MANATEE COUNTY
FLORIDA

May 21, 2013

TO: All Interested Bidders

SUBJECT: Invitation for Bids #13-0773CD
US 301 @ Fort Hamer Road Intersection Improvements

ADDENDUM #3

Bidders are hereby notified that this Addendum shall be acknowledged on page 00300-1 of the Bid Form and made a part of the above named bidding and contract documents. Bids submitted without acknowledgment of the Addendum will be considered incomplete.

The following items are issued to add to, modify, and clarify the bid and contract documents. These items shall have the same force and effect as the original bidding and contract documents, and cost involved shall be included in the bid prices. Bids to be submitted on the specified bid date, shall conform to the additions and revisions listed herein.

1. **ADD** the Limited Phase II Environmental Site Assessment report for the Fort Hamer Road & US 301 Intersection Improvement Project dated November 2010 that is attached to this Addendum #3 to the Bid Documents.
2. **DELETE** the Tree Removal Permit paragraph on page 18 of the Contract Documents.
3. **CLARIFICATION** of Well Abandonment listed in the Technical Special Provisions:

   There are a total of nine (9) wells to be abandoned: six (6) monitoing wells (MW-4R,MW-6R, MW-9, MW-20, MW-22, MW-23), one (1) deep monitoring well (DW-1), and two (2) potable water wells. Please refer to the well exhibits that are attached to this Addendum #3 for well locations and depth information.
4. **CLARIFICATION** of Contaminated Site Activity and Well Abondonment permit requrements listed in the Technical Special Provisions:

   Any NPDES concerns need to be routed to 813-632-7600, Jorge Perez at extension 312 or Cindy Zhang-Torres at extension 410.

   For abandoning water wells, Contractors need to follow the instructions in the permit application to abandon water wells: State of Florida Permit Application to Construct, Repair, Modify, or Abandon a Well (LEG-R.040.01 (June 2010) 40D-3.101(1), F.A.C.). They can obtain the permit application at the following SWFWMD web address:

   http://www.swfwmd.state.fl.us/permits/wellconstruction/

Financial Management Department –Purchasing Division
1112 Manatee Avenue West, Suite 803, Bradenton, FL 34205
PHONE: 941.749.3014 * FAX: 941.749.3034
www.mymanatee.org

5. **ADD** the following **CRUSHED CONCRETE ARTICLE** to the Special Provisions of the Contract Documents:

CRUSHED CONCRETE BASE (OPTIONAL SUB BASE FOR COUNTY ROW ONLY)

Crushed Concrete Base shall follow FDOT Standard Specifications 2007 (rev 8-07) except that the Lime Rock Bearing Ratio (LBR) shall be minimum 150. The layer coefficient of 0.18 with LBR minimum150 is allowed to calculate the base thickness.

Only FDOT certified piles are acceptable to this project. The producing process certified by FDOT without the actual pile certified is not considered solid enough for the acceptance of the material. The Contractor shall send the Engineer the delivery tickets with FDOT certified pile number, pile location, project name and manufacturer's contact information shown.

Additional tests and pile inspections will be required for the quality control and the Contractor will be responsible for the cost of the initial ten tests and any re-tests when needed. The material will be rejected by the County if the initial test fails. The rejected material shall be completely removed from the project site.

1) Regarding structural number on Crushed Concrete Base, Manatee County to approve SN0.18 if following criteria is met and maintained:

A) Limerock Bearing Ratio value of 150 or greater 10" compacted thickness in place.

B) Gradation conforms to FDOT Specifications 2007 (rev 8-07).

C) Deleterious materials conform to FDOT Specifications 2007 (rev 8-07).

D) Delivery ticket indicates FDOT approved source, actual lot allocated to a particular project.

E) Piles or lots to be inspected by Manatee County representative prior to acceptance.

2) Regarding Limerock Bearing Ratio value:

A) No Limerock Bearing Ratio value less than 150, with no under tolerance.

3) Regarding source approval:

A) FDOT approved source, allocated lot sufficient to serve project's needs, delivery tickets stating FDOT approved source, project name, FDOT preapproved lot or pile number.

4) Regarding deleterious materials:

A) Deleterious material content in addition to the FDOT Specifications2007 (rev 8-07) should state that no construction debris such as Styrofoam insulation, telephone wire, lumber, shingles, aluminum window or door frames etc., or household trash ie: bottles, cans, paper goods etc. is acceptable.

