG-1984
Substance: Vehicular diesel
Content Description: Vehicular Diesel

Gallons: 10000 Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: P

Tank Id: 11
Status: Removed
Status Date: 30-JUN-1988
Install Date: 01-AUG-1984
Substance: Leaded gas
Content Description: Leaded Gas

U003656904

EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

ROTH FARMS INC-GRESSINGER FARM (Continued)

U003656904

EDR ID Number

Gallons: 4000 Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: F

Click here for Florida Oculus:

AST:

Facility ID: 8623294 Facility Status: OPEN

Type Description: Fuel user/Non-retail

Facility Phone: Not reported

DEP Contractor Own: P

Region: STATE Positioning Method: AGPS

Lat/Long (dms): 26 24 0 / 80 36 0

Owner:

Owner Id: 18716

Owner Name: ROTH FARMS INC
Owner Address: PO BOX 1300
Owner Address 2: Not reported

Owner City,St,Zip: BELLE GLADE, FL 33430
Owner Contact: DENNIS LECROY
Owner Phone: (561) 996-2991

Tank Id: 12
Status: In service
Status Date: Not reported
Install Date: 01-JUL-1983
Substance: New/lube oil
Content Description: New/Lube Oil

Gallons: 550

Tank Location: ABOVEGROUND

Click here for Florida Oculus:

DWM CONTAM:

Program Site Id: 8623294 Lat DD: 26 Lat MM: 32 Lat SS: 26.62 Long DD: 80 Long MM: 29 Long SS: 51.55 PCLP50 Office/ District: Program Area: Petroleum Offsite Contamination: U

Project Manager: Not reported

Priority Score: 5

Remediation Status: WAITING
Date Known Offsite: Not reported
Datum: HARN
Method: AGPS

MAP FINDINGS

Map ID Direction Distance

Direction EDR ID Number

Distance (ft.)Site Database(s) EPA ID Number

ROTH FARMS INC-GRESSINGER FARM (Continued)

U003656904

Program Eligible: Yes

Ineligible: Not reported

29 SOUTH FL WTR MGMT DIST-FRMR EAA VILLAGE 5.3 MI N BROWARD CO LINE-WESTSIDE US 27 BOCA RATON, FL 00053 LUST U004218962 TANKS N/A

LUST:

Region: STATE
Facility Id: 9813885
Facility Status: CLOSED

Facility Type: Z - Other Regulated Facility

Facility Phone: (561)682-2516
Facility Cleanup Rank: Not reported
District: Southeast District
Lat/Long (dms): 26 23 47.4 / 80 35 24.72

Section: 31
Township: 46S
Range: 38E
Feature: Not reported
Method: Not reported
Datum: Not reported
Score: Not reported

Score Effective Date:

Score When Ranked:

Operator:

Not reported

Discharge Cleanup Summary:

Discharge Date: 09/24/2013
PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED
Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 01/06/2014 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Not reported

I - INELIGIBLE

GIBSON_D

01/06/2014

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Contaminated Media:

Discharge Date: 09/24/2013
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 01/06/2014 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Elig Indicator:

Site Manager:

Site Mgr End Date:

Not reported

I - INELIGIBLE

GIBSON_D

01/06/2014

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: Not reported Contaminated Monitoring Well: No Contaminated Soil: Yes

Distance (ft.)Site Database(s) EPA ID Number

SOUTH FL WTR MGMT DIST-FRMR EAA VILLAGE (Continued)

U004218962

EDR ID Number

Contaminated Surface Water: No Contaminated Ground Water: No

Pollutant: E - Aviation Gas
Pollutant Other Description: Not reported
Gallons Discharged: 400

Task Information:

District: SED
Facility ID: 9813885
Facility Status: CLOSED

Facility Type: Z - Other Regulated Facility -

50

County: PALM BEACH

County ID:

Cleanup Eligibility Status:

Source Effective Date: 12-04-2013 Discharge Date: 09-24-2013

Cleanup Required: R - CLEANUP REQUIRED
Discharge Cleanup Status: SRCR - SRCR COMPLETE

Disch Cleanup Status Date: 01-06-2014

SRC Action Type: SRCR - SITE REHABILITATION COMPLETION REPORT

SRC Submit Date: 11-27-2013 SRC Review Date: 12-04-2013 SRC Completion Status: A - APPROVED SRC Issue Date: 01-06-2014 SRC Comment: Not reported Cleanup Work Status: COMPLETED GIBSON_D Site Mgr: Site Mgr End Date: 01-06-2014

Tank Office: PCLP50 - Palm Beach County

SR Task ID: 90848
SR Cleanup Responsible: SR Funding Eligibility Type: -

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported SR Other Treatment: Not reported SR Alternate Proc Received Date: Not reported SR Alternate Procedure Status: Not reported SR Alternate Procedure Status Date:Not reported SR Alternate Procedure Comments: Not reported SA Task ID: Not reported

SA Cleanup Responsible: -

SA Funding Eligibility Type: -

SA Actual Cost:

SA Completion Date:

SA Payment Date:

RAP Task ID:

Not reported

Not reported

Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RAP Actual Cost:

RAP Completion Date:

RAP Payment Date:

Not reported

Not reported

Not reported

rection EDR ID Number

SOUTH FL WTR MGMT DIST-FRMR EAA VILLAGE (Continued)

U004218962

EPA ID Number

Database(s)

RA Actual Cost: Not reported

Click here for Florida Oculus:

TANKS:

Facility ID: 9813885
Facility Phone: (561) 682-2516
Facility Status: CLOSED

Facility Type: Z

Type Description: Other Regulated Facility

Dep Co: P

Lat/Lon Deg Min Sec: Not reported

29 SOUTH FL WATER MGMT DIST-FORMER CABASSA FARMS US 27-19 MI SOUTH OF SOUTH BAY SOUTH BAY, FL 33430

LUST U004110007 UST N/A

LUST:

Region: STATE
Facility Id: 9809549
Facility Status: CLOSED

Facility Type: G - State Government
Facility Phone: (561)682-2516
Facility Cleanup Rank: Not reported
District: Southeast District

Lat/Long (dms): 26 23 51.9048 / 80 35 16.2909

Section: Not reported Not reported Township: Not reported Range: Not reported Feature: Method: Not reported Datum: Not reported Score: Not reported Score Effective Date: Not reported Score When Ranked: Not reported Operator: JEFFREY SMITH Name Update: Not reported Address Update: Not reported

Discharge Cleanup Summary:

Discharge Date: 08/31/2007 PCT Discharge Combined: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12/24/2007 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Eligibility Indicator:

Site Manager:

Site Mgr End Date:

Not reported

I - INELIGIBLE

RIAL_S

03/11/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIRONMENTAL RESOURCES MGMT

Distance (ft.)Site Database(s) EPA ID Number

SOUTH FL WATER MGMT DIST-FORMER CABASSA FARMS (Continued)

U004110007

EDR ID Number

Contaminated Media:

Discharge Date: 08/31/2007
Pct Discharge Combined With: Not reported

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12/24/2007 Cleanup Work Status: COMPLETED

Information Source: D - DISCHARGE NOTIFICATION

Other Source Description:

Elig Indicator:

Site Manager:

Site Mgr End Date:

Not reported

I - INELIGIBLE

RIAL_S

03/11/2008

Tank Office: PCLP50 - PALM BEACH CNTY ENVIR

Contaminated Drinking Wells: Not reported

Contaminated Monitoring Well: Yes
Contaminated Soil: No
Contaminated Surface Water: No
Contaminated Ground Water: Yes

Pollutant: H - Generator/Pump Diesel
Pollutant Other Description: 1500 gallon abandoned UST.

Gallons Discharged: Not reported

Task Information:

District: SED
Facility ID: 9809549
Facility Status: CLOSED

Facility Type: G - State Government -

County: PALM BEACH

County ID: 50 Cleanup Eligibility Status: I

Source Effective Date: 11-13-2007 Discharge Date: 08-31-2007

Cleanup Required: R - CLEANUP REQUIRED Discharge Cleanup Status: NFA - NFA COMPLETE

Disch Cleanup Status Date: 12-24-2007

SRC Action Type: NFA - NO FURTHER ACTION

SRC Submit Date: 11-07-2007 SRC Review Date: 11-13-2007 A - APPROVED SRC Completion Status: SRC Issue Date: 12-24-2007 SRC Comment: Not reported Cleanup Work Status: COMPLETED Site Mgr: RIAL_S Site Mgr End Date: 03-11-2008

Tank Office: PCLP50 - Palm Beach County

SR Task ID: Not reported

SR Cleanup Responsible: -

SR Funding Eligibility Type:

SR Actual Cost: Not reported SR Completion Date: Not reported SR Payment Date: Not reported SR Oral Date: Not reported SR Written Date: Not reported SR Soil Removal: Not reported SR Free Product Removal: Not reported SR Soil Tonnage Removed: Not reported SR Soil Treatment: Not reported

Distance
Distance (ft.)Site
Database(s) EPA ID Number

SOUTH FL WATER MGMT DIST-FORMER CABASSA FARMS (Continued)

U004110007

EDR ID Number

SA Actual Cost:
SA Completion Date:
Not reported

RAP Cleanup Responsible ID: - RAP Funding Eligibility Type: -

RAP Actual Cost:
RAP Completion Date:
RAP Payment Date:
RAP Last Order Approved:
RAP Last Order Approved:
RA Task ID:
RA Cleanup Responsible:
RAP Last Order Approved:
RAP Last Order ApproveDesign Ap

RA Funding Eligibility Type:
RA Years to Complete:

0

RA Actual Cost: Not reported

Click here for Florida Oculus:

UST:

Facility Id: 9809549 Facility Status: CLOSED

Type Description:

Facility Phone:

Region:

Positioning Method:

Lat/Long (dms):

State Government
(561) 682-2516
STATE
Not reported
Not reported

Owner:

Owner Id: 20374

Owner Name: SOUTH FL WATER MGMT DIST Owner Address: 3301 GUN CLUB RD-DEPT #5432

Owner Address 2: ATTN: JEFFREY SMITH

Owner City,St,Zip: WEST PALM BEACH, FL 33406

Owner Contact: JEFFREY A SMITH Owner Phone: (561) 682-2516

Tank Info:

Tank Id:

Status: Removed
Status Date: 20-AUG-2007
Install Date: Not reported

Substance: Diesel-generator,pump Content Description: Generator/Pump Diesel

Gallons: 1500 Vessel Indicator: TANK

Tank Location: UNDERGROUND

DEP Contractor: F

MAP FINDINGS

Map ID Direction Distance Distance (ft.)Site

EDR ID Number

Database(s)

EPA ID Number

SOUTH FL WATER MGMT DIST-FORMER CABASSA FARMS (Continued)

U004110007

Click here for Florida Oculus:

Count: 8 records ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BELLE GLADE	A100162810	PALM BEACH CNTY-PALMTRAN SITE	1703 HWY 16	33430	AST
BELLE GLADE	A100011403	TOP FARMS INC	SR 80 / 5.5 MI E OF BELLE GLADE	33430	AST
BELLE GLADE	A100184066	GROWERS MGMT INC	HWY 827 BROWNS FARM RD	33430	AST
BELLE GLADE	A100289531	ATLANTIC MILL TANK FARM	HWY 880 15 MI E OF BELLE GLADE	33430	AST
BELLE GLADE	S121158338	POLICE TRAINING BUILDING AND STORAGE	2050 W CANAL STREET	33430	ASBESTOS
BELLE GLADE	1014388808	SUGAR FARMS CO-OP MAINTENANCE	STATE ROAD 880	33430	RCRA-CESQG
PALM BEACH COUNTY	M300006544	PALM BEACH AGGREGATES, INC.	PALM BEACH MINE		US MINES
SOUTH BAY	1000701366	TALISMAN SUGAR CORP	US HWY 27 E	33430	RCRA NonGen / NLR

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/30/2017 Source: EPA Date Data Arrived at EDR: 06/08/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 99

Telephone: N/A

Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: 202-564-7333

EPA Region 1 EPA Region 6

Telephone 617-918-1143 Telephone: 214-655-6659

EPA Region 3 EPA Region 7

Telephone 215-814-5418 Telephone: 913-551-7247

EPA Region 4 **EPA Region 8**

Telephone 404-562-8033 Telephone: 303-312-6774

EPA Region 9 EPA Region 5

Telephone 312-886-6686 Telephone: 415-947-4246

EPA Region 10

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/30/2017 Date Data Arrived at EDR: 06/09/2017

Date Made Active in Reports: 09/15/2017

Number of Days to Update: 98

Source: EPA Telephone: N/A

Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Quarterly

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/30/2017 Date Data Arrived at EDR: 06/09/2017

Date Made Active in Reports: 09/15/2017

Number of Days to Update: 98

Source: EPA Telephone: N/A

Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Source: EPA

Date of Government Version: 10/15/1991 Date Data Arrived at EDR: 02/02/1994 Date Made Active in Reports: 03/30/1994 Number of Days to Update: 56

Telephone: 202-564-4267 Last EDR Contact: 08/15/2011

Next Scheduled EDR Contact: 11/28/2011 Data Release Frequency: No Update Planned

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/11/2017 Date Data Arrived at EDR: 07/21/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 77

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 01/29/2018 Data Release Frequency: Quarterly

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP. renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/11/2017 Date Data Arrived at EDR: 07/28/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 70

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 01/29/2018 Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/11/2017 Date Data Arrived at EDR: 07/26/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 79

Source: Environmental Protection Agency

Telephone: 202-564-6023 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Semi-Annually

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/13/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 10

Source: EPA

Telephone: 800-424-9346 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/13/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 10

Source: Environmental Protection Agency Telephone: (404) 562-8651

Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 10

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/13/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 10

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 10

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/13/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 10

Source: Environmental Protection Agency

Telephone: (404) 562-8651 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/10/2017 Date Data Arrived at EDR: 08/30/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 44

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/10/2017 Date Data Arrived at EDR: 08/30/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 44

Source: Environmental Protection Agency

Telephone: 703-603-0695 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2017 Date Data Arrived at EDR: 09/21/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 22

Source: National Response Center, United States Coast Guard

Telephone: 202-267-2180 Last EDR Contact: 09/21/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/21/2017 Date Data Arrived at EDR: 09/21/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 22

Source: U.S. Department of Transportation

Telephone: 202-366-4555 Last EDR Contact: 09/21/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012 Date Data Arrived at EDR: 08/07/2012 Date Made Active in Reports: 09/18/2012

Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety

Telephone: 202-366-4595 Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/13/2017 Date Data Arrived at EDR: 09/06/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 30

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/19/2017 Date Data Arrived at EDR: 06/20/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 87

Source: Environmental Protection Agency

Telephone: 202-566-2777 Last EDR Contact: 09/20/2017

Next Scheduled EDR Contact: 01/01/2018 Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/10/2006 Date Made Active in Reports: 01/11/2007

Number of Days to Update: 62

Source: USGS Telephone: 888-275-8747 Last EDR Contact: 10/13/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015 Date Data Arrived at EDR: 07/08/2015 Date Made Active in Reports: 10/13/2015

Number of Days to Update: 97

Source: U.S. Army Corps of Engineers Telephone: 202-528-4285

Last EDR Contact: 11/22/2017

Next Scheduled EDR Contact: 03/05/2018
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017 Date Data Arrived at EDR: 06/13/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 94

Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 11/08/2017

Next Scheduled EDR Contact: 02/26/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2017 Date Data Arrived at EDR: 08/03/2017 Date Made Active in Reports: 10/20/2017

Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Last EDR Contact: 09/25/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/27/2017 Date Data Arrived at EDR: 10/12/2017 Date Made Active in Reports: 10/20/2017

Number of Days to Update: 8

Source: EPA

Telephone: 703-416-0223 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 12/18/2017 Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017 Date Data Arrived at EDR: 10/11/2017 Date Made Active in Reports: 11/03/2017

Number of Days to Update: 23

Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 11/22/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004

Number of Days to Update: 39

Source: Environmental Protection Agency

Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Date Data Arrived at EDR: 05/07/2009 Date Made Active in Reports: 09/21/2009

Number of Days to Update: 137

Source: EPA, Region 9 Telephone: 415-947-4219 Last EDR Contact: 10/20/2017

Next Scheduled EDR Contact: 02/05/2018

Data Release Frequency: No Update Planned

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005 Date Data Arrived at EDR: 02/29/2008 Date Made Active in Reports: 04/18/2008

Number of Days to Update: 49

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 12/01/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 07/31/2017 Date Data Arrived at EDR: 08/30/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 44

Source: Department of Labor, Mine Safety and Health Administration

Telephone: 303-231-5959 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011 Date Data Arrived at EDR: 06/08/2011 Date Made Active in Reports: 09/13/2011

Number of Days to Update: 97

Source: USGS

Telephone: 703-648-7709 Last EDR Contact: 12/01/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Varies

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014 Date Data Arrived at EDR: 11/24/2015 Date Made Active in Reports: 04/05/2016

Number of Days to Update: 133

Source: EPA

Telephone: 202-566-0250 Last EDR Contact: 11/20/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012 Date Data Arrived at EDR: 01/15/2015 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 14

Source: EPA

Telephone: 202-260-5521 Last EDR Contact: 09/22/2017

Next Scheduled EDR Contact: 01/01/2018 Data Release Frequency: Every 4 Years

FTTS: FIFRA/TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Date Data Arrived at EDR: 04/16/2009 Date Made Active in Reports: 05/11/2009