CRUSHED CONCRETE BASE (Continued)

5) Material source inspection:

A) Prior to acceptance of base product, a representative of Manatee County will visit the Producer's location and obtain a sample of the proposed base for the specified project. In addition to sampling, the pile will be visually inspected for deleterious materials, substantial segregation, or any other undesirable characteristics. The pile shall have a traceable identification by pile number or lot number and an accurate quality assessment.

6) Import and placement of base product:

A) During import of base product, a County Inspector or duly designated representative of the county will be onsite monitoring incoming loads, making visual assessments of the product and checking load tickets for verification of materials.

7) Import and placement of base product:

A) After spreading out, prior to compacting, samples of the base product will be obtained by Manatee County approved testing lab, every 500 LF staggering right, left, center of the roadway for Limerock Bearing Ratio, gradation and deleterious material testing.

8) Rejection of materials:

A) Material not meeting above requirements will be subject to rejection and be removed from the project site. Any three (3) concurrent rejections will require immediate shut down of imported material and require review and remedies prior to restart.

9) Compaction of material:

A) In place material should be a minimum of 10" in compacted thickness and achieve 98% of AASHTO T-180 compaction.

6. **CHANGE** Article E.5, Dewatering System Operation, on page 17-7 of the Technical Special Provisions to read as follows:

Payment for the dewatering system operation including incidental work will be based on the Day price for the Dewatering System Operation Bid Item # 64.

7. **CHANGE** Article TSP-2.B, Basis of Payment, on page 17-8 of the Technical Special Provisions to read as follows:

The basis of payment and method of measurement for well abandonment shall be based on the Day price for the Well Abandonment Bid Item #67.

8. **DELETE** Sheet Numbers 1,18,34,51,54,71 of the Plan Set and **INSERT** the revised Sheet Numbers 1,18,34,51,54,71 of the Plan Set that are atteched to this Addendum #3.

9. **DELETE** Bid Form pages 00300-2 thru 00300-11 and **INSERT** the REVISED Bid Form pages 00300-2 thru 00300-11 that are attached to this Addendum #3.

The following questions have been asked regarding this IFB:

QUESTION #1: Reference specification section SPECIAL TERMS AND CONDITIONS, page 14, POST CONSTRUCTION STORM PIPE TESTING, this paragraph speaks only to televising the newly constructed storm pipe and no mention of laser profiling as the F.D.O.T. specifications require, please confirm that we do not have to laser profile the pipe.

RESPONSE #1: Laser profiling of all storm sewer pipe will be required per section 430-4.8 of the specifications.

QUESTION #2: Reference specification section SPECIAL PROVISIONS, page 5, GUARANTEE, here we are told the guarantee period is 12 (twelve) months, in the Information For Bidders section 00030, page 00030-3, par. C.07, WARRANTY AND GUARANTEE PROVISIONS, the guarantee period is for 3 (three) years, which is correct? It makes a difference if we do not have to purchase an additional 2 (two) year warranty bond.

RESPONSE #2: The minimum Warranty period shall be three (3) years.

QUESTION #3: The bid item for Turnout Construction; 727 SY – a review of the plans indicates some of these turnouts will be concrete and some are asphalt. Can a bid item & quantity be determined for concrete locations allowing for consistency in the materials used in case there is a change in quantity of this item?

RESPONSE #3: The Pay Item No. 524-3 for Sidewalk Concrete, 6" Thick is the pay item for concrete driveways. The Pay Item 286-1 for Turnout Construction is the pay item for the asphalt driveway turnouts.

QUESTION #4: Also in regards to the Turnout Construction; please confirm that the proposed thickness is as per FDOT std specification 515, sheet 6.

RESPONSE #4: The Turnout Construction for asphalt driveways will be as indicated in FDOT Design Standards Index 515, Sheets 5 and 6.

QUESTION #5: Sheet 39 shows the 60th Street East and Doris Road connections to US 301 will be removed and indicate a cul-de-sac will be constructed. A review of sheet 19 and 72 however, show the US 301 connections are removed, but a Y-type turnaround is proposed for 60th Street E and a Dead End barricade for Doris Road. Please clarify what is required at these two locations and provide a typical section for roadway construction.

RESPONSE #5: The pavement design for the Ft. Hamer Road is to be used for the cul-de-sacs. Sheet 39 is the soil survey sheet from the soil report and is not to be used to construct the roadway improvements. Sheet 19 (Plan & Profile) and Sheet 72 (S&PM) are consistent with each other and will be used to control the roadway construction.

QUESTION #6: A review of the FDOT driveway permit does not state there are any lane closure restrictions on US 301. Can the County clarify if the work on US 301 can occur during the daytime or what lane restrictions will be enforced during construction?

RESPONSE #6: The Plan sheets have been updated to indicate the lane closure restrictions along US301- see item #6 of Addendum #3 above.

QUESTION #7: The Soils report indicates that organic soil was encountered at Station 14+00, 30' RT and Station 22+00, 30' LT @ 4-5' depth. What are the expected limits (width, length and depth) of the subsoil excavation that calculate to the 200 cy bid item quantity shown?

RESPONSE #7: The limits will be determined in the field and payment for this item will be based on field measurements.

QUESTION #8: For the Remediation of Soil items; please provide the limits and calculations for the Soil excavation (1000 cy) and Impacted soil (75 tn).

RESPONSE #8: The limits will be determined in the field and payment for this item will be based on field measurements.

QUESTION #9: Are the existing monitoring wells to be left in place; ie protected during the excavation work?

RESPONSE #9: See item #3 above for monitoring wells that the Contractor is to abandon. All other monitoring wells on private property are to remain undisturbed.

QUESTION #10: For the relocated light poles proposed along US 301; is the contractor to maintain the lights operational at all times (via temporary lighting) or can the lights be taken out of service during the removal and relocation period?

RESPONSE #10: The FDOT has indicated that the existing lighting along US 301 is to be maintained so existing lights shall not be removed until new or temporary lights are functioning.

QUESTION #11: It was stated during the pre-bid meeting that the County will be completing all of the structure demolition shown on the roadway plans prior to this contract start. Does this include existing drainfields, septic tanks and fencing/gates? Does it also include concrete sidewalks, driveways and parking areas?

RESPONSE #11: The County hired demolition contractor will be removing the following items from three properties as follows: 12104 US 301 (Herrera Property)- Demo contractor to remove garage structure, truck body, existing tires, poultry barn with concrete slab, and concrete slab South of the building, Fill to grade and sod only in the bldg footprint, and remove all manmade trash and debris. 5751 Ft Hamer Road (Marsh Property)- Demo contractor to remove house, pool and cage, wooden shed to the South of the house, concrete drive, septic tank and drain field. 5851 Ft Hamer Road (Marsh Property)- Demo Contractor will remove the drain field.

QUESTION #12: Have the affected utility owners been advised of the project and if so, are there utility relocation schedules that can be provided to the proposed bidders?

RESPONSE #12: The utility coordination was performed for the project. The dispositions of existing and proposed utility relocations are reflected in the Utility Adjustment Sheets. The contractor will take over utility coordination during construction per Special Provisions. The utility companies do not provide Manatee County relocation schedules so there are not any available.

QUESTION #13: Sheet 16; it appears that the cross hatch designating milling and resurfacing was omitted from the Westbound lanes of US 301. Please confirm that this section of US 301 is to be milled and resurfaced as per the typical section.

RESPONSE #13: The Contractors shall construct US 301 improvements as shown on Sheets 18, 19, 20 and 21. Not as shown on Sheet 16 which is for the Ft. Hamer Road improvements.

QUESTION #14: Are "all" of the Oak Trees shown in the Right of Way to be removed or it is the County's intent to try and save some of the trees which will not be affected by the Construction.

RESPONSE #14: Unless otherwise indicated on plans, all trees (including oaks) shown in the Right of Way are to be removed. Plan and profile sheets show trees with trunk diameter greater than 4-inches. Trees and brush with trunk diameters less than 4-inches and within the Right of Way shall also be removed.

QUESTION #15: Technical Special Provisions TSP 1-D-3 mentions that the soils to be removed offsite are to be taken to a thermal treatment facility. May a properly licensed landfill be an acceptable alternative to the thermal treatment facility? Considering the dumping fees associated with a treatment facility, a landfill would be very economical.