Number of Days to Update: 25

Source: EPA

Telephone: 202-566-1667 Last EDR Contact: 08/18/2017

Next Scheduled EDR Contact: 12/04/2017 Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 03/01/2007 Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2007

Next Scheduled EDR Contact: 03/17/2008

Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 12/17/2008

Next Scheduled EDR Contact: 03/17/2008 Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009 Date Data Arrived at EDR: 12/10/2010 Date Made Active in Reports: 02/25/2011

Number of Days to Update: 77

Source: EPA

Telephone: 202-564-4203 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016 Date Data Arrived at EDR: 11/23/2016 Date Made Active in Reports: 02/10/2017

Number of Days to Update: 79

Source: Environmental Protection Agency

Telephone: 202-564-2501 Last EDR Contact: 10/11/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017 Date Data Arrived at EDR: 06/09/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 126

Source: EPA

Telephone: 202-566-0500 Last EDR Contact: 10/13/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016 Date Data Arrived at EDR: 09/08/2016 Date Made Active in Reports: 10/21/2016

Number of Days to Update: 43

Source: Nuclear Regulatory Commission

Telephone: 301-415-7169 Last EDR Contact: 10/16/2017

Next Scheduled EDR Contact: 11/20/2017 Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2017 Date Data Arrived at EDR: 10/05/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 8

Source: Environmental Protection Agency

Telephone: 202-343-9775 Last EDR Contact: 10/05/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2017 Date Data Arrived at EDR: 09/06/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 9

Source: EPA

Telephone: (404) 562-9900 Last EDR Contact: 12/05/2017

Next Scheduled EDR Contact: 03/19/2018
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995

Number of Days to Update: 35

Source: EPA

Telephone: 202-564-4104 Last EDR Contact: 06/02/2008

Next Scheduled EDR Contact: 09/01/2008 Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017 Date Data Arrived at EDR: 02/09/2017 Date Made Active in Reports: 04/07/2017

Number of Days to Update: 57

Source: Environmental Protection Agency

Telephone: 202-564-8600 Last EDR Contact: 10/23/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015 Date Data Arrived at EDR: 02/22/2017 Date Made Active in Reports: 09/28/2017

Number of Days to Update: 218

Source: EPA/NTIS Telephone: 800-424-9346 Last EDR Contact: 11/20/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Biennially

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 02/13/2017 Date Data Arrived at EDR: 02/15/2017 Date Made Active in Reports: 11/03/2017

Number of Days to Update: 261

Source: Environmental Protection Agency

Telephone: 202-564-0527 Last EDR Contact: 11/21/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Date Data Arrived at EDR: 03/03/2015 Date Made Active in Reports: 03/09/2015

Number of Days to Update: 6

Source: Environmental Protection Agency

Telephone: 703-308-4044 Last EDR Contact: 11/09/2017

Next Scheduled EDR Contact: 02/19/2018 Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/30/2017 Date Data Arrived at EDR: 06/09/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 98

Source: Environmental Protection Agency

Telephone: 703-603-8787 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Date Data Arrived at EDR: 10/27/2010 Date Made Active in Reports: 12/02/2010

Number of Days to Update: 36

Source: American Journal of Public Health

Telephone: 703-305-6451 Last EDR Contact: 12/02/2009 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013 Date Data Arrived at EDR: 10/17/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 3

Source: EPA

Telephone: 202-564-6023 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 02/19/2018 Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2016 Date Data Arrived at EDR: 06/02/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 133

Source: Department of Defense Telephone: 703-704-1564 Last EDR Contact: 10/16/2017

Next Scheduled EDR Contact: 01/29/2018 Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/13/2017 Date Data Arrived at EDR: 09/06/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 30

Source: Drug Enforcement Administration

Telephone: 202-307-1000 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land

A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014 Date Data Arrived at EDR: 08/06/2014 Date Made Active in Reports: 01/29/2015

Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service

Telephone: 301-443-1452 Last EDR Contact: 11/03/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Varies

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017 Date Data Arrived at EDR: 02/03/2017 Date Made Active in Reports: 04/07/2017

Number of Days to Update: 63

Source: Environmental Protection Agency

Telephone: 615-532-8599 Last EDR Contact: 11/17/2017

Next Scheduled EDR Contact: 02/26/2018 Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017 Date Data Arrived at EDR: 05/30/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 136

Source: FEMA

Telephone: 202-646-5797 Last EDR Contact: 10/13/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014 Date Data Arrived at EDR: 09/10/2014 Date Made Active in Reports: 10/20/2014

Number of Days to Update: 40

Source: Environmental Protection Agency

Telephone: N/A

Last EDR Contact: 09/08/2017

Next Scheduled EDR Contact: 12/18/2017

Data Release Frequency: Varies

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016 Date Data Arrived at EDR: 01/05/2017 Date Made Active in Reports: 04/07/2017

Number of Days to Update: 92

Source: Environmental Protection Agency

Telephone: 703-603-8704 Last EDR Contact: 10/06/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Varies

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 08/07/2009 Date Made Active in Reports: 10/22/2009

Number of Days to Update: 76

Source: Department of Energy Telephone: 202-586-8719 Last EDR Contact: 12/05/2017

Next Scheduled EDR Contact: 03/19/2018 Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data A listing of minor source facilities.

Date of Government Version: 10/12/2016 Date Data Arrived at EDR: 10/26/2016 Date Made Active in Reports: 02/03/2017

Number of Days to Update: 100

Source: EPA

Telephone: 202-564-2496 Last EDR Contact: 09/26/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/10/2017 Date Data Arrived at EDR: 05/17/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 121

Source: Environmental Protection Agency

Telephone: 202-566-1917 Last EDR Contact: 11/01/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013 Date Data Arrived at EDR: 03/21/2014 Date Made Active in Reports: 06/17/2014

Number of Days to Update: 88

Source: Environmental Protection Agency

Telephone: 617-520-3000 Last EDR Contact: 11/06/2017

Next Scheduled EDR Contact: 02/19/2018 Data Release Frequency: Quarterly

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016 Date Data Arrived at EDR: 12/27/2016 Date Made Active in Reports: 02/17/2017

Number of Days to Update: 52

Source: Department of Energy Telephone: 202-586-3559 Last EDR Contact: 11/02/2017

Next Scheduled EDR Contact: 02/19/2018 Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011 Date Data Arrived at EDR: 10/19/2011 Date Made Active in Reports: 01/10/2012

Number of Days to Update: 83

Source: Environmental Protection Agency

Telephone: 202-566-0517 Last EDR Contact: 10/26/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels

Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/17/2017 Date Data Arrived at EDR: 08/17/2017 Date Made Active in Reports: 09/15/2017

Number of Days to Update: 29

Source: EPA

Telephone: 800-385-6164 Last EDR Contact: 11/20/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Quarterly

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2017 Date Data Arrived at EDR: 09/06/2017 Date Made Active in Reports: 10/20/2017

Number of Days to Update: 44

Source: Environmental Protection Agency

Telephone: 202-564-2280 Last EDR Contact: 12/05/2017

Next Scheduled EDR Contact: 03/19/2018 Data Release Frequency: Quarterly

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/25/2017 Date Data Arrived at EDR: 09/26/2017 Date Made Active in Reports: 10/20/2017

Number of Days to Update: 24

Source: Department of Interior Telephone: 202-208-2609 Last EDR Contact: 09/25/2017

Next Scheduled EDR Contact: 12/25/2017 Data Release Frequency: Quarterly

STATE AND LOCAL RECORDS

SHWS: Florida's State-Funded Action Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 08/10/2017 Date Data Arrived at EDR: 08/22/2017 Date Made Active in Reports: 09/21/2017

Number of Days to Update: 30

Source: Department of Environmental Protection

Telephone: 850-488-0190 Last EDR Contact: 11/22/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Semi-Annually

SWF/LF: Solid Waste Facility Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal

sites.

Date of Government Version: 10/16/2017

Date Data Arrived at EDR: 10/17/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 41

Source: Department of Environmental Protection

Telephone: 850-922-7121 Last EDR Contact: 10/17/2017

Next Scheduled EDR Contact: 01/29/2018 Data Release Frequency: Quarterly

UIC: Underground Injection Wells Database Listing

A listing of Class I wells. Class I wells are used to inject hazardous waste, nonhazardous waste, or municipal

waste below the lowermost USDW.

Date of Government Version: 10/31/2017 Date Data Arrived at EDR: 11/01/2017 Date Made Active in Reports: 11/28/2017

Number of Days to Update: 27

Source: Department of Environmental Protection

Telephone: 850-245-8655 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

SWRCY: Recycling Centers

A listing of recycling centers located in the state of Florida.

Date of Government Version: 07/24/2014 Date Data Arrived at EDR: 10/22/2014 Date Made Active in Reports: 01/12/2015

Number of Days to Update: 82

Source: Department of Environmental Protection

Telephone: 850-245-8718 Last EDR Contact: 10/20/2017

Next Scheduled EDR Contact: 01/29/2018 Data Release Frequency: Varies

LUST: Petroleum Contamination Detail Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 10/04/2017 Date Data Arrived at EDR: 10/31/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 27

Source: Department of Environmental Protection

Telephone: 850-245-8839 Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Quarterly

TANKS: Storage Tank Facility List

This listing includes storage tank facilities that do not have tank information. The tanks have either be closed or removed from the site, but the facilities were still registered at some point in history.

Date of Government Version: 10/04/2017 Date Data Arrived at EDR: 10/31/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-8841 Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Quarterly

UST: Storage Tank Facility Information

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 10/04/2017 Date Data Arrived at EDR: 10/31/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-8839 Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tank Listing

The file for Leaking Aboveground Storage Tanks. Please remember STCM does not track the source of the discharge so the agency provides a list of facilities with an aboveground tank and an open discharge split by facilities with aboveground tanks only and facilities with aboveground and underground tanks.

Date of Government Version: 11/02/2017 Date Data Arrived at EDR: 11/03/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 24

Source: Department of Environmental Protection

Telephone: 850-245-8799 Last EDR Contact: 10/25/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Varies

AST: Storage Tank Facility Information Registered Aboveground Storage Tanks.

Date of Government Version: 10/04/2017 Date Data Arrived at EDR: 10/31/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-8839 Last EDR Contact: 10/31/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Quarterly

FL SITES: Sites List

This summary status report was developed from a number of lists including the Eckhardt list, the Moffit list, the EPA Hazardous Waste Sites list, EPA's Emergency & Remedial Response information System list (RCRA Section 3012) & existing department lists such as the obsolete uncontrolled Hazardous Waste Sites list. This list is no longer updated.

Date of Government Version: 12/31/1989 Date Data Arrived at EDR: 05/09/1994 Date Made Active in Reports: 08/04/1994

Number of Days to Update: 87

Source: Department of Environmental Protection

Telephone: 850-245-8705 Last EDR Contact: 03/24/1994 Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

SPILLS: Oil and Hazardous Materials Incidents

Statewide oil and hazardous materials inland incidents.

Date of Government Version: 10/10/2017 Date Data Arrived at EDR: 10/12/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 46

Source: Department of Environmental Protection

Telephone: 850-245-2010 Last EDR Contact: 10/10/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Semi-Annually

ENG CONTROLS: Institutional Controls Registry

The registry is a database of all contaminated sites in the state of Florida which are subject to engineering controls. Engineering Controls encompass a variety of engineered remedies to contain and/or reduce contamination, and/or physical barriers intended to limit access to property. ECs include fences, signs, guards, landfill caps, provision of potable water, slurry walls, sheet pile (vertical caps), pumping and treatment of groundwater, monitoring wells, and vapor extraction systems.

Date of Government Version: 10/02/2017 Date Data Arrived at EDR: 10/03/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 55

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Semi-Annually

Inst Control: Institutional Controls Registry

The registry is a database of all contaminated sites in the state of Florida which are subject to institutional and engineering controls.

Date of Government Version: 10/02/2017 Date Data Arrived at EDR: 10/03/2017

Date Made Active in Reports: 11/27/2017 Number of Days to Update: 55 Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Semi-Annually

VCP: Voluntary Cleanup Sites

Listing of closed and active voluntary cleanup sites.

Date of Government Version: 08/22/2017 Date Data Arrived at EDR: 08/23/2017 Date Made Active in Reports: 10/23/2017

Number of Days to Update: 61

Source: Department of Environmental Protection

Telephone: 850-245-8705 Last EDR Contact: 11/14/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Facilities

The Drycleaners database, maintained by the Department of Environmental Protection, provides information about permitted dry cleaner facilities.

Date of Government Version: 10/03/2017 Date Data Arrived at EDR: 10/24/2017

Date Made Active in Reports: 11/21/2017 Number of Days to Update: 28 Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 10/24/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Semi-Annually

PRIORITYCLEANERS: Priority Ranking List

The Florida Legislature has established a state-funded program to cleanup properties that are contaminated as a result of the operations of a drycleaning facility.

Date of Government Version: 07/10/2017 Date Data Arrived at EDR: 08/17/2017 Date Made Active in Reports: 10/23/2017

Number of Days to Update: 67

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 11/17/2017

Next Scheduled EDR Contact: 02/26/2018 Data Release Frequency: Varies

DEDB: Ethylene Dibromide Database Results

Ethylene dibromide (EDB), a soil fumigant, that has been detected in drinking water wells. The amount found exceeds the maximum contaminant level as stated in Chapter 62-550 or 520. It is a potential threat to public health when present in drinking water.

Date of Government Version: 09/27/2017 Date Data Arrived at EDR: 09/28/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 54

Source: Department of Environmental Protection

Telephone: 850-245-8335 Last EDR Contact: 09/27/2017

Next Scheduled EDR Contact: 01/01/2018 Data Release Frequency: Varies

BSRA: Brownfield Site Rehabilitation Agreements Listing

The BSRA provides DEP and the public assurance that site rehabilitation will be conducted in accordance with Florida Statutes and DEP's Contaminated Site Cleanup Criteria rule. In addition, the BSRA provides limited liability protection for the voluntary responsible party. The BSRA contains various commitments by the voluntary responsible party, including milestones for completion of site rehabilitation tasks and submittal of technical reports and plans. It also contains a commitment by DEP to review technical reports according to an agreed upon schedule. Only those brownfield sites with an executed BSRA are eligible to apply for a voluntary cleanup tax credit incentive pursuant to Section 376.30781, Florida Statutes.

Date of Government Version: 08/02/2017 Date Data Arrived at EDR: 10/03/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 49

Source: Department of Environmental Protection

Telephone: 850-245-8934 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Varies

BROWNFIELDS AREAS: Brownfields Areas Database

A "brownfield area" means a contiguous area of one or more brownfield sites, some of which may not be contaminated, that has been designated as such by a local government resolution. Such areas may include all or portions of community redevelopment areas, enterprise zones, empowerment zones, other such designated economically deprived communities and areas, and Environmental Protection Agency (EPA) designated brownfield pilot projects. This layer provides a polygon representation of the boundaries of these designated Brownfield Areas in Florida.

Date of Government Version: 08/23/2017 Date Data Arrived at EDR: 10/03/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 49

Source: Department of Environmental Protection

Telephone: 850-245-8934 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Quarterly

BROWNFIELDS: Brownfields Sites Database

Brownfields are defined by the Florida Department of Environmental Protection (FDEP) as abandoned, idled, or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Date of Government Version: 09/19/2017 Date Data Arrived at EDR: 10/03/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 49

Source: Department of Environmental Protection

Telephone: 850-245-8927 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Semi-Annually

WASTEWATER: Wastewater Facility Regulation Database

Domestic and industrial wastewater facilities.

Date of Government Version: 11/01/2017 Date Data Arrived at EDR: 11/07/2017 Date Made Active in Reports: 11/28/2017

Number of Days to Update: 21

Source: Department of Environmental Protection

Telephone: 850-245-8600 Last EDR Contact: 11/07/2017

Next Scheduled EDR Contact: 02/19/2018 Data Release Frequency: Quarterly

AIRS: Permitted Facilities Listing

A listing of Air Resources Management permits.

Date of Government Version: 05/17/2017 Date Data Arrived at EDR: 05/23/2017 Date Made Active in Reports: 08/01/2017

Number of Days to Update: 70

Source: Department of Environmental Protection

Telephone: 850-921-9558 Last EDR Contact: 10/25/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Varies

TIER 2: Tier 2 Facility Listing

A listing of facilities which store or manufacture hazardous materials that submit a chemical inventory report.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 06/23/2017 Date Made Active in Reports: 08/02/2017

Number of Days to Update: 40

Source: Department of Environmental Protection

Telephone: 850-413-9970 Last EDR Contact: 09/07/2017

Next Scheduled EDR Contact: 12/25/2017 Data Release Frequency: Varies

FL Cattle Dip. Vats: Cattle Dipping Vats

From the 1910's through the 1950's, these vats were filled with an arsenic solution for the control and eradication of the cattle fever tick. Other pesticides, such as DDT, were also widely used. By State law, all cattle, horses, mules, goats, and other susceptible animals were required to be dipped every 14 days. Under certain circumstances, the arsenic and other pesticides remaining at the site may present an environmental or public health hazard.