RESPONSE #15: The contaminated soil can be disposed at any facility that has been approved by DEP to receive contaminated soil.

QUESTION #16: Some questions on the bid docs: 1. After the site visit, clarification is needed as to what will be left on-site after the demolition? a. Which structures will be left standing? b. Any septic systems? c. Wells?

RESPONSE #16: See response to Question #11 above for items that will be demolished by the County's demolition contractor.

QUESTION #17: As to the plans: a. Sheet 5 – Existing structure details: i. Grate inlets 11, 12 and 13 and pipes 17, 18 and 19 are said to be removed "by others".

RESPONSE #17: Survey was completed prior to US-301 project by FDOT, which was to remove these pipes and structures. See attached image for pipes and structures to be removed (marked in red). As final disposition of pipes and structures was not verified by survey, Contractor shall field verify that they have been removed.

QUESTION #18: 1. Part of demolition? ii. Existing pipes, sht 5 – can't find #14, #15, #16?

RESPONSE #18: No, existing pipes are north of construction limits on Ft. Hamer Road and are to remain.

QUESTION #19: 1. Part of demolition? iii. Existing structures, sht 5 - #806 – remove structure P-5? Calls for plug?

RESPONSE #19: Yes, P-5 inlet # 806 shall be removed. The pipe shall be plugged and filled with flowable fill.

END OF ADDENDUM #3

Bids will be received at Manatee County Purchasing, 1112 Manatee Avenue West, Bradenton, Florida 34205 until **Wednesday, May 29, 2013 at 3:00 PM.**

Sincerely,

Melissa M. Wendel, CPPO
Purchasing Official

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "A" Based on Completion Time of 300 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
			ROADWAY				
1	101-1		Mobilization	LS	1	$ _____	$ _____
2	102-1		Maintenance of Traffic	LS	1	$ _____	$ _____
3	102-3		Commercial Material for Driveway Maintenance	CY	100	$ _____	$ _____
4	104-10-3		Sediment Barrier	LF	5,823	$ _____	$ _____
5	104-11		Floating Turbidity Barrier	LF	101	$ _____	$ _____
6	104-15		Soil Tracking Prevention Device	EA	2	$ _____	$ _____
7	104-18		Inlet Protection System	EA	40	$ _____	$ _____
8	107-1		Litter Removal And Disposal (calculate using performance sod area times project duration in days divided by 30 days)	AC	14.0	$ _____	$ _____
9	107-2		Mowing (calculate using performance sod area times project duration in days divided by 30 days)	AC	4.3	$ _____	$ _____
10	110-1-1		Clearing & Grubbing (9.5 Ac)	LS	1	$ _____	$ _____
11	110-4		Removal of Existing Concrete Pavement	SY	1,529	$ _____	$ _____
12	110-7-1		Mailbox	EA	5	$ _____	$ _____
13	120-1		Regular Excavation	CY	8,678	$ _____	$ _____
14	120-4		Subsoil Excavation	CY	200	$ _____	$ _____
15	120-6		Embankment	CY	7,538	$ _____	$ _____
16	121-70		Flowable Fill (Contigency)	CY	10	$ _____	$ _____
17	160-4		Type B Stabilization	SY	14,538	$ _____	$ _____
18	162-1-11		Prepared Soil Layer, 6"	SY	25,721	$ _____	$ _____
19	285-701		Optional Base, Base Group 1	SY	485	$ _____	$ _____
20	285-709		Optional Base, Base Group 9	SY	12,397	$ _____	$ _____
21	286-1		Turnout Construction	SY	727	$ _____	$ _____
22	327-70-6		Milling Exist Asph Pavt, 1 1/2" Avg Depth	SY	11,947	$ _____	$ _____
23	334-1-13		Superpave Asphaltic Conc, Traffic C (1-1/2")	TN	512	$ _____	$ _____
24	334-1-13		Superpave Asphaltic Conc, Traffic C (3")	TN	978	$ _____	$ _____

Bidder Name: _____

Authorized Signature: _____

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US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "A" Based on Completion Time of 300 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
25	337-7-33		Asphalt Concrete Friction Course, Traffic C, FC-12.5, Rubber (1.5")	TN	2,060	$ _____	$ _____
26	400-2-2		Concrete Class II, Endwalls	CY	6.9	$ _____	$ _____
27	425-1201		Inlets, Curb, Type 9, <10'	EA	1	$ _____	$ _____
28	425-1351		Inlets, Curb, Type P-5, <10'	EA	12	$ _____	$ _____
29	425-1361		Inlets, Curb, Type P-6, <10'	EA	5	$ _____	$ _____
30	425-1511		Inlets, Dt Bot, Type B, <10'	EA	1	$ _____	$ _____
31	425-1521		Inlets, Dt Bot, Type C, <10'	EA	1	$ _____	$ _____
32	425-1541		Inlets, Dt Bot, Type D, <10'	EA	2	$ _____	$ _____
33	425-1543		Inlets, Dt Bot, Type D, J Bot, <10'	EA	5	$ _____	$ _____
34	425-1579		Inlets, Ditch Bottom, Type G, Modify	EA	1	$ _____	$ _____
35	425-2-43		Manholes, P-7, Partial, <10'	EA	1	$ _____	$ _____
36	425-2-61		Manholes, P-8, <10'	EA	6	$ _____	$ _____
37	425-2-71		Manholes, J-7, <10'	EA	1	$ _____	$ _____
38	425-2-93		Manholes, J-8, Partial	EA	2	$ _____	$ _____
39	425-11		Modify Drainage Structure	EA	1	$ _____	$ _____
40	430-174-118		Pipe Culvert, Optional Material, Round, 18" SD	LF	94	$ _____	$ _____
41	430-174-230		Pipe Culvert, Optional Material, Other - Ellip/Arch, 30" SD (24"x38")	LF	47	$ _____	$ _____
42	430-175-115		Pipe Culvert, Optional Material, Round, 15" S/CD	LF	97	$ _____	$ _____
43	430-175-118		Pipe Culvert, Optional Material, Round, 18" S/CD	LF	694	$ _____	$ _____
44	430-175-124		Pipe Culvert, Optional Material, Round, 24" S/CD	LF	1,416	$ _____	$ _____
45	430-175-130		Pipe Culvert, Optional Material, Round, 30" S/CD	LF	59	$ _____	$ _____
46	430-175-230		Pipe Culvert, Optional Material, Other - Ellip/Arch, 30" S/CD (24"x38")	LF	244	$ _____	$ _____
47	430-175-236		Pipe Culvert, Optional Material, Other - Ellip/Arch, 36" S/CD (29"x45")	LF	435	$ _____	$ _____
48	430-175-242		Pipe Culvert, Optional Material, Other - Ellip/Arch, 42" S/CD (34"x53")	LF	471	$ _____	$ _____
49	430-982-133		Mitered End Sect, Optional Round, 30" CD	EA	1	$ _____	$ _____
50	430-984-125		Mitered End Sect, Optional Round, 18" SD	EA	5	$ _____	$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "A" Based on Completion Time of 300 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
51	430-984-633		Mitered End Sect, Optional / Ellip /Arch, 30" SD (24"x38" SD)	EA	3	$ _____	$ _____
52	430-830		Pipe Filling And Plugging - Place Out of Service	CY	8	$ _____	$ _____
53	520-1-7		Concrete Curb & Gutter, Type E	LF	1,027	$ _____	$ _____
54	520-1-10		Concrete Curb & Gutter, Type F	LF	1,967	$ _____	$ _____
55	522-1		Sidewalk Concrete, 4" Thick	SY	901	$ _____	$ _____
56	522-2		Sidewalk Concrete, 6" Thick	SY	255	$ _____	$ _____
57	524-3		Concrete Core Ditch Blocks	CY	27.8	$ _____	$ _____
58	530-3-4		Riprap, Rubble, F&I, Ditch Lining	TN	10	$ _____	$ _____
59	570-1-2		Performance Turf, Sod (Incl. Fert. And Water)	SY	25,721	$ _____	$ _____
			SUBTOTAL (ROADWAY ONLY)				$ _____
			REMEDIATION OF PETROLEUM IMPACTED SOIL AND GROUNDWATER				
			ACTIVITIES (all categories include labor, fuel, equipment & expendables)				