Date of Government Version: 02/04/2005 Date Data Arrived at EDR: 06/29/2007 Date Made Active in Reports: 07/11/2007

Number of Days to Update: 12

Source: Department of Environmental Protection

Telephone: 850-245-4444 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: No Update Planned

ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 10/23/2017 Date Data Arrived at EDR: 10/24/2017 Date Made Active in Reports: 11/21/2017

Number of Days to Update: 28

Source: Department of Environmental Protection

Telephone: 850-717-9086 Last EDR Contact: 11/14/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Varies

RESP PARTY: Responsible Party Sites Listing Open, inactive and closed responsible party sites

> Date of Government Version: 10/02/2017 Date Data Arrived at EDR: 10/03/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 55

Source: Department of Environmental Protection

Telephone: 850-245-8758 Last EDR Contact: 10/03/2017

Next Scheduled EDR Contact: 01/15/2018 Data Release Frequency: Quarterly

CLEANUP SITES: DEP Cleanup Sites - Contamination Locator Map Listing

This listing includes the locations of waste cleanup sites from various programs. The source of the cleanup site data includes Hazardous Waste programs, Site Investigation Section, Compliance and Enforcement Tracking, Drycleaning State Funded Cleanup Program (possibly other state funded cleanup), Storage Tank Contamination Monitoring.

Date of Government Version: 08/28/2017 Date Data Arrived at EDR: 08/30/2017 Date Made Active in Reports: 11/02/2017

Number of Days to Update: 64

Source: Department of Environmental Protection

Telephone: 866-282-0787 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Quarterly

DWM CONTAM: DWM CONTAMINATED SITES

A listing of active or known sites. The listing includes sites that need cleanup but are not actively being working on because the agency currently does not have funding (primarily petroleum and drycleaning).

Date of Government Version: 04/01/2017 Date Data Arrived at EDR: 05/16/2017 Date Made Active in Reports: 08/01/2017

Number of Days to Update: 77

Source: Department of Environmental Protection

Telephone: 850-245-7503 Last EDR Contact: 10/23/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Varies

SITE INV SITES: Site Investigation Section Sites Listing

Statewide coverage of Site Investigation Section (SIS) sites. Site Investigation is a Section within the Bureau of Waste Cleanup, Division of Waste Management. SIS provides technical support to FDEP District Waste Cleanup Programs and conducts contamination assessments throughout the state.

Date of Government Version: 08/21/2017 Date Data Arrived at EDR: 08/22/2017 Date Made Active in Reports: 10/23/2017

Number of Days to Update: 62

Source: Department of Environmental Protection

Telephone: 850-245-8953 Last EDR Contact: 11/20/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Quarterly

FF TANKS: Federal Facilities Listing

A listing of federal facilities with storage tanks.

Date of Government Version: 10/03/2017 Date Data Arrived at EDR: 10/05/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 53

Source: Department of Environmental Protection

Telephone: 850-245-8250 Last EDR Contact: 09/25/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Quarterly

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater

than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017

Number of Days to Update: 546

Source: USGS

Telephone: 202-208-3710 Last EDR Contact: 10/11/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Semi-Annually

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998 Date Data Arrived at EDR: 12/03/2007 Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: 703-308-8245 Last EDR Contact: 10/30/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/26/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 78

Source: EPA, Region 5 Telephone: 312-886-7439 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/01/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 78

Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/14/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 71

Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 71

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017

Number of Days to Update: 99

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 11/07/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Quarterly

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016 Date Data Arrived at EDR: 01/27/2017 Date Made Active in Reports: 05/05/2017

Number of Days to Update: 98

Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/13/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 78

Source: Environmental Protection Agency Telephone: 415-972-3372

Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/24/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 71

Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/25/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 78

Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/13/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 78

Source: EPA Region 9 Telephone: 415-972-3368 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/01/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/13/2017

Number of Days to Update: 78

Source: EPA Region 8 Telephone: 303-312-6137 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 71

Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/26/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 71

Source: EPA Region 5 Telephone: 312-886-6136 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/01/2016 Date Data Arrived at EDR: 01/26/2017 Date Made Active in Reports: 05/05/2017

Number of Days to Update: 99

Source: EPA Region 6 Telephone: 214-665-7591 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/14/2017 Date Data Arrived at EDR: 07/27/2017 Date Made Active in Reports: 10/06/2017

Number of Days to Update: 71

Source: EPA, Region 1 Telephone: 617-918-1313 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016 Date Data Arrived at EDR: 01/27/2017 Date Made Active in Reports: 05/05/2017

Number of Days to Update: 98

Source: EPA Region 4 Telephone: 404-562-9424 Last EDR Contact: 10/27/2017

Next Scheduled EDR Contact: 02/05/2018 Data Release Frequency: Semi-Annually

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Date Data Arrived at EDR: 09/29/2015 Date Made Active in Reports: 02/18/2016

Number of Days to Update: 142

Source: EPA, Region 1 Telephone: 617-918-1102 Last EDR Contact: 09/25/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Date Data Arrived at EDR: 04/22/2008 Date Made Active in Reports: 05/19/2008

Number of Days to Update: 27

Source: EPA, Region 7 Telephone: 913-551-7365 Last EDR Contact: 04/20/2009

Next Scheduled EDR Contact: 07/20/2009

Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A

Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Undete: N/A

Number of Days to Update: N/A

Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A

Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Floridia.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/10/2014
Number of Days to Update: 193

Source: Department of Environmental Protection

Telephone: N/A

Last EDR Contact: 06/01/2012 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

COUNTY RECORDS

ALACHUA COUNTY:

Facility List

List of all regulated facilities in Alachua County.

Date of Government Version: 03/28/2017 Date Data Arrived at EDR: 03/29/2017 Date Made Active in Reports: 05/15/2017

Number of Days to Update: 47

Source: Alachua County Environmental Protection Department

Telephone: 352-264-6800 Last EDR Contact: 09/25/2017

Next Scheduled EDR Contact: 01/08/2018 Data Release Frequency: Annually

BROWARD COUNTY:

Aboveground Storage Tanks

Aboveground storage tank locations in Broward County.

Date of Government Version: 06/06/2017 Date Data Arrived at EDR: 07/17/2017 Date Made Active in Reports: 09/22/2017

Number of Days to Update: 67

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 12/01/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Varies

Semi-Annual Inventory Report on Contaminated Locations

Early Detection Incentive/Environmental Assessment Remediation. This report monitors the status and remediation progress of known contaminated locations within Broward County. Sites listed by the US EPA, the Florida Department of Environmental Protection, and sites licensed for contamination assessment and cleanup by the Division of Pollution Prevention and Remediation Programs of the Department.

Date of Government Version: 08/29/2017 Date Data Arrived at EDR: 08/30/2017 Date Made Active in Reports: 10/27/2017

Number of Days to Update: 58

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Hazardous Material Sites

HM sites use or store greater than 25 gallons of hazardous materials per month.

Date of Government Version: 06/06/2017 Date Data Arrived at EDR: 07/17/2017 Date Made Active in Reports: 10/20/2017

Number of Days to Update: 95

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 12/01/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Annually

Notice Of Violations Sites

NOV facilities have received a notice of violation letter under the Broward County Chapter 27 Code.

Date of Government Version: 06/06/2017 Date Data Arrived at EDR: 07/17/2017 Date Made Active in Reports: 10/20/2017

Number of Days to Update: 95

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 12/01/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Annually

Underground Storage Tanks

All known regulated storage tanks within Broward County, including those tanks that have been closed

Date of Government Version: 06/06/2017 Date Data Arrived at EDR: 07/17/2017 Date Made Active in Reports: 09/22/2017

Number of Days to Update: 67

Source: Broward County Environmental Protection Department

Telephone: 954-818-7509 Last EDR Contact: 12/01/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Annually

HILLSBOROUGH COUNTY:

Hillsborough County LF

Hillsborough county landfill sites.

Date of Government Version: 09/08/2017 Date Data Arrived at EDR: 10/24/2017 Date Made Active in Reports: 11/27/2017

Number of Days to Update: 34

Source: Hillsborough County Environmental Protection Commission

Telephone: 813-627-2600 Last EDR Contact: 10/23/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Varies

MIAMI-DADE COUNTY:

Air Permit Sites

Facilities that release or have a potential to release pollutants.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Liquid Waste Transporter List

The Liquid Waste Transporter permit regulates the transportation of various types of liquid and solid waste, including hazardous waste, waste oil and oily waste waters, septic and grease trap waste, biomedical waste, spent radiator fluid, photo chemical waste, dry sewage sludge, and other types of non-hazardous industrial waste. The Liquid Waste Transporter permits needed to protect the environment and the public from improperly handled and transported waste.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: DERM

Telephone: 305-372-6755 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Quarterly

Grease Trap Sites

Any non-residential facility that discharges waste to a sanitary sewer.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Dade County Dept. of Env. Resources Mgmt.

Telephone: 305-372-6508 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Marine Facilities Operating Permit

What is this permit used for? Miami-Dade County Ordinance 89-104 and Section 24-18 of the Code of Miami-Dade County require the following types of marine facilities to obtain annual operating permits from DERM: All recreational boat docking facilities with ten (10) or more boat slips, moorings, davit spaces, and vessel tie-up spaces.

All boat storage facilities contiguous to tidal waters in Miami-Dade County with ten (10) or more dry storage spaces including boatyards and boat manufacturing facilities.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: DERM

Telephone: 305-372-3576 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Quarterly

Maimi River Enforcement

The Miami River Enforcement database files were created for facilities and in some instances vessels that were inspected by a workgroup within the Department that was identified as the Miami River Enforcement Group. The files do not all necessarily reflect enforcement cases and some were created for locations that were permitted by other Sections within the Department.

Date of Government Version: 06/05/2013 Date Data Arrived at EDR: 06/06/2013 Date Made Active in Reports: 08/06/2013

Number of Days to Update: 61

Source: DERM

Telephone: 305-372-3576 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Quarterly

Hazardous Waste Sites

Sites with the potential to generate waste

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/13/2017

Number of Days to Update: 74

Source: Dade County Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Industrial Waste Type 2-4 Sites

IW2s are facilities having reclaim or recycling systems with no discharges, aboveground holding tanks or spill prevention and countermeasure plans. IW4s are facilities that discharge an effluent to the ground.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Department of Environmental Resources Management

Telephone: 305-372-6700 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Industrial Waste Type 5 Sites

Generally these facilities fall under the category of "conditionally exempt small quantity generator" or "small quantity generator".

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Department of Environmental Resources Management

Telephone: 305-372-6700 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Industrial Waste Type 6

Permits issued to those non-residential land uses located within the major drinking water wellfield protection areas that are not served by sanitary sewers. These facilities do not handle hazardous materials but are regulated because of the env. sensitivity of the areas where they are located.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Department of Environmental Resources Management

Telephone: 305-372-6700 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Industrial Waste Permit Sites

Facilities that either generate more than 25,000 of wastewater per day to sanitary sewers or are pre-defined by FPA

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Department of Environmental Resources Management

Telephone: 305-372-6700 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Enforcement Case Tracking System Sites

Enforcement cases monitored by the Dade County Department of Environmental Resources Management.

Date of Government Version: 08/30/2017 Date Data Arrived at EDR: 08/31/2017 Date Made Active in Reports: 11/09/2017

Number of Days to Update: 70

Source: Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Fuel Spills Cases

DERM documents fuel spills of sites that are not in a state program.

Date of Government Version: 01/08/2009 Date Data Arrived at EDR: 01/13/2009 Date Made Active in Reports: 02/05/2009

Number of Days to Update: 23

Source: Department of Environmental Resources Management

Telephone: 305-372-6755 Last EDR Contact: 11/27/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

Storage Tanks

A listing of aboveground and underground storage tank site locations.

Date of Government Version: 06/01/2017 Date Data Arrived at EDR: 06/02/2017 Date Made Active in Reports: 08/01/2017

Number of Days to Update: 60

Source: Department of Environmental Resource Management

Telephone: 305-372-6700 Last EDR Contact: 11/28/2017

Next Scheduled EDR Contact: 03/12/2018 Data Release Frequency: Semi-Annually

PALM BEACH COUNTY:

Palm Beach County LF

Palm Beach County Inventory of Solid Waste Sites.

Date of Government Version: 09/01/2011 Date Data Arrived at EDR: 09/20/2011 Date Made Active in Reports: 10/10/2011

Number of Days to Update: 20

Source: Palm Beach County Solid Waste Authority

Telephone: 561-640-4000 Last EDR Contact: 09/15/2017

Next Scheduled EDR Contact: 12/25/2017 Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/28/2017 Date Data Arrived at EDR: 08/18/2017 Date Made Active in Reports: 11/14/2017

Number of Days to Update: 88

Source: Department of Energy & Environmental Protection

Telephone: 860-424-3375 Last EDR Contact: 11/14/2017

Next Scheduled EDR Contact: 02/26/2018 Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 04/11/2017 Date Made Active in Reports: 07/27/2017 Number of Days to Update: 107

Source: Department of Environmental Protection Telephone: N/A

Last EDR Contact: 10/05/2017

Next Scheduled EDR Contact: 01/22/2018 Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/01/2017 Date Data Arrived at EDR: 11/01/2017 Date Made Active in Reports: 11/13/2017

Number of Days to Update: 12

Source: Department of Environmental Conservation

Telephone: 518-402-8651 Last EDR Contact: 11/01/2017

Next Scheduled EDR Contact: 02/12/2018 Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 07/25/2017 Date Made Active in Reports: 09/25/2017

Number of Days to Update: 62

Source: Department of Environmental Protection

Telephone: 717-783-8990 Last EDR Contact: 10/16/2017

Next Scheduled EDR Contact: 01/29/2018 Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013 Date Data Arrived at EDR: 06/19/2015 Date Made Active in Reports: 07/15/2015

Number of Days to Update: 26

Source: Department of Environmental Management

Telephone: 401-222-2797 Last EDR Contact: 11/16/2017

Next Scheduled EDR Contact: 03/05/2018 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2016 Date Data Arrived at EDR: 04/13/2017 Date Made Active in Reports: 07/14/2017

Number of Days to Update: 92

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 09/11/2017

Next Scheduled EDR Contact: 12/25/2017 Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Department of Children & Families

Source: Provider Information Telephone: 850-488-4900

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Department of Environmental Protection

Telephone: 850-245-8238

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

EAA Storage Reservoir Southwest Palm Beach, FL 33480

Inquiry Number: 5124409.6w

December 07, 2017

EDR DataMap™ Well Search Report



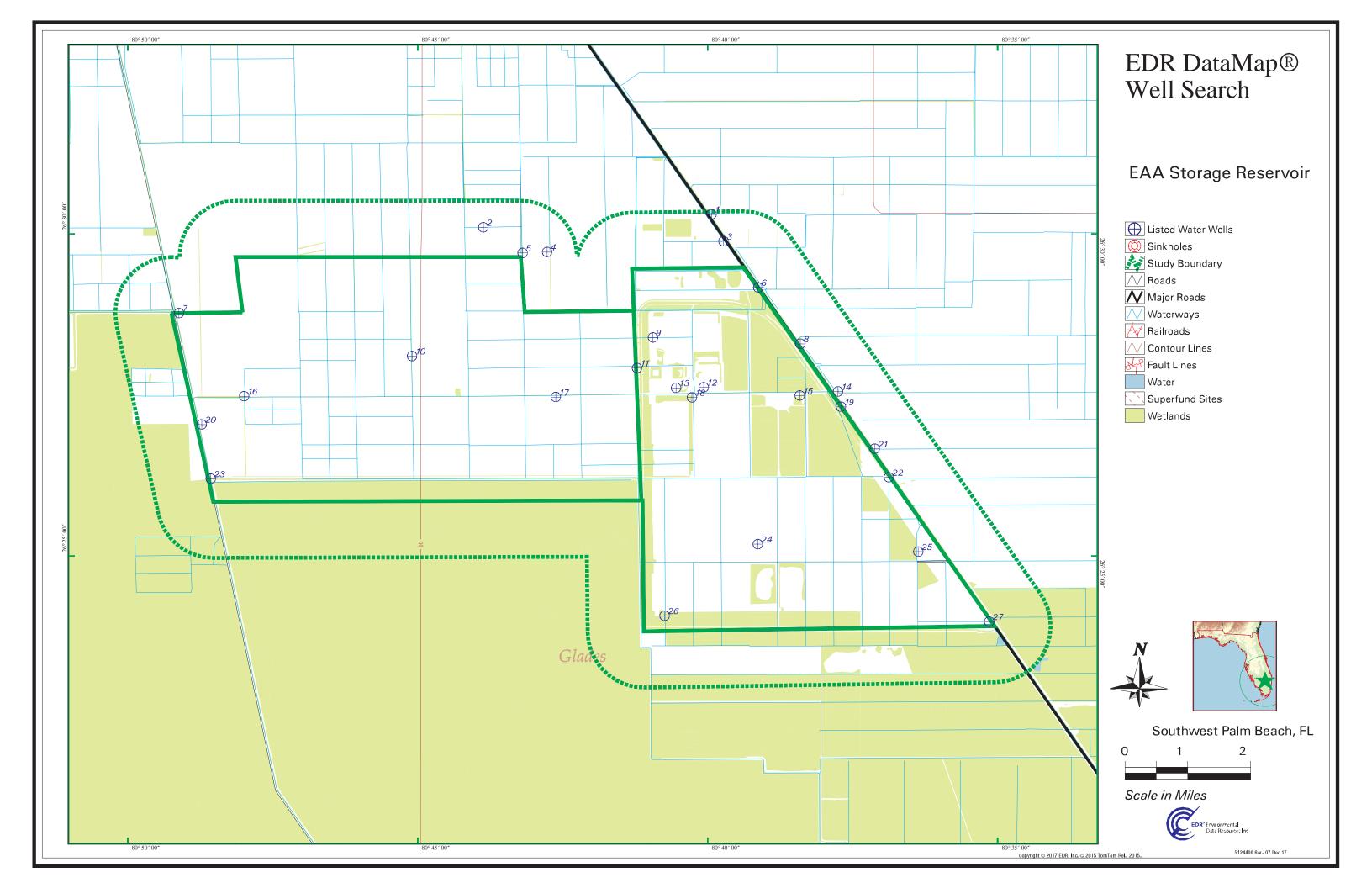
Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.



GEOCHECK VERSION 2.1 SUMMARY

FEDERAL DATABASE WELL INFORMATION

MAP	WELL
<u>ID</u>	<u>ID</u>
2	USGS40000236893
4	USGS40000236876
7	USGS40000236821
8	USGS40000236794
10	USGS40000236778
11	USGS40000236764
17	USGS40000236737
19	USGS40000236725
22	USGS40000236635
23	USGS40000236568
24	USGS40000236565
25	USGS40000236497
26	USGS40000236498
27	USGS40000236495

STATE WATER WELL INFORMATION

MAP	WELL
<u>ID</u>	<u>ID</u>
1	FLSO80000017614
1	FLSO80000017625
1	FLSO80000017624
3	FLSO80000019854
5	FLSO80000032387
6	FLSO80000032717
6	FLSO80000032716
6	FLSO80000032735
6	FLSO80000032734
6	FLSO80000028762
6	FLSO80000056329
6	FLSO80000028760
6	FLSO80000032714
6	FLSO80000032715
7	FLSO80000032719
7	FLSO80000032718
8	FLSO80000032395
9	FLSO80000051711
9	FLSO80000051710
8	FLSA80000027383
8	FLSO80000012004
8	FLSA80000027708
12	FLSO80000028761
14	FLSO80000032184
15	FLSO80000056330
16	FLSO80000032379
18	FLSO80000039772
20	FLSO80000032720
20	FLSO80000032721
21	FLSO80000032185

GEOCHECK VERSION 2.1 SUMMARY

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Map ID: 13

PWS ID: FL4504225

PWS Name: TALISMAN SUGAR MILL

US27(16MILES)SOUTH OF S.BAY

SOUTH BAY, FL 33430

PWS currently has or had major violation(s) or enforcement:

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Map ID: 13

PWS ID: FL4504225

PWS Name: TALISMAN SUGAR MILL

US27(16MILES)SOUTH OF S.BAY

SOUTH BAY, FL 33430

PWS currently has or had major violation(s) or enforcement:

USGS TOPOGRAPHIC MAP(S)

26080-D5 NORTH OF DEEM CITY, FL 26080-D6 SOUTH OF OKEELANTA, FL 26080-D7 EAST OF LITTLE CYPRESS SW, FL 26080-E6 OKEELANTA, FL 26080-E7 LAKE HARBOR SE, FL

AREA RADON INFORMATION

Federal EPA Radon Zone for PALM BEACH County: 3

Note: Zone 1 indoor average level > 4 pCi/L.

: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.

: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for PALM BEACH COUNTY, FL

Number of sites tested: 104

Area Average Activity % < 4 pCi/L % 4-20 pCi/L % > 20 pCi/L

Living Area 0.650 pCi/L 99% 1% 0%

Basement Not Reported Not Reported Not Reported Not Reported

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Water Well Information:

Map ID: 2

Org. Identifier: USGS-FL Site ID: USGS40000236893

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-263000080440001

Monloc name: PB -1701
Monloc type: Well
Monloc desc: Not Reported
Huc code: 03090202

Not Reported Huc code: Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported 26.5003514 Latitude: Longitude: -80.7331154 Sourcemap scale: Not Reported Horiz Acc measure: Horiz Acc measure units: minutes

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 12 Vert measure units: feet Vertacc measure val: 2

Vert accmeasure units: feet

Vertcollection method: Interpolated from topographic map

Vert coord refsys: NGVD29 Countrycode:

Aquifername: Not Reported
Formation type: Not Reported
Aquifer type: Not Reported

Construction date: Not Reported Welldepth: 935

Welldepth units: ft Wellholedepth: Not Reported

Wellholedepth units: Not Reported

Ground-water levels, Number of Measurements: 0

Map ID:

Org. Identifier: USGS-FL Site ID: USGS40000236876

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262937080425401

Monloc name: PB - 444
Monloc type: Well
Monloc desc: Not Reported

Huc code: 03090202 Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported 26.4939627 Latitude: -80.7147816 Longitude: Sourcemap scale: Not Reported Horiz Acc measure: Unknown Horiz Acc measure units: Unknown

Horiz coord refsys: NAD83 Vert measure val: Not Reported Vert measure units: Not Reported Vertacc measure val: Not Reported

Vert accmeasure units: Not Reported Vertcollection method: Not Reported

Vert coord refsys: Not Reported Countrycode: US

Aquifername: Not Reported Formation type: Not Reported

US

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Aquifer type: Unconfined single aquifer

Construction date: Not Reported Welldepth: Not Reported Welldepth units: Not Reported Wellholedepth: Not Reported

Wellholedepth units: Not Reported

Ground-water levels, Number of Measurements: 0

Map ID: 7

Org. Identifier: USGS-FL Site ID: USGS40000236821

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262837080491701

Monloc name: PB -1486
Monloc type: Well
Monloc desc: Not Reported

03090202 Huc code: Drainagearea value: Not Reported Contrib drainagearea: Drainagearea Units: Not Reported Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4772969 -80.8211733 24000 Longitude: Sourcemap scale: Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: Not Reported Vert measure units: Not Reported Vertacc measure val: Not Reported

Vert accmeasure units: Not Reported Vertcollection method: Not Reported

Vert coord refsys: Not Reported Countrycode: US

Aquifername: Surficial aquifer system
Formation type: Fort Thompson Formation
Aquifer type: Unconfined single aquifer

Construction date: 19830823 Welldepth: 220 Welldepth units: ft Wellholedepth: 225

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 8

Org. Identifier: USGS-FL Site ID: USGS40000236794

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262813080383801

Monloc name: PB -1790
Monloc type: Well
Monloc desc: Not Reported
Huc code: 03090202

Not Reported Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4706578 Longitude: -80.6437797 Sourcemap scale: Not Reported Horiz Acc measure: .1 Horiz Acc measure units: seconds

Horiz Collection method: Global positioning system (GPS), uncorrected

Horiz coord refsys: NAD83 Vert measure val: 11.56 Vert measure units: feet Vertacc measure val: .01

Vert accmeasure units: feet

Vertcollection method: Differential Global Positioning System (GPS)r

Vert coord refsys: NGVD29 Countrycode: US Aquifername: Surficial aquifer system

Formation type: Surficial Aquifer System

GEOCHECK VERSION 2.1 STATE DATABASE WELL INFORMATION

Aquifer type: Unconfined multiple aquifers

Construction date: 20030411 Welldepth: 65.6 Welldepth units: ft Wellholedepth: 67

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 10

Org. Identifier: USGS-FL Site ID: USGS40000236778

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262800080451401

Monloc name: PB -1786
Monloc type: Well
Monloc desc: Not Reported

03090202 Huc code: Drainagearea value: Not Reported Contrib drainagearea: Not Reported Drainagearea Units: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4670582 -80.7535965 Not Reported Longitude: Sourcemap scale: Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Differentially corrected Global Positioning System (DGPS)

Horiz coord refsys: NAD83 Vert measure val: 13.38 Vert measure units: feet Vertacc measure val: 1

Vert accmeasure units: feet

Vertcollection method: Differential Global Positioning System (GPS)r

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Surficial aquifer system Formation type: Surficial Aquifer System

Aquifer type: Not Reported

Construction date: 20020813 Welldepth: 181.3 Welldepth units: ft Wellholedepth: 182

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 11

Org. Identifier: USGS-FL Site ID: USGS40000236764

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262749080412101

Monloc name: PB -1787
Monloc type: Well
Monloc desc: Not Reported

03090202 Not Reported Huc code: Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4639554 -80.6889337 Longitude: Sourcemap scale: Not Reported Horiz Acc measure: .1 Horiz Acc measure units: seconds

Horiz Collection method: Differentially corrected Global Positioning System (DGPS)

Horiz coord refsys: NAD83 Vert measure val: 12.15 Vert measure units: feet Vertacc measure val: .1

Vert accmeasure units: feet

Vertcollection method: Differential Global Positioning System (GPS)r

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Surficial aquifer system Formation type: Surficial Aquifer System

Aquifer type: Not Reported

Construction date: 20020813 Welldepth: 161.5 Welldepth units: ft Wellholedepth: 183

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 17

Org. Identifier: USGS-FL Site ID: USGS40000236737

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262722080424501

Monloc name: PB -1485
Monloc type: Well
Monloc desc: Not Reported

03090202 Huc code: Drainagearea value: Not Reported Contrib drainagearea: Drainagearea Units: Not Reported Not Reported Contrib drainagearea units: Not Reported Latitude: 26.456464 -80.7122816 24000 Longitude: Sourcemap scale: Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: Not Reported Vert measure units: Not Reported Vertacc measure val: Not Reported

Vert accmeasure units: Not Reported Vertcollection method: Not Reported

Vert coord refsys: Not Reported Countrycode: US

Aquifername: Surficial aquifer system
Formation type: Fort Thompson Formation
Aquifer type: Unconfined single aquifer

Construction date: 19830822 Welldepth: 220 Welldepth units: ft Wellholedepth: 225

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 19

Org. Identifier: USGS-FL Site ID: USGS40000236725

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262713080375001

Monloc name: PB - 840
Monloc type: Well
Monloc desc: Not Reported
Huc code: 03090202

Not Reported Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4539639 Longitude: -80.630335 Sourcemap scale: Not Reported Horiz Acc measure: Unknown Horiz Acc measure units: Unknown

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: Not Reported Vert measure units: Not Reported Vertacc measure val: Not Reported

Vert accmeasure units: Not Reported Vertcollection method: Not Reported

Vert coord refsys: Not Reported Countrycode: US

Aquifername: Not Reported Formation type: Not Reported

Aquifer type: Not Reported

Construction date: 19741107 Welldepth: 260

Welldepth units: ft Wellholedepth: Not Reported

Wellholedepth units: Not Reported

Ground-water levels, Number of Measurements: 0

Map ID: 22

Org. Identifier: USGS-FL Site ID: USGS40000236635

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262607080370001

Monloc name: PB -1785
Monloc type: Well
Monloc desc: Not Reported

03090202 Huc code: Drainagearea value: Not Reported Contrib drainagearea: Not Reported Drainagearea Units: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4357146 -80.6165736 Not Reported Longitude: Sourcemap scale: Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Differentially corrected Global Positioning System (DGPS)

Horiz coord refsys: NAD83 Vert measure val: 11.84 Vert measure units: feet Vertacc measure val: 1

Vert accmeasure units: feet

Vertcollection method: Differential Global Positioning System (GPS)r

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Surficial aquifer system Formation type: Surficial Aquifer System

Aquifer type: Not Reported

Construction date: 20020813 Welldepth: 173.8 Welldepth units: ft Wellholedepth: 180

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 23

Org. Identifier: USGS-FL Site ID: USGS40000236568

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262508080483701

Monloc name: PB - 149
Monloc type: Well
Monloc desc: Not Reported
Huc code: 03090202

Not Reported Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4353539 Longitude: -80.8114509 Sourcemap scale: Not Reported Horiz Acc measure: Unknown Horiz Acc measure units: Unknown

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: Not Reported Vert measure units: Not Reported Vertacc measure val: Not Reported

Vert accmeasure units: Not Reported Vertcollection method: Not Reported

Vert coord refsys: Not Reported Countrycode: US

Aquifername: Not Reported Formation type: Not Reported

Aquifer type: Not Reported

Construction date: 19410412 Welldepth: 27.1

Welldepth units: ft Wellholedepth: Not Reported

Wellholedepth units: Not Reported

Ground-water levels, Number of Measurements: 0

Map ID: 24

Org. Identifier: USGS-FL Site ID: USGS40000236565

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262505080391601

Monloc name: PB -1696
Monloc type: Well
Monloc desc: Not Reported

03090202 Huc code: Drainagearea value: Not Reported Contrib drainagearea: Not Reported Drainagearea Units: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4184097 -80.6542246 Not Reported Longitude: Sourcemap scale: Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: 11
Vert measure units: feet Vertacc measure val: 2

Vert accmeasure units: feet
Vertcollection method: Unknown
Vert coord refsys: NGVD29

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Not Reported Formation type: Not Reported Aquifer type: Not Reported

Construction date: Not Reported Welldepth: 1705 Welldepth units: ft Wellholedepth: 1705

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 25

Org. Identifier: USGS-FL Site ID: USGS40000236497

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262355080360201

Monloc name: PB -1473
Monloc type: Well
Monloc desc: Not Reported
Huc code: 03090202

Drainagearea value: Not Reported Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.4164652 -80.6081123 Longitude: Sourcemap scale: 24000 seconds Horiz Acc measure: Horiz Acc measure units:

Horiz Collection method: Interpolated from map

Horiz coord refsys: NAD83 Vert measure val: Not Reported Vert measure units: Not Reported Vertacc measure val: Not Reported

Vert accmeasure units: Not Reported Vertcollection method: Not Reported

Vert coord refsys: Not Reported Countrycode: US

Aquifername: Surficial aquifer system
Formation type: Fort Thompson Formation

Aquifer type: Unconfined single aquifer

Construction date: 19830808 Welldepth: 45
Welldepth units: ft Wellholedepth: 45

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 26

Org. Identifier: USGS-FL Site ID: USGS40000236498

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262358080405201

Monloc name: PB -1792
Monloc type: Well
Monloc desc: Not Reported

Not Reported Huc code: Drainagearea value: Not Reported Not Reported Contrib drainagearea: Not Reported Drainagearea Units: Contrib drainagearea units: Not Reported Latitude: 26.3998826 -80.6810309 Not Reported Longitude: Sourcemap scale: Horiz Acc measure: Horiz Acc measure units: seconds

Horiz Collection method: Global positioning system (GPS), uncorrected

Horiz coord refsys: NAD83 Vert measure val: 11.92 Vert measure units: feet Vertacc measure val: .01

Vert accmeasure units: feet

Vertcollection method: Differential Global Positioning System (GPS)r

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Not Reported

Formation type: Surficial Aquifer System

Aquifer type: Not Reported

Construction date: 20030404 Welldepth: 71.67 Welldepth units: ft Wellholedepth: 73

Wellholedepth units: ft

Ground-water levels, Number of Measurements: 0

Map ID: 27

Org. Identifier: USGS-FL Site ID: USGS40000236495

Formal name: USGS Florida Water Science Center

Monloc Identifier: USGS-262353080351601

Monloc name: PB -1789
Monloc type: Well
Monloc desc: Not Reported

03090202 Not Reported Huc code: Drainagearea value: Drainagearea Units: Not Reported Contrib drainagearea: Not Reported Contrib drainagearea units: Not Reported Latitude: 26.3983825 -80.5877229 Longitude: Sourcemap scale: Not Reported Horiz Acc measure: .1 Horiz Acc measure units: seconds

Horiz Collection method: Global positioning system (GPS), uncorrected

Horiz coord refsys: NAD83 Vert measure val: 11.82 Vert measure units: feet Vertacc measure val: .01

Vert accmeasure units: feet

Vertcollection method: Differential Global Positioning System (GPS)r

Vert coord refsys: NGVD29 Countrycode: US

Aquifername: Surficial aquifer system Formation type: Surficial Aquifer System

Unconfined multiple aquifers

Aquifer type: Construction date: Welldepth: Wellholedepth: 20030414 74.5 Welldepth units: ft 76

ft Wellholedepth units:

Ground-water levels, Number of Measurements: 0

Water Well Information:

Map ID: 1

 Permit no:
 50-00045-W
 App no:
 101012-1

 Actual per:
 IND

Project name: STAR RANCH ENTERPRISES

 Lu code:
 AGR

 Acres serv:
 4813.7

 Id:
 44351

 Facinv typ:
 CULVERT

 Fac name:
 C-5 (East Farm)

Pumptype c: N/A Pump diame: Cul diamet: 24 Well diame: 0 0 Pump capac: Pump intak: 0 0 Pump int 1: Invert ele: 3.5 764903 Pump coord: Pump coo 1: 788918 Well depth: 0 Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Paige Bollenbacher, P.G. Fee catego: IND

Site id: FLSO80000017614

Map ID: 1

Permit no: 50-00045-W App no: 101012-1

Actual per: IND

Project name: STAR RANCH ENTERPRISES

 Lu code:
 AGR

 Acres serv:
 4813.7

 Id:
 230404

 Facinv typ:
 PUMP

Fac name: P-9 (East Farm)

Pumptype c: **AXF** Pump diame: 24 Cul diamet: 0 Well diame: 0 Pump capac: 764 Pump intak: 0 Pump int 1: 3.5 Invert ele: Pump coord: 764903 Pump coo 1: 788918 Well depth: 0 Cased dept: 0

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)
Display na: Paige Bollenbacher, P.G.