60	CON_1		Contaminated Soil Excavation - (includes loading of excavated soils)	CY	1,000	$ _____	$ _____
61	CON_2		Transport - Impacted Soil	TN	75	$ _____	$ _____
62	CON_3		Disposal - Impacted Soil	TN	75	$ _____	$ _____
63	CON_4		Dewatering System Installation: (specify # of points: _____) (system	LS	1	$ _____	$ _____
64	CON_5		Dewatering System Operation:	DAY	20	$ _____	$ _____
65	CON_6		Holding Tank (specify tank size: _____ gallons)	LS	1	$ _____	$ _____
66	CON_7		Mobilization	LS	1	$ _____	$ _____
67	CON_8		Well Abandonment	DAY	2	$ _____	$ _____
			SUBTOTAL (REMEDIATION OF PETROLEUM IMPACTED SOIL AND GROUNDWATER ONLY)				$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "A" Based on Completion Time of 300 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
			SIGNING AND MARKING				
68	700-20-11		Sign Single Post, F&I, Less Than 12 SF	AS	33	$ _____	$ _____
69	700-20-12		Sign Single Post, F&I, 12-20 SF	AS	4	$ _____	$ _____
70	700-20-40		Sign Single Post, Relocate	AS	3	$ _____	$ _____
71	700-20-60		Sign Single Post, Remove	AS	11	$ _____	$ _____
72	700-48-48		Sign Panels, Relocate, 15 Or Less	EA	4	$ _____	$ _____
73	700-48-58		Sign Panels, Replace, 15 Or Less	EA	2	$ _____	$ _____
74	705-10-1		Type I Object Marker	EA	2	$ _____	$ _____
75	705-10-4		Type 4 Object Marker	EA	5	$ _____	$ _____
76	706-3		Retro-Reflective Pavement Markers	EA	289	$ _____	$ _____
77	711-11-111		Thermoplastic, Standard, White, Solid, 6"	LF	6,811	$ _____	$ _____
78	711-11-122		Thermoplastic, Standard, White, Solid, 8"	LF	1,596	$ _____	$ _____
79	711-11-123		Thermoplastic, Standard, White, Solid, 12"	LF	137	$ _____	$ _____
80	711-11-124		Thermoplastic, Standard, White, Solid, 18"	LF	1,580	$ _____	$ _____
81	711-11-125		Thermoplastic, Standard, White, Solid, 24"	LF	91	$ _____	$ _____
82	711-11-131		Thermoplastic, Standard, White, Skip, 6"	LF	845	$ _____	$ _____
83	711-11-151		Thermoplastic, Standard, White, Dotted / Guideline / 6-10 Gap Extension, 6"	LF	459	$ _____	$ _____
84	711-11-160		Thermoplastic, Standard, White, Message	EA	8	$ _____	$ _____
85	711-11-170		Thermoplastic, Standard, White, Arrow	EA	23	$ _____	$ _____
86	711-11-211		Thermoplastic, Standard, Yellow, Solid, 6"	LF	6,917	$ _____	$ _____
87	711-11-224		Thermoplastic, Standard, Yellow, Solid, 18"	LF	153	$ _____	$ _____
88	711-11-260		Thermoplastic, Standard, Yellow, Dotted / Guideline / 6-10 Gap Extension, 6"	LF	302	$ _____	$ _____
			SUBTOTAL (SIGNING AND MARKING ONLY)				$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "A" Based on Completion Time of 300 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
			ROADWAY LIGHTING				
89	555-1-2		Directional Bore, 6" to less than 12"	LF	120	$ _____	$ _____
90	715-1-12		Lighting Conductors, F&I, insul. No. 6	LF	4,000	$ _____	$ _____
91	715-1-13		Lighting Conductors, F&I, insul. No. 4	LF	1,620	$ _____	$ _____
92	715-1-70		Lighting Conductors, Remove	LF	1,740	$ _____	$ _____
93	715-2-11		Conduit, F&I, Underground (Min. 2-inch Lighting Conduit at 1,820 LF and 3-inch Communication Conduit at 1,780 LF)	LF	3,600	$ _____	$ _____
94	715-4-123		Light Pole Complete, F&I, 130 MPH, 50'	EA	5	$ _____	$ _____
95	715-7-11		Load Center, F&I, Secondary Voltage	EA	1	$ _____	$ _____