Site id: Paige Bollenbacher, P. Site id: FLSO80000017625

Fee catego:

IND

Map ID:

Permit no: 50-00045-W App no: 101012-1

Actual per: IND

Project name: STAR RANCH ENTERPRISES

 Lu code:
 AGR

 Acres serv:
 4813.7

 Id:
 230403

 Facinv typ:
 PUMP

Fac name: P-8 (East Farm)

Pumptype c: **AXF** 24 Pump diame: Cul diamet: 0 Well diame: 0 Pump capac: 764 Pump intak: 0 Pump int 1: 3.5 Invert ele: 764903 Pump coord: 788918 Pump coo 1: Well depth: 0 Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Paige Bollenbacher, P.G. Fee catego: IND

Site id: FLSO80000017624

Map ID: 3

Permit no: 50-00092-W App no: 101007-28

Actual per: IND

Project name: WEST FARM

Lu code: AGR Acres serv: 868 ld: 44167 **CULVERT** Facinv typ: Culvert #1 Fac name: Pumptype c: N/A 0 Pump diame: 24 Cul diamet: 0 Well diame: Pump capac: 0

Pump intak: 0
Pump int 1: 0
Invert ele: 3
Pump coord: 766032
Pump coo 1: 786398

Well depth: 0
Cased dept: 0

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Rick Bower, P.G. Fee catego: IND

Site id: FLSO80000019854

Map ID: 5

Permit no: 50-08986-W App no: 140321-10

Actual per: IND

Project name: SUGAR FARMS CO OP

 Lu code:
 AGR

 Acres serv:
 98473.42

 Id:
 264867

 Facinv typ:
 CULVERT

 Fac name:
 3 Talisman N-S 3

Pumptype c: N/A Pump diame: 0 Cul diamet: 48 Well diame: 0 Pump capac: 0 Pump intak: 0 Pump int 1: 0 Invert ele: 0 Pump coord: 747151 Pump coo 1: 785243 Well depth: 0 Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Vincent Migliore, P.G. Fee catego: IND

Site id: FLSO80000032387

Map ID: 6

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

Lu code: AGR Acres serv: 61937.22 ld: 37280 **PUMP** Facinv typ: 16 - East Fac name: Pumptype c: **AXF** 0 Pump diame: 0 Cul diamet: Well diame: 0 Pump capac: 36000 Pump intak: 0 Pump int 1: 0 Invert ele: 0 769811 Pump coord: Pump coo 1: 782170

Well depth: 0
Cased dept: 0

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032717

Map ID: 6

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

Lu code: AGR Acres serv: 61937.22 37280 ld: Facinv typ: **PUMP** Fac name: 16 - East Pumptype c: **AXF** Pump diame: 0 Cul diamet: 0 Well diame: 0 36000 Pump capac: 0

Pump int 1: 0
Invert ele: 0
Pump coord: 769811
Pump coo 1: 782170
Well depth: 0
Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: FRZ

Source nam: SFWMD Canal (L-19)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032716

Map ID: 6

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

 Lu code:
 AGR

 Acres serv:
 61937.22

 Id:
 44271

 Facinv typ:
 CULVERT

Fac name: 10- EAST (Project Culvert)

Pumptype c: N/A 0 Pump diame: 60 Cul diamet: Well diame: 0 Pump capac: 0 Pump intak: 0 Pump int 1: 0 Invert ele: 0 Pump coord: 769811 Pump coo 1: 782170 Well depth: 0 Cased dept: 0

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032735

Map ID: 6

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

 Lu code:
 AGR

 Acres serv:
 61937.22

 Id:
 44271

 Facinv typ:
 CULVERT

Fac name: 10- EAST (Project Culvert)

Pumptype c: N/A Pump diame: 0 Cul diamet: 60 Well diame: 0 Pump capac: 0 Pump intak: 0 Pump int 1: 0 Invert ele: 0 769811 Pump coord: Pump coo 1: 782170 Well depth: 0 Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: FRZ

Source nam: SFWMD Canal (L-19)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032734

Map ID:

Permit no: 50-07674-W App no: 070411-2

Actual per: GP

Project name: EAA A-1 RESERVIOR

Lu code: **PWS** Acres serv: ld: 212823 WELL Facinv typ: WELL 3 Fac name: Pumptype c: CEN Pump diame: 0 0 Cul diamet: Well diame: 2 Pump capac: 20 Pump intak: 0

 Pump int 1:
 0

 Invert ele:
 0

 Pump coord:
 768680

 Pump coo 1:
 782155

 Well depth:
 50

 Cased dept:
 50

Fee catego:

Facwlsts c:

Fee catego:

GP MIN

Ε

GP MIN

070411-2

Factypwu c: PWS

Source nam: Surficial Aquifer System
Display na: Adrienne Charbonneau

Site id: FLSO80000028762

Map ID:

Permit no: 50-10438-W App no: 140218-3

Actual per: GP

Project name: E A A A-1 FEB

Lu code: PWS Acres serv: 1

267326 ld: Facinv typ: WELL Fac name: Well 1 Pumptype c: CEN Pump diame: 0 Cul diamet: 0 Well diame: 2 20 Pump capac: Pump intak: 10 Pump int 1: 0 Invert ele: 0

 Pump coord:
 768958

 Pump coo 1:
 782107

 Well depth:
 50

 Cased dept:
 50

 Usests cod:
 PRM

Factypwu c: PWS

Source nam: Surficial Aquifer System

Display na: Lisa J. Ullman, P.G.

Site id: FLSO80000056329

Map ID: 6
Permit no: 50-07674-W App no:

Actual per: GP

Project name: EAA A-1 RESERVIOR

Lu code: PWS
Acres serv: 1
Id: 195854

WELL Facinv typ: WELL 1 Fac name: Pumptype c: CEN Pump diame: 0 0 Cul diamet: Well diame: 2 Pump capac: 20 Pump intak: 0 Pump int 1: 0 Invert ele: 0 Pump coord: 769061 Pump coo 1: 782037 Well depth: 50

Cased dept: 50
Usests cod: PRM Facwlsts c: E

Factypwu c: PWS

Source nam: Surficial Aquifer System

Display na: Adrienne Charbonneau Fee catego: GP MIN

Site id: FLSO80000028760

Map ID: 6

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

Lu code: AGR Acres serv: 61937.22 37279 ld: Facinv typ: **PUMP** Fac name: 15- East Pumptype c: **AXF** Pump diame: 0 Cul diamet: 0 Well diame: 0 37000 Pump capac: Pump intak: 0

Pump int 1: 0
Invert ele: 0
Pump coord: 769970
Pump coo 1: 781915
Well depth: 0
Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: FRZ

Source nam: SFWMD Canal (L-19)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032714

Map ID: 6

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

Lu code: AGR Acres serv: 61937.22 ld: 37279 **PUMP** Facinv typ: 15- East Fac name: Pumptype c: **AXF** 0 Pump diame: 0 Cul diamet: Well diame: 0 Pump capac: 37000 Pump intak: 0 Pump int 1: 0 Invert ele: 0 769970 Pump coord: Pump coo 1: 781915

0

Well depth:

Cased dept: 0
Usests cod: PRM Facwlsts c:

Ε

IND

Factypwu c: IRR

Source nam: SFWMD Canal (L-19)

Display na: Nancy Demonstranti, P.G. Fee catego:

Site id: FLSO80000032715

Map ID: 7

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

 Lu code:
 AGR

 Acres serv:
 61937.22

 Id:
 37319

 Facinv typ:
 PUMP

 Fac name:
 9 - FARM 15

 Pumptype c:
 AXF

 Pump diame:
 30

Cul diamet: 0 Well diame: 0 18000 Pump capac: Pump intak: 0 Pump int 1: 0 Invert ele: 0 714934 Pump coord: Pump coo 1: 779788 Well depth: 0 Cased dept: 0

Usests cod: PROD Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-24)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032719

Map ID: 7

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

 Lu code:
 AGR

 Acres serv:
 61937.22

 Id:
 37319

 Facinv typ:
 PUMP

 Fac name:
 9 - FARM 15

 Pumptype c:
 AXF

30 Pump diame: 0 Cul diamet: Well diame: 0 Pump capac: 18000 Pump intak: 0 Pump int 1: 0 Invert ele: 0 Pump coord: 714934 Pump coo 1: 779788 Well depth: 0 Cased dept: 0

Fee catego:

IND

IND

Factypwu c: FRZ

Source nam: SFWMD Canal (L-24)
Display na: Nancy Demonstranti, P.G.

Site id: FLSO80000032718

Map ID: 8

Permit no: 50-08986-W App no: 140321-10

Actual per: IND

Project name: SUGAR FARMS CO OP

Lu code: AGR Acres serv: 98473.42 41456 ld: Facinv typ: **PUMP** Fac name: 1 Farm 50 Pumptype c: **AXF** Pump diame: 36 Cul diamet: 0 Well diame: 0 25000 Pump capac: Pump intak: 0 Pump int 1: 0 Invert ele: 0 773337

Pump coord: 773337
Pump coo 1: 777562
Well depth: 0
Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-18)
Display na: Vincent Migliore, P.G.

Display na: Vincent Migliore, P.G. Fee catego: Site id: FLSO80000032395

Map ID: 9

Permit no: 50-04240-W App no: 010802-1

Actual per: IND

Project name: PERO FAMILY FARM INC

Lu code: AGR Acres serv: 6.4 ld: 110713 WELL Facinv typ: Fac name: 2 Pumptype c: SUB 0 Pump diame: 0 Cul diamet: Well diame: 6 Pump capac: 150 Pump intak: -40 Pump int 1: 0 Invert ele: 0 759450 Pump coord:

Pump coord: 759450 Pump coo 1: 777350 Well depth: 120

Cased dept: 100
Usests cod: PRM Facwlsts c: P

Factypwu c: IRR

Source nam: Surficial Aquifer System

Display na: Jeffery Scott Fee catego: GP

Site id: FLSO80000051711

Map ID: 9

Permit no: 50-04240-W App no: 010802-1

Actual per: IND

Project name: PERO FAMILY FARM INC

Lu code: **AGR** Acres serv: 6.4 29689 ld: Facinv typ: WELL Fac name: 1 Pumptype c: SUB Pump diame: 0 Cul diamet: 0 Well diame: 6 Pump capac: 150 Pump intak: -40

 Pump int 1:
 0

 Invert ele:
 0

 Pump coord:
 759400

 Pump coo 1:
 777300

 Well depth:
 120

 Cased dept:
 100

 Leasts and:
 PPM

Usests cod: PRM Facwlsts c: P

Factypwu c: IRR

Source nam: Surficial Aquifer System

Display na: Jeffery Scott Fee catego: GP

Site id: FLSO80000051710

Map ID: 8

Fluwid: AAH1058 Well type: 41

Status: INACTIVE Casing mat: Black Steel

 Longitude:
 -80.64166

 Latitude:
 26.47082

 Well depth:
 85

 Length:
 70

Diameter: Not Reported

Comment: Well is out of service

Sanit seal: Yes Name: SUGAR FARMS SOUTHERN DIVISION

Permit num:

First name: Not Reported Last name: Not Reported Phone: Not Reported Phone ext: Not Reported

Lg pws: 0

Datum: WS1984 Hae: 9.89

31-JUL-01 Loc method: **DGPS** Gps date: Project id: **PWS** Insp fname: Not Reported Insp Iname: Not Reported Insp chd: Not Reported Req numb: Not Reported Property i: Not Reported PALM BEACH Address: 15500 US HWY #27 County:

Number: 15500 Predir: Not Reported

4500119

Prefix:Not ReportedStreet:US HWY #27Suffix:Not ReportedPostdir:Not ReportedZipcode:00053City:SOUTH BAY

Zipcode: 00053 Loc id: 324160 Gps id: 324160

Wsrp id: Not Reported Action: Not Reported Port stat: **POTABLE** Res type: Not Reported Other id: Not Reported Software: Not Reported Not Reported Streetside: Agency: Not Reported

Parcel id: Not Reported

Pws design: 0 Pws verify: 0

Site id: FLSA80000027383

Map ID: 8

Permit no: 50-08585-W App no: 080220-7

Actual per: GP
Project name: HACIENDA NTNC

Project name: HACIENDA NTNC Lu code: PWS

Acres serv: 1 222729 ld: Facinv typ: WELL Fac name: well 1 Pumptype c: CEN Pump diame: 0 Cul diamet: 0 Well diame: 4 Pump capac: 8 28 Pump intak: Pump int 1: 0 Invert ele: 0

 Pump coord:
 773865

 Pump coo 1:
 776905

 Well depth:
 35

 Cased dept:
 25

 Usests cod:
 PRM

 Factypwu c:
 PWS

Source nam: Surficial Aquifer System

Display na: Lindy Cerar, P.G. Fee catego: GP MIN

Site id: FLSO80000012004

Facwlsts c:

Ε

 Map ID:
 8

 Fluwid:
 AAH2265
 Well type:
 45

 Status:
 ACTIVE
 Casing mat:
 PVC

Status: ACTIVE Casing mat:
Longitude: -80.6403
Latitude: 26.47044

Well depth: 0
Length: 0

Diameter: 2 Permit num: 4500119
Comment: Not Reported

Comment: Not Reported
Sanit seal: Yes Name: NEW HOPE SOUTH INC.

First name: Not Reported Last name: Not Reported

Phone: Not Reported

Lg pws: 0
Datum: WS1984
Hae: -20.74

Gps date: 05-APR-02
Project id: SUPER
Insp Iname: Not Reported
Req numb: Not Reported
County: PALM BEACH

Number: 15500
Prefix: Not Reported
Suffix: Not Reported
Zipcode: 00053
Loc id: 324810

 Loc Id:
 324810

 Gps id:
 324810

 Wsrp id:
 500049901

 Port stat:
 POTABLE

 Other id:
 Not Reported

 Streetside:
 Not Reported

 Parcel id:
 Not Reported

Pws design: 14000 Pws verify: 0

Site id: FLSA80000027708

Phone ext: Not Reported

Loc method: DGPS
Insp fname: Not Reported
Insp chd: Not Reported
Property i: Not Reported

Address: 15500 US HIGHWAY 27
Predir: Not Reported
Street: US HIGHWAY 27
Postdir: Not Reported
City: SOUTH BAY

Action: UNFILTERED
Res type: Not Reported
Software: Not Reported
Agency: Not Reported

Map ID: 12

Permit no: 50-07674-W

Actual per: GP

Project name: EAA A-1 RESERVIOR

Lu code: PWS Acres serv: 1

ld: 195855 Facinv typ: WELL WELL 2 Fac name: Pumptype c: CEN Pump diame: 0 Cul diamet: 0 Well diame: 2 20 Pump capac: 0 Pump intak: 0 Pump int 1: Invert ele: 0 Pump coord: 764209 Pump coo 1: 772657 Well depth: 50 50 Cased dept:

Usests cod: PRM Factypwu c: PWS

Source nam: Surficial Aquifer System

Display na: Adrienne Charbonneau

Site id: FLSO80000028761

App no: 070411-2

Facwlsts c: E

Fee catego: GP MIN

Map ID: 14

Permit no: 50-08986-W App no: 140321-10

Actual per: IND

Project name: SUGAR FARMS CO OP

 Lu code:
 AGR

 Acres serv:
 98473.42

 Id:
 228001

 Facinv typ:
 CULVERT

Fac name: 1 Resmondo Ousley

Pumptype c: N/A Pump diame: 0 Cul diamet: 42 Well diame: 0 0 Pump capac: Pump intak: 0 0 Pump int 1: Invert ele: 0 Pump coord: 776840 Pump coo 1: 772300 Well depth: 0 Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-18)

Display na: Vincent Migliore, P.G. Fee catego: IND

Site id: FLSO80000032184

Map ID: 15

Permit no: 50-10438-W App no: 140218-3

Actual per: GP

Project name: E A A A-1 FEB

Lu code: PWS
Acres serv: 1
Id: 267746
Facinv typ: WELL
Fac name: Well 2
Pumptype c: CEN
Pump diame: 0

0 Cul diamet: Well diame: 2 Pump capac: 20 Pump intak: 5 0 Pump int 1: Invert ele: 0 773236 Pump coord: Pump coo 1: 771908 Well depth: 50 Cased dept: 40

Usests cod: PRM Facwlsts c: E

Factypwu c: PWS

Source nam: Surficial Aquifer System

Display na: Lisa J. Ullman, P.G. Fee catego: GP MIN

Site id: FLSO80000056330

Map ID: 16

Permit no: 50-08986-W App no: 140321-10

Actual per: IND

Project name: SUGAR FARMS CO OP

 Lu code:
 AGR

 Acres serv:
 98473.42

 Id:
 228098

 Facinv typ:
 CULVERT

 Fac name:
 3 Talisman N-S 1

Pumptype c: N/A Pump diame: 0 Cul diamet: 48 Well diame: 0 0 Pump capac: 0 Pump intak: Pump int 1: 0 Invert ele: 0 Pump coord: 721000 Pump coo 1: 771730 Well depth: 0 Cased dept: 0 Usests cod: PRM

Usests cod: PRM Facwlsts c: Factypwu c: IRR

Source nam: SFWMD Canal (L-24)
Display na: Vincent Migliore, P.G. Fee catego: IND

Site id: FLSO80000032379

Map ID: 18

App no:

Permit no: 50-04222-W Actual per: GP

Project name: DELRAY GROWERS

Lu code: NUR 7 Acres serv: 29625 ld: WELL Facinv typ: Fac name: 1 Pumptype c: #N/A 0 Pump diame: Cul diamet: 0 Well diame: 6 Pump capac: 300 Pump intak: 0 Pump int 1: 0 Invert ele: 0 Pump coord: 763100 Pump coo 1: 771700 Well depth: 120

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Cased dept:

Source nam: Surficial Aquifer System

100

Display na: Thomas Colios Fee catego: GP

Site id: FLSO80000039772

Ε

990129-44

Map ID: 20

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

 Lu code:
 AGR

 Acres serv:
 61937.22

 Id:
 37320

 Facinv typ:
 PUMP

 Fac name:
 10 - FARM 15

Pumptype c: **AXF** Pump diame: 16 Cul diamet: 0 Well diame: 0 Pump capac: 8000 Pump intak: 0 0 Pump int 1: Invert ele: 0 Pump coord: 717007 Pump coo 1: 769070 Well depth: 0

Cased dept: 0
Usests cod: PROD Facwlsts c: E

Factypwu c: FRZ

Source nam: SFWMD Canal (L-24)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032720

Map ID: 20

Permit no: 50-00656-W App no: 140307-29

Actual per: IND

Project name: OKEELANTA - TENNANT NORTH AND SOUTH CULVERTS

 Lu code:
 AGR

 Acres serv:
 61937.22

 Id:
 37320

 Facinv typ:
 PUMP

 Fac name:
 10 - FARM 15

Pumptype c: **AXF** Pump diame: 16 Cul diamet: 0 Well diame: 0 Pump capac: 8000 Pump intak: 0 Pump int 1: 0 Invert ele: 0 717007 Pump coord: Pump coo 1: 769070 Well depth: 0 Cased dept: 0

Usests cod: PROD Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-24)

Display na: Nancy Demonstranti, P.G. Fee catego: IND

Site id: FLSO80000032721

Map ID: 21

Permit no: 50-08986-W App no: 140321-10

Actual per: IND

Project name: SUGAR FARMS CO OP

 Lu code:
 AGR

 Acres serv:
 98473.42

 Id:
 228002

 Facinv typ:
 CULVERT

Fac name: 2 Resmondo Ousley

Pumptype c: N/A Pump diame: 0 Cul diamet: 42 Well diame: 0 Pump capac: 0 0 Pump intak: Pump int 1: 0 Invert ele: 0 Pump coord: 780302 Pump coo 1: 766925 Well depth: 0 Cased dept: 0

Usests cod: PRM Facwlsts c: E

Factypwu c: IRR

Source nam: SFWMD Canal (L-18)

Display na: Vincent Migliore, P.G. Fee catego: IND

Site id: FLSO80000032185

GEOCHECK VERSION 2.1 PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

Map ID: 13

PWS Water Well Information:

Epa region: 04 State: FL

Pwsid: FL4504225

Pwsname: TALISMAN SUGAR MILL

City served: Not Reported State served: FL Zip served: 12099 Not Reported Fips county: Status: Closed Pop srvd: 475 Groundwater Pwssvcconn: 27 Source: **NTNCWS** Pws type: Owner: Private

Contact: Not Reported Contactor gname: Not Reported

Contact phone: 561-996-5527 Contact address1: US27(16MILES)SOUTH OF S.BAY

Contact address2: Not Reported Contact city: SOUTH BAY
Contact state: FL Contact zip: 33430

Activity code:

Facid: 1

Facname: PLANT ID = 02 SOURCE ID = 000

Facility type: Treatment_plant Activity code: I

Treatment obj: corrosion control Treatment process: sequestration Treatment obj: corrosion control Treatment process: ph adjustment Treatment obj: disinfection Treatment process: hypochlorination, post Treatment obj: organics removal Treatment process: reverse osmosis Treatment obj: taste / odor control Treatment process: aeration, packed tower

Facid: 2

Facname: PLANT ID = 01 SOURCE ID = 000

Facility type: Treatment_plant Activity code: I

Treatment obj: corrosion control Treatment process: ph adjustment

Treatment obj: disinfection Treatment process: gaseous chlorination, post

Treatment obj: particulate removal Treatment process: coagulation

Treatment obj: particulate removal Treatment process: filtration, rapid sand Treatment obj: Treatment process: lime - soda ash addition

Location Information:

Name: TALISMAN SUGAR MILL

Pwstypcd: NTNCWS Primsrccd: GW

Popserved: 475

Add1: US27(16MILES)SOUTH OF S.BAY

Add2: Not Reported

City: SOUTH BAY State: FL

Zip:33430Phone:561-996-5527Cityserv:SOUTH BAYCntyserv:Not ReportedStateserv:FLZipserv:Not Reported

PWS ID: FL4504225

Date Initiated: Not Reported Date Deactivated: Not Reported

PWS Name: TALISMAN SUGAR MILL

US27(16MILES)SOUTH OF S.BAY

SOUTH BAY, FL 33430

GEOCHECK VERSION 2.1 PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

Addressee / Facility: System Owner/Responsible Party

TALISMAN SUGAR CORPORATION

P.O BOX 814

BELLE GLADE, FL 33430

Facility Latitude: 26 27 30 Facility Longitude: 080 40 40 Facility Latitude: 26 27 31 Facility Longitude: 080 40 41

City Served: Not Reported

Treatment Class: Treated Population: 00000475

Violations information not reported.

Map ID: 13

Epa region: 04 State: FL

Pwsid: FL4504225

Pwsname: TALISMAN SUGAR MILL

City served:Not ReportedState served:FLZip served:Not ReportedFips county:12099Status:ClosedPop srvd:475

Pwssvcconn:27Source:GroundwaterPws type:NTNCWSOwner:Private

Contact: Not Reported Contactor gname: Not Reported

Contact phone: 561-996-5527 Contact address1: US27(16MILES)SOUTH OF S.BAY

Contact address2: Not Reported Contact city: SOUTH BAY
Contact state: FL Contact zip: 33430

Activity code:

Facid: 1

Facname: PLANT ID = 02 SOURCE ID = 000

Facility type: Treatment_plant Activity code:

sequestration Treatment obj: corrosion control Treatment process: Treatment obj: corrosion control Treatment process: ph adjustment Treatment obj: disinfection Treatment process: hypochlorination, post Treatment obj: Treatment process: reverse osmosis organics removal Treatment obj: aeration, packed tower taste / odor control Treatment process:

Facid: 2

Facname: PLANT ID = 01 SOURCE ID = 000

Facility type: Treatment_plant Activity code: I

Treatment obj: corrosion control Treatment process: ph adjustment

Treatment obj: disinfection Treatment process: gaseous chlorination, post

Treatment obj: particulate removal Treatment process: coagulation

Treatment obj: particulate removal Treatment process: filtration, rapid sand
Treatment obj: Treatment process: lime - soda ash addition

Location Information:

Name: TALISMAN SUGAR MILL

Pwstypcd: NTNCWS Primsrccd: GW

Popserved: 475

Add1: US27(16MILES)SOUTH OF S.BAY

Add2: Not Reported

City: SOUTH BAY State: FL

Zip:33430Phone:561-996-5527Cityserv:SOUTH BAYCntyserv:Not ReportedStateserv:FLZipserv:Not Reported

PWS ID: FL4504225

Date Initiated: Not Reported Date Deactivated: Not Reported

PWS Name: TALISMAN SUGAR MILL

US27(16MILES)SOUTH OF S.BAY

SOUTH BAY, FL 33430

Addressee / Facility: System Owner/Responsible Party

TALISMAN SUGAR CORPORATION

P.O BOX 814

BELLE GLADE, FL 33430

Facility Latitude: 26 27 30 Facility Longitude: 080 40 40 Facility Latitude: 26 27 31 Facility Longitude: 080 40 41

City Served: Not Reported

Treatment Class: Treated Population: 00000475

Violations information not reported.

FLORIDA GOVERNMENT WELL RECORDS SEARCHED

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at

least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after

August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

State Wetlands Data: Wetlands Inventory

Source: Department of Environmental Protection

Telephone: 850-245-8238

Well Construction Permitting Database

Source: Northwest Florida Water Management District

Telephone: 850-539-5999

Consumptive Use Permit Well Database

Source: St. Johns River Water Management District

Telephone: 386-329-4841

Permitted Well Location Database

Source: South Florida Water Management District

Telephone: 561-682-6877

Super Act Program Well Data

This table consists of data relating to all privately and publicly owned potable wells investigated as part of

the SUPER Act program. The Florida Department of Health's SUPER Act Program (per Chapter 376.3071(4)(g),

Florida Statutes), was given authority to provide field and laboratory services, toxicological risk assessments,

investigations of drinking water contamination complaints and education of the public

Source: Department of Health Telephone: 850-245-4250

Water Well Location Information

Source: Suwannee River Water Management District

Telephone: 386-796-7211

Water Well Permit Database

Source: Southwest Water Management District

Telephone: 352-796-7211

DEP GWIS - Generalized Water Information System Well Data

Source: Department of Environmental Protection

Telephone: 850-245-8507

Data collected for the Watershed Monitoring Section of the Department of Environmental Protection.

DOH and DEP Historic Study of Private Wells

Source: Department of Environmental Protection

Telephone: 850-559-0901

Historic database for private supply wells.

Florida Sinkholes

Source: Department of Environmental Protection, Geological Survey

The sinkhole data was gathered by the Florida Sinkhole Research Institute, University of Florida.

Oil and Gas Permit Database

Source: Department of Environmental Protection

Telephone: 850-245-3194

Locations of all permitted wells in the state of Florida.

FLORIDA GOVERNMENT WELL RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

EAA Storage Reservoir

EAA Storage Reservoir Southwest Palm Beach, FL 00053

Inquiry Number: 5132330.1

December 09, 2017

USGS Aerial Photography Priority Package



Thank you for your business.

Please contact EDR at 1-800-352-0050 with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2016 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

USGS Aerial Photography

Order # <u>5132330.1</u>

Southwest Palm Beach, FL Palm Beach County

Photo ID	Date	Scale
NP0NAPP011083172	1999	1"=3333'
NP0NAPP011083101	1999	1"=3333'
NP0NAPP008677141	1996	1"=3333'
NP0NAPP008677103	1996	1"=3333'
NC1NHAP840401110	1986	1"=4833' 50% cov w
NC1NHAP840043072	1984	1"=6666'
NC1NHAP840043235	1984	1"=6666'
AR1VEOR00150185	1980	1"=6666'
AR1VEOR00190028	1980	1"=6666'
AR1VEOR00140219	1979	1"=6666' 40% cov se
AR1SWEO00050099	1971	1"=6850'
AR1SWEO00030005	1971	1"=6850'
AR1SWDA00020024	1970	1"=2000' 40% cov w
AR1VCHV00010342	1969	1"=2000' 55% cov e
AR1VCHV00010380	1969	1"=2000'
AR1VCHV00010379	1969	1"=2000'
AR1VCHV00010381	1969	1"=2000'
ARB590310030253	1960	1"=3333' 60% cov w
AR1VYM000010034	1957	1"=1966 60% cov n
AR1VYM000010037	1957	1"=1966'
AR1VYM000010036	1967	1"=1966'
AR1VYM000010032	1967	1=1966'
AR1SU0000120031	1953	1"=1966' 99% cov n
AR1SU0000120033	1953	1"=1966'
AR1SU0000110026	1953	1"=1966'

AR1SU0000120034	1953	1"=1966'
AR1SU0000120036	1953	1"=1966'
AR1SU0000110029	1953	1"=1966'
AR1SU0000110028	1953	1"=1966'
AR1SU0000040053	1952	1"=1966' 20% cov s
AR1SU0000040049	1952	1"=1966'
AR1SU0000040055	1952	1"=1966'
AR1SU0000040051	1952	1"=1966'
ARA007111016092	1950	1"=4750' 90% cov e

Tips:

The following information is intended to assist you in the use of the USGS Aerials. Because the performance and use of different systems can vary greatly, questions on the use of each computer, and program used should be referred to the manufacturer of the computer and program.

Opening and working with large .tiff files:

- Click on file to open once only (please be patient).
- Close other programs to make memory available.
- Only open one photo at a time, close photo before attempting to open another.
- USGS Aerials are provided in .tiff format on a DVD and may require a special program to open or edit.
- You must have a DVD-ROM drive on your computer to open the images.
- o If you have Windows XP/98se, the **Microsoft Paint Program** will allow you to view and edit the images. Other programs are available from Adobe and on the Internet.
- The files provided on the USGS DVD are very large (up to 400 megabytes) and can take up to 15 minutes, or longer, to open on your computer depending on your hardware and software.
- o For faster opening, copy the files into your local hard drive prior to opening the files.
- USGS Aerials do not have a north indicator; please verify natural land marks such as lakes and rivers for proper alignment.
- o Be sure your computer meets the minimum system requirements.
- Minimum System Requirements:
 - o Microsoft Windows 98/2000/XP Mac OS 9+ LINUX
 - o Pentium-300mhz + or equivalent
 - o 64 MB RAM
 - o HDD free space: 300 Mb for each photo 100 Mb of system disk space for a swap-file
 - DVD-ROM Drive
 - o .tiff editing/viewing program

Photo ID	Date	Scale
NP0NAPP011083172	1999	1"=3333'



Photo ID	Date	Scale
NP0NAPP011083101	1999	1"=3333'

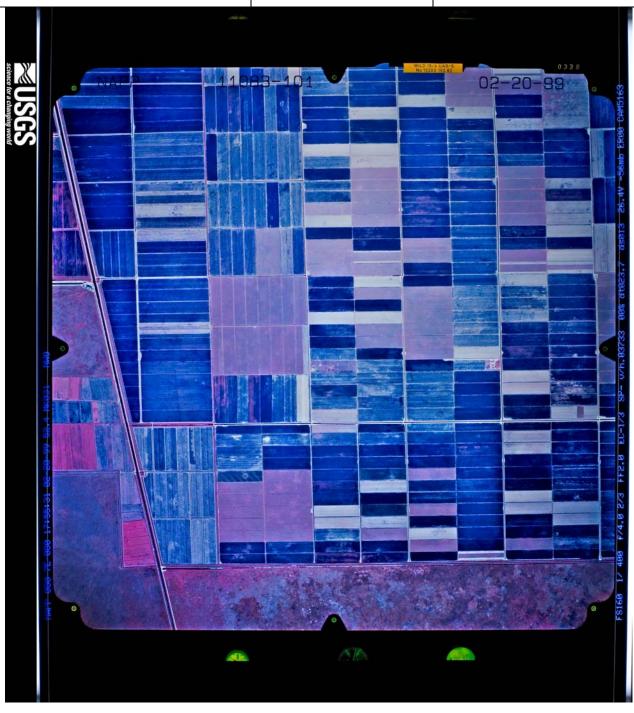


Photo ID	Date	Scale
NP0NAPP008677141	1996	1"=3333'

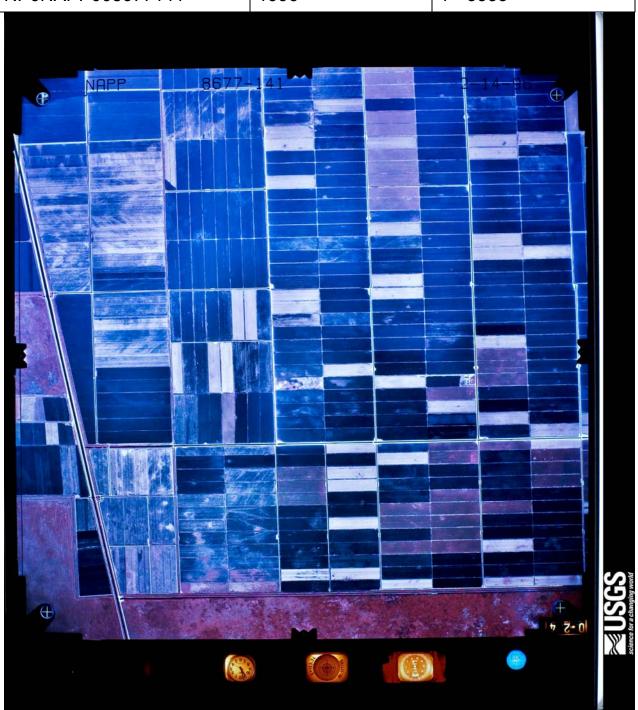


Photo ID	Date	Scale
NP0NAPP008677103	1996	1"=3333'

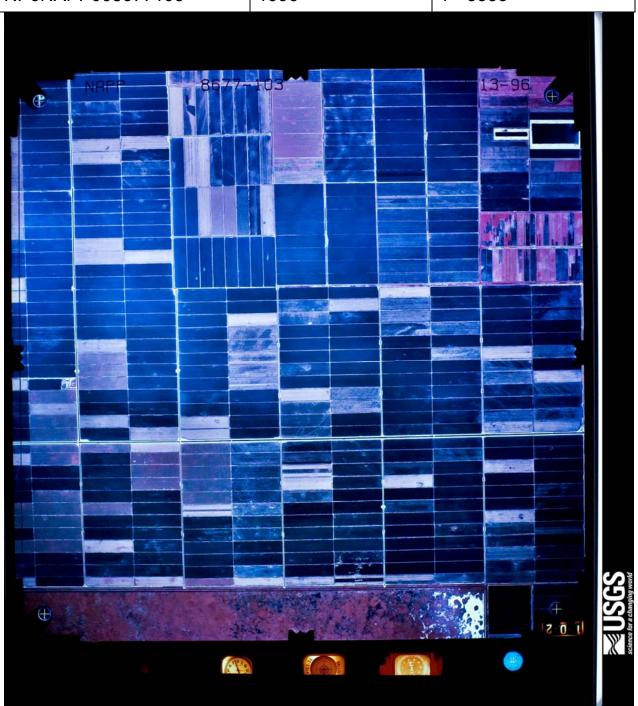


Photo ID	Date	Scale
NC1NHAP840401110	1986	1"=4833' 50% cov w

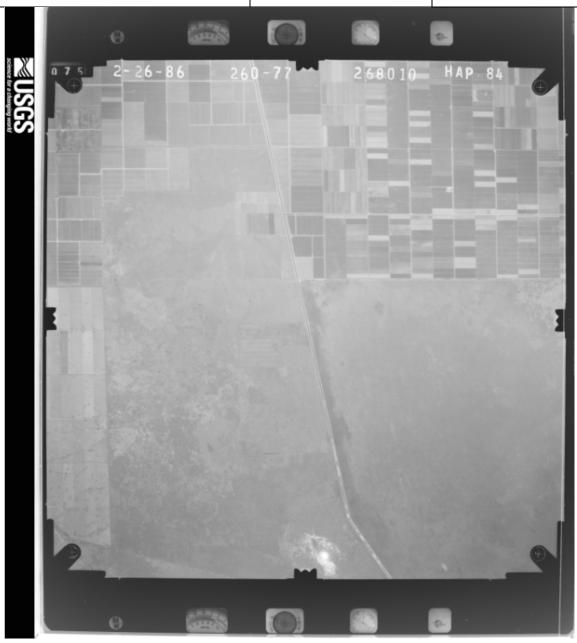


Photo ID	Date	Scale
NC1NHAP840043072	1984	1"=6666'

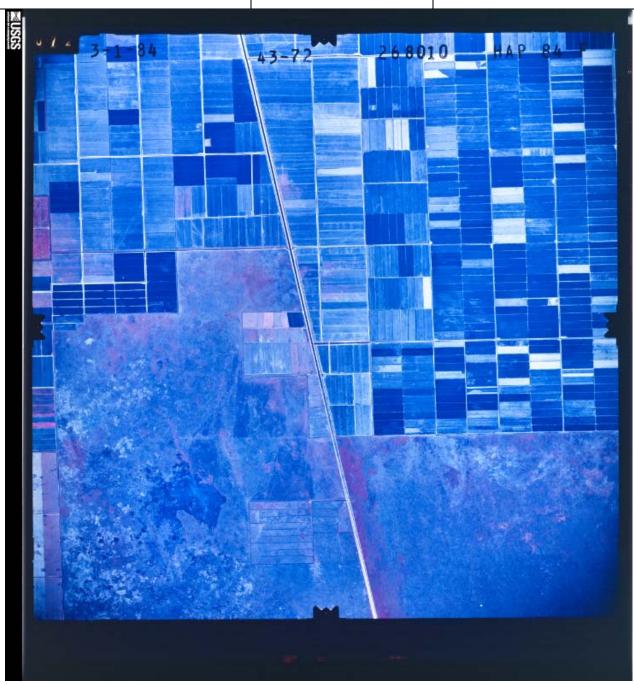


Photo ID	Date	Scale
NC1NHAP840043235	1984	1"=6666'

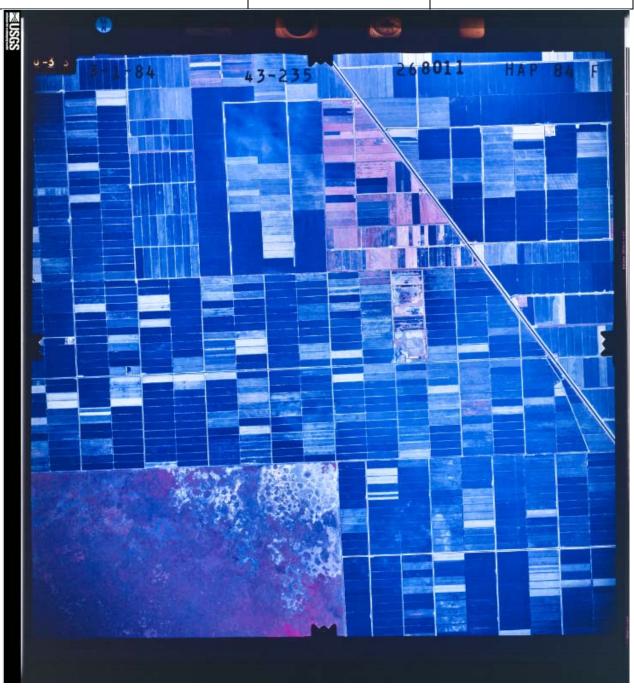


Photo ID	Date	Scale
AR1VEOR00150185	1980	1"=6666'



Photo ID	Date	Scale
AR1VEOR00190028	1980	1"=6666'

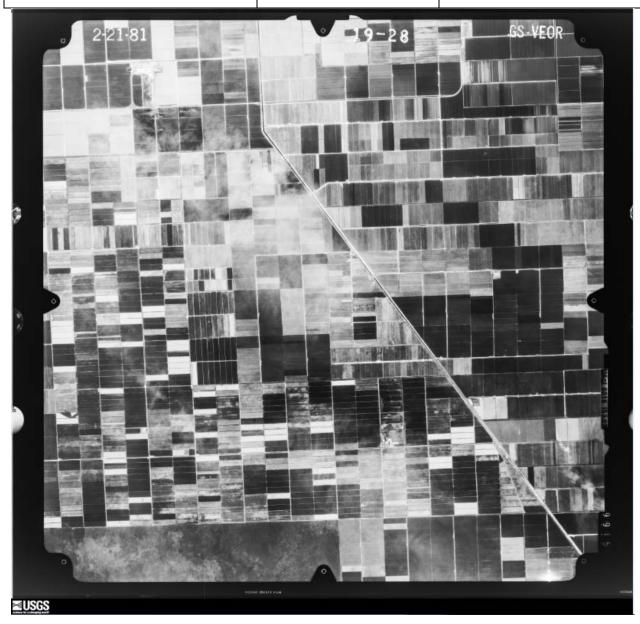


Photo ID	Date	Scale
AR1VEOR00140219	1979	1"=6666' 40% cov se

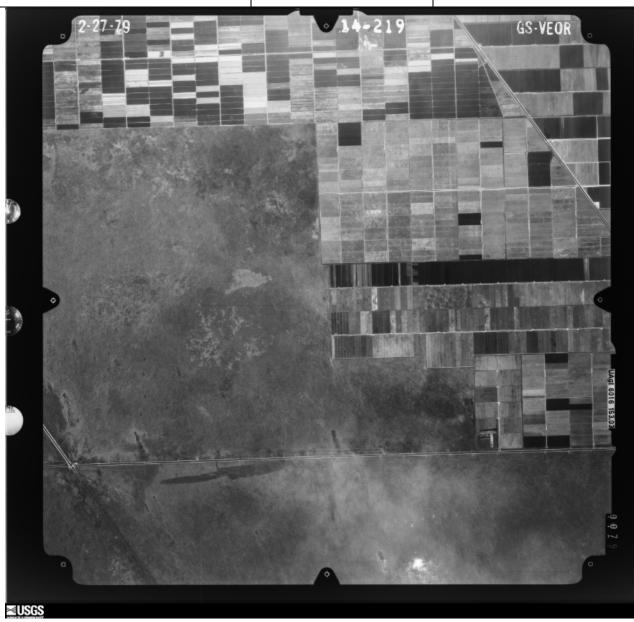


Photo ID	Date	Scale
AR1SWEO00050099	1971	1"=6850'



Photo ID	Date	Scale
AR1SWEO00030005	1971	1"=6850'

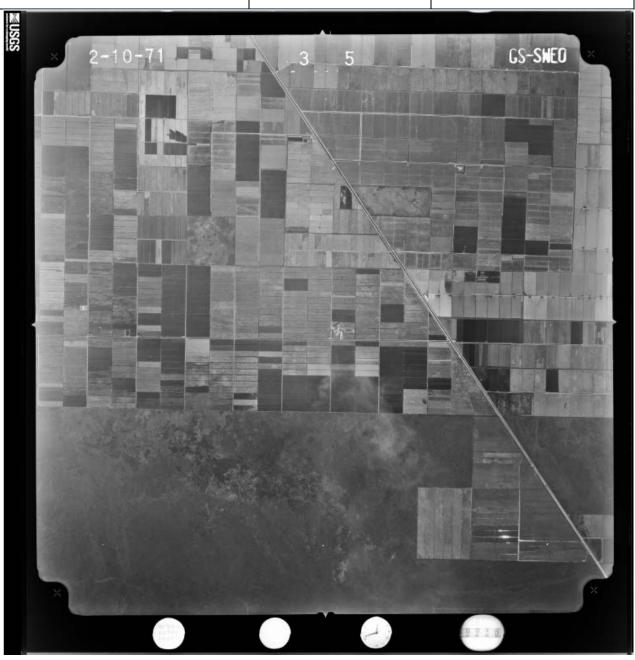


Photo ID	Date	Scale
AR1SWDA00020024	1970	1"=2000' 40% cov w

Photo ID	Date	Scale
AR1VCHV00010342	1969	1"=2000' 55% cov e

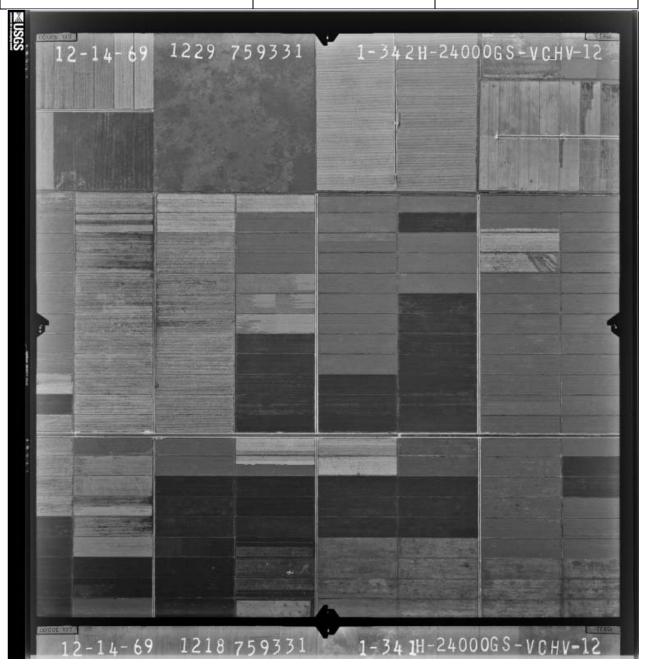


Photo ID	Date	Scale
AR1VCHV00010380	1969	1"=2000'

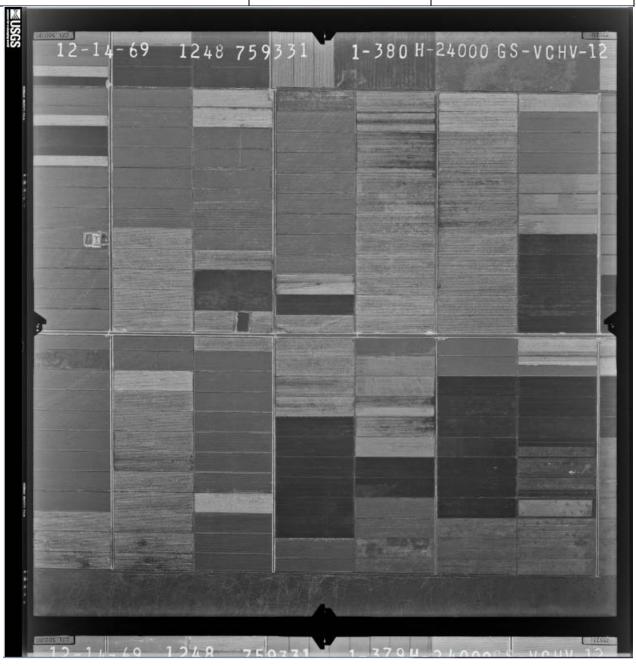


Photo ID	Date	Scale
AR1VCHV00010379	1969	1"=2000'

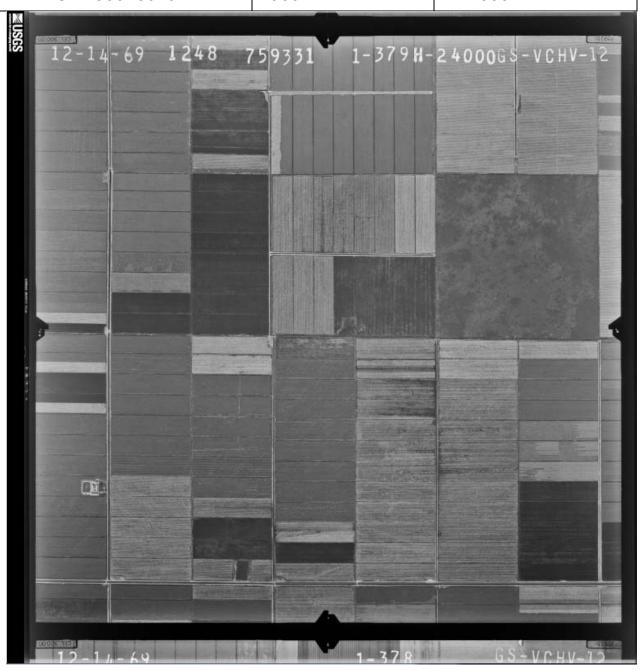


Photo ID	Date	Scale
AR1VCHV00010381	1969	1"=2000'

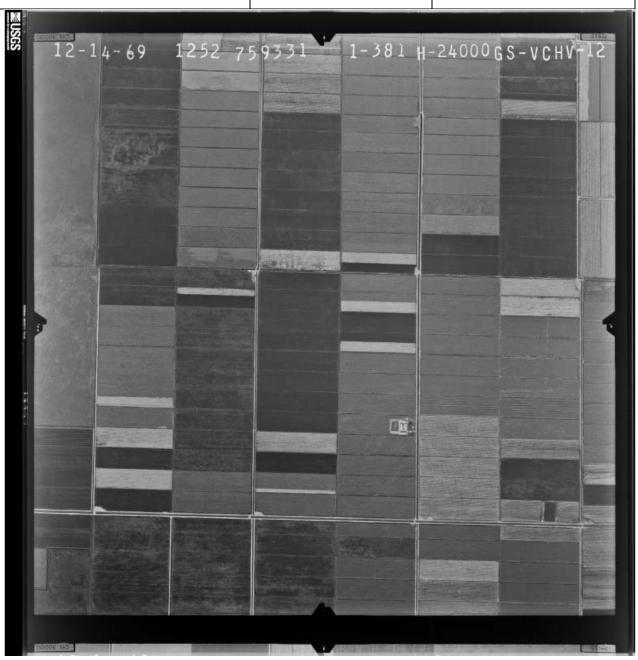


Photo ID	Date	Scale
ARB590310030253	1960	1"=3333' 60% cov w

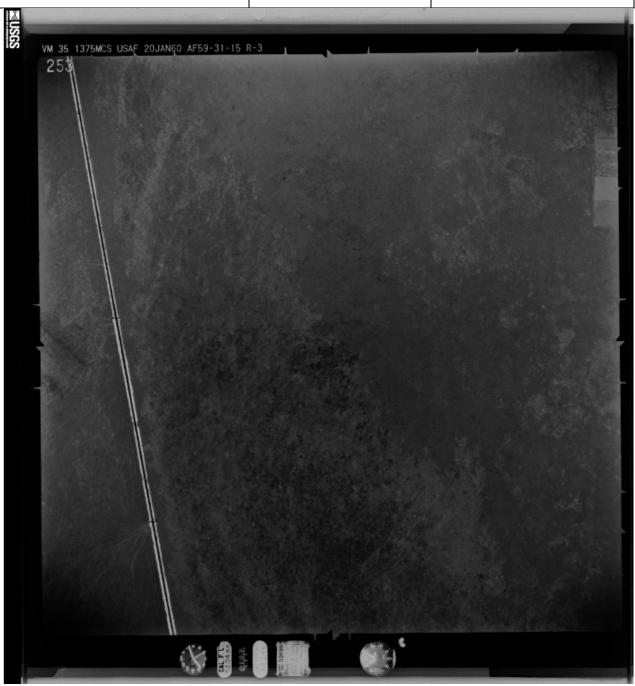


Photo ID	Date	Scale
AR1VYM000010034	1957	1"=1966 60% cov n



Photo ID	Date	Scale
AR1VYM000010037	1957	1"=1966'

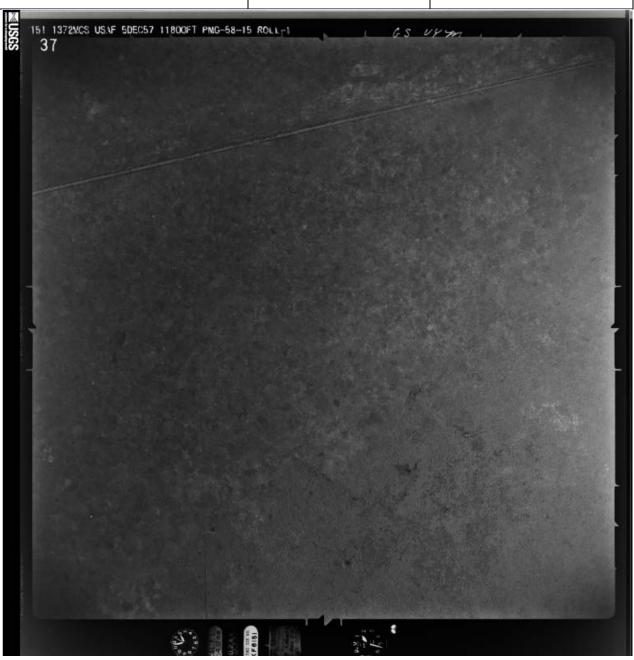


Photo ID	Date	Scale
AR1VYM000010036	1967	1"=1966'

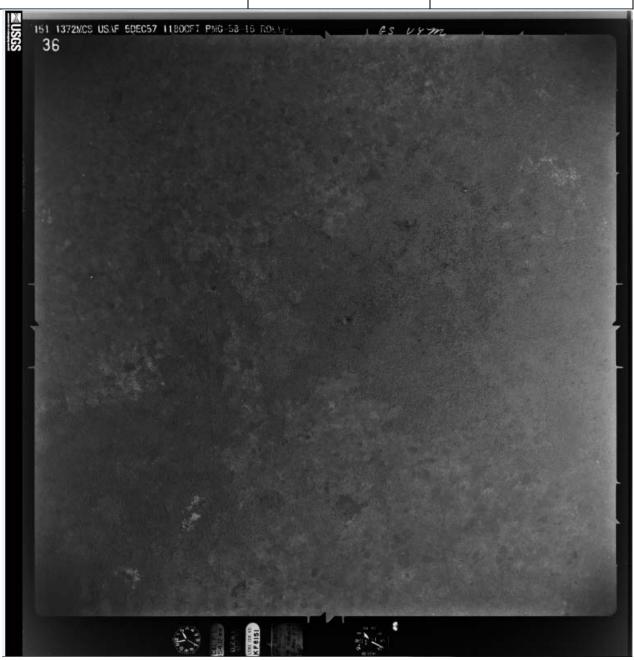


Photo ID	Date	Scale
AR1VYM000010032	1967	1=1966'

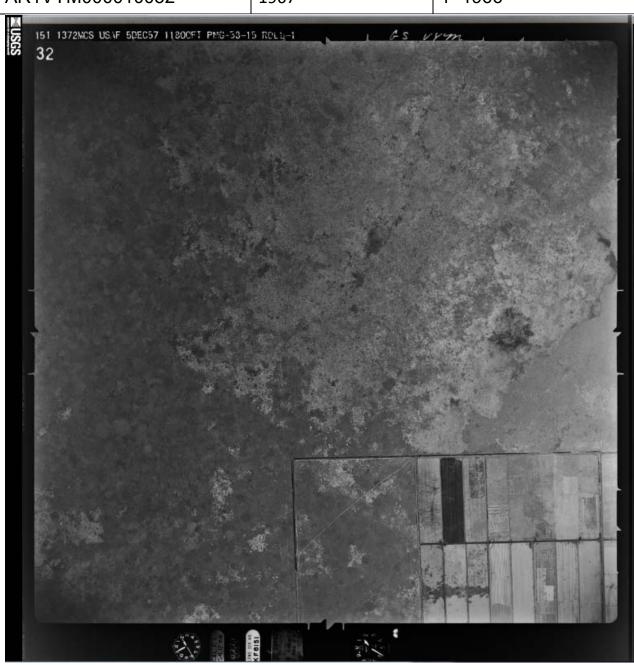


Photo ID	Date	Scale
AR1SU0000120031	1953	1"=1966' 99% cov n

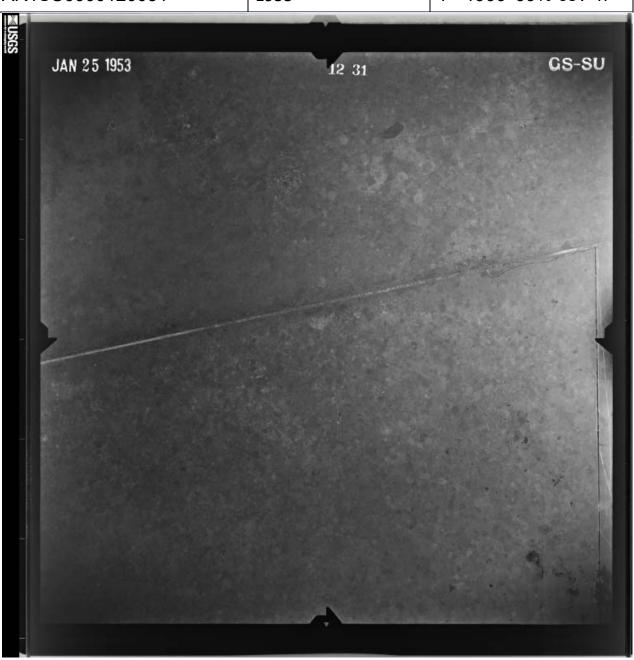


Photo ID	Date	Scale
AR1SU0000120033	1953	1"=1966'

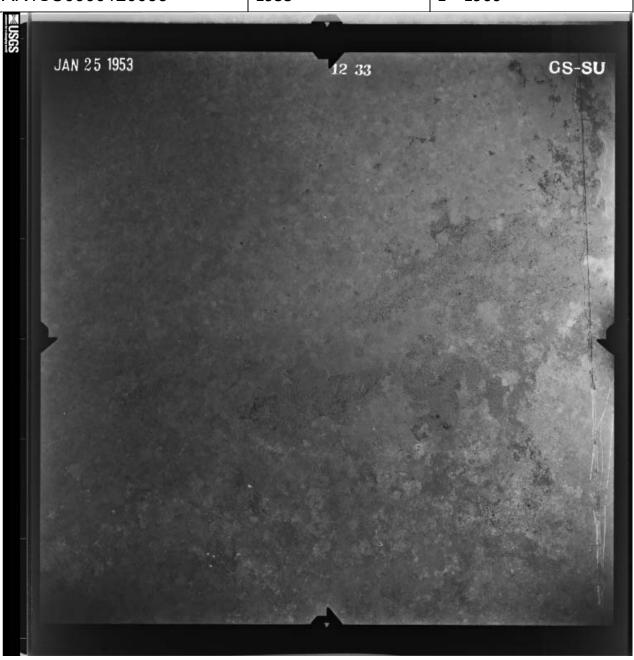


Photo ID	Date	Scale
AR1SU0000110026	1953	1"=1966'

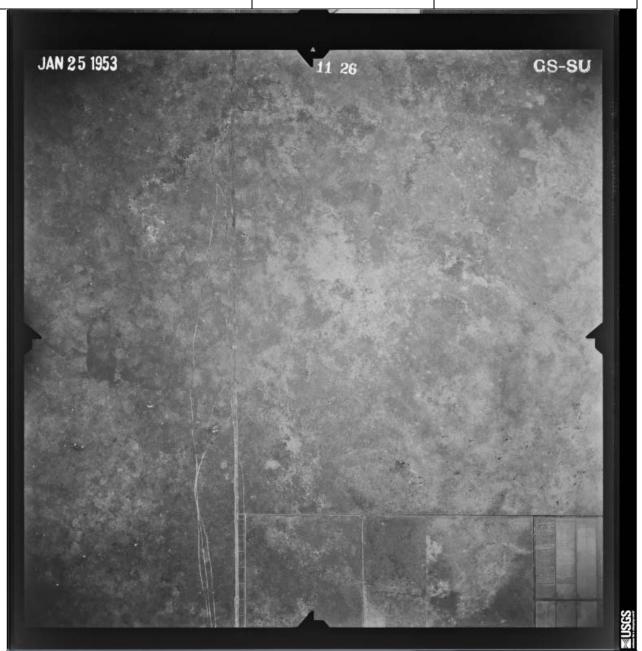


Photo ID	Date	Scale
AR1SU0000120034	1953	1"=1966'

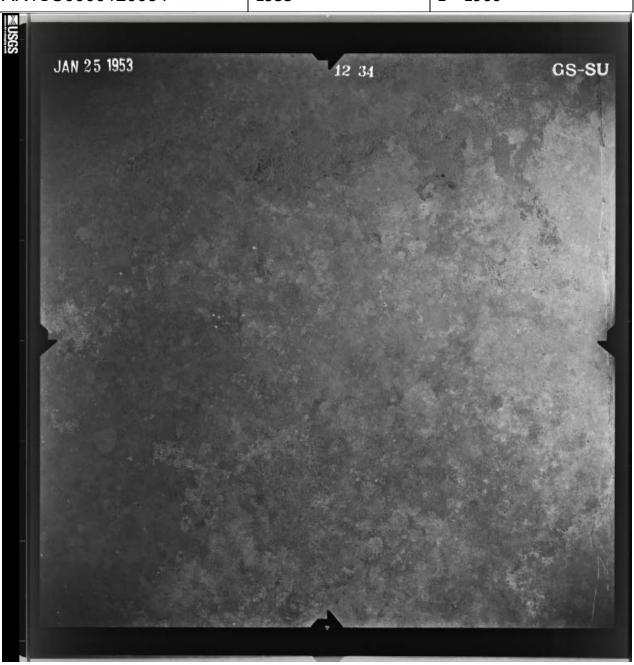


Photo ID	Date	Scale
AR1SU0000120036	1953	1"=1966'

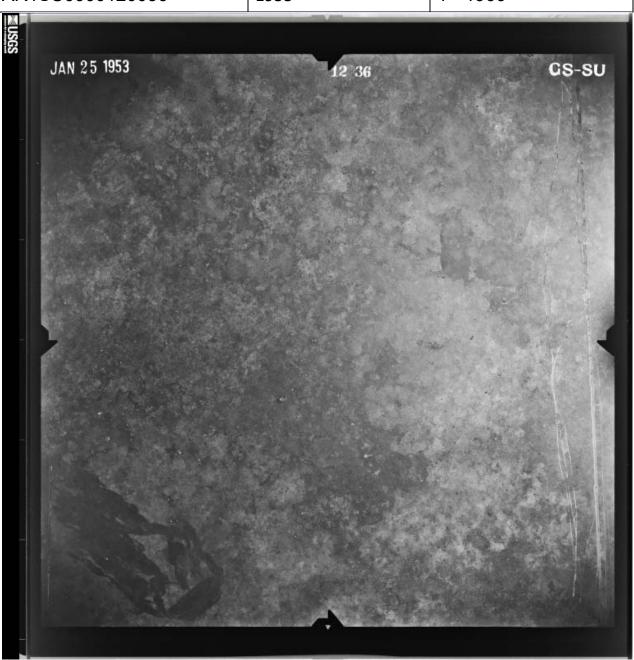


Photo ID	Date	Scale
AR1SU0000110029	1953	1"=1966'

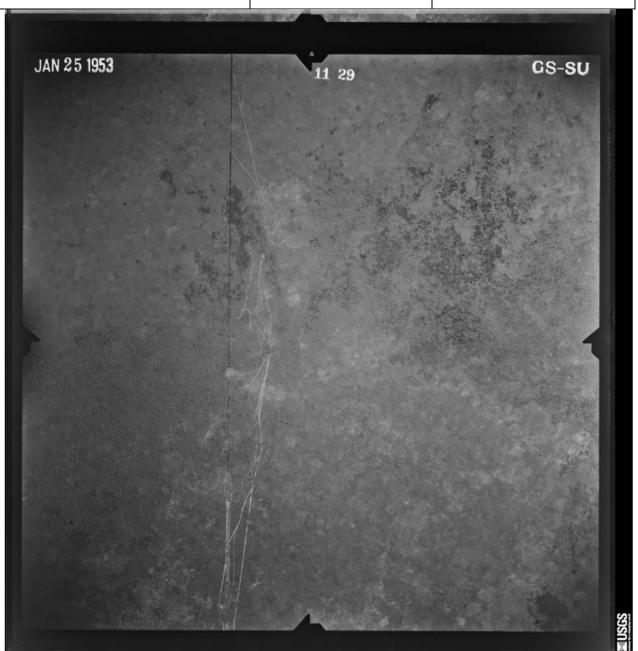


Photo ID	Date	Scale
AR1SU0000110028	1953	1"=1966'

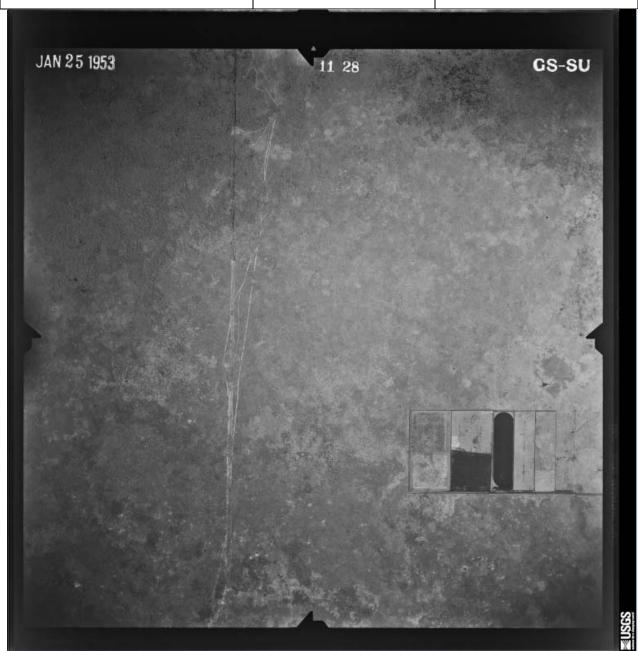


Photo ID	Date	Scale
AR1SU0000040053	1952	1"=1966' 20% cov s

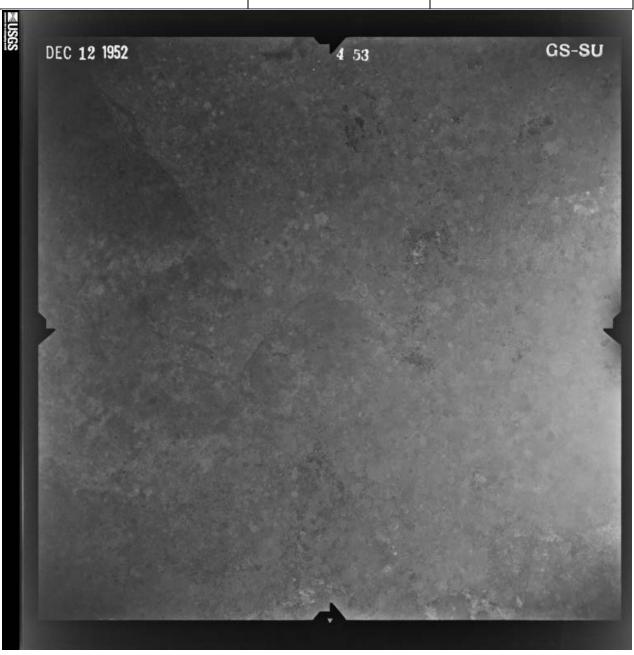


Photo ID	Date	Scale
AR1SU0000040049	1952	1"=1966'



Photo ID	Date	Scale
AR1SU0000040055	1952	1"=1966'

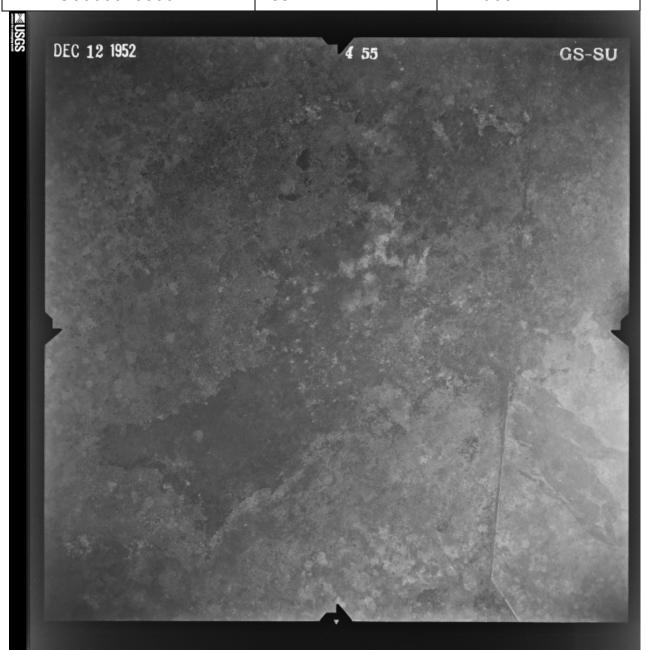


Photo ID	Date	Scale
AR1SU0000040051	1952	1"=1966'

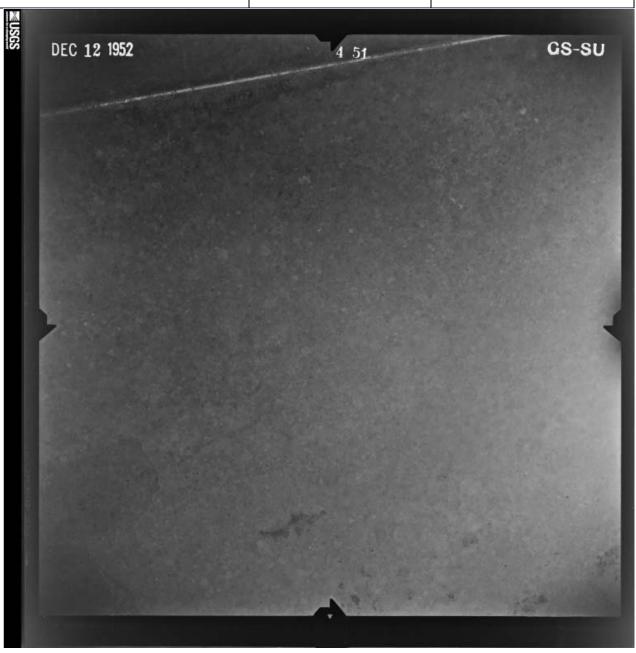


Photo ID	Date	Scale
ARA007111016092	1950	1"=4750' 90% cov e