96	715-14-11		Lighting, Pull Box, F&I, Roadside, Moulded	EA	13	$ _____	$ _____
97	715-14-51		Lighting, Pull Box, Remove, Roadside	EA	3	$ _____	$ _____
98	715-31-1		Lighting Routine Maintenance	LU	3	$ _____	$ _____
99	715-500-1		Pole Cable Distribution System, Conventional	EA	8	$ _____	$ _____
100	715-540-000		Light Pole Complete, Relocate	EA	3	$ _____	$ _____
101	783-5-1		Fiber Optic Pull Box	EA	2	$ _____	$ _____
102	783-6-1		Fiber Optic Splice Box	EA	3	$ _____	$ _____
			SUBTOTAL (ROADWAY LIGHTING ONLY)				$ _____
			DISCRETIONARY WORK (USED ONLY WITH COUNTY APPROVAL)				$200,000.00
			TOTAL PRICE FOR BID "A" - Based on Completion Time of <u>300</u> Calendar Days				$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "B" Based on Completion Time of 240 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
			ROADWAY				
1	101-1		Mobilization	LS	1	$ _____	$ _____
2	102-1		Maintenance of Traffic	LS	1	$ _____	$ _____
3	102-3		Commercial Material for Driveway Maintenance	CY	100	$ _____	$ _____
4	104-10-3		Sediment Barrier	LF	5,823	$ _____	$ _____
5	104-11		Floating Turbidity Barrier	LF	101	$ _____	$ _____
6	104-15		Soil Tracking Prevention Device	EA	2	$ _____	$ _____
7	104-18		Inlet Protection System	EA	40	$ _____	$ _____
8	107-1		Litter Removal And Disposal (calculate using performance sod area times project duration in days divided by 30 days)	AC	14.0	$ _____	$ _____
9	107-2		Mowing (calculate using performance sod area times project duration in days divided by 30 days)	AC	4.3	$ _____	$ _____
10	110-1-1		Clearing & Grubbing (9.5 Ac)	LS	1	$ _____	$ _____
11	110-4		Removal of Existing Concrete Pavement	SY	1,529	$ _____	$ _____
12	110-7-1		Mailbox	EA	5	$ _____	$ _____
13	120-1		Regular Excavation	CY	8,678	$ _____	$ _____
14	120-4		Subsoil Excavation	CY	200	$ _____	$ _____
15	120-6		Embankment	CY	7,538	$ _____	$ _____
16	121-70		Flowable Fill (Contigency)	CY	10	$ _____	$ _____
17	160-4		Type B Stabilization	SY	14,538	$ _____	$ _____
18	162-1-11		Prepared Soil Layer, 6"	SY	25,721	$ _____	$ _____
19	285-701		Optional Base, Base Group 1	SY	485	$ _____	$ _____
20	285-709		Optional Base, Base Group 9	SY	12,397	$ _____	$ _____
21	286-1		Turnout Construction	SY	727	$ _____	$ _____
22	327-70-6		Milling Exist Asph Pavt, 1 1/2" Avg Depth	SY	11,947	$ _____	$ _____
23	334-1-13		Superpave Asphaltic Conc, Traffic C (1-1/2")	TN	512	$ _____	$ _____
24	334-1-13		Superpave Asphaltic Conc, Traffic C (3")	TN	978	$ _____	$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "B" Based on Completion Time of 240 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
25	337-7-33		Asphalt Concrete Friction Course, Traffic C, FC-12.5, Rubber (1.5")	TN	2,060	$ _____	$ _____
26	400-2-2		Concrete Class II, Endwalls	CY	6.9	$ _____	$ _____
27	425-1201		Inlets, Curb, Type 9, <10'	EA	1	$ _____	$ _____
28	425-1351		Inlets, Curb, Type P-5, <10'	EA	12	$ _____	$ _____
29	425-1361		Inlets, Curb, Type P-6, <10'	EA	5	$ _____	$ _____
30	425-1511		Inlets, Dt Bot, Type B, <10'	EA	1	$ _____	$ _____
31	425-1521		Inlets, Dt Bot, Type C, <10'	EA	1	$ _____	$ _____
32	425-1541		Inlets, Dt Bot, Type D, <10'	EA	2	$ _____	$ _____
33	425-1543		Inlets, Dt Bot, Type D, J Bot, <10'	EA	5	$ _____	$ _____
34	425-1579		Inlets, Ditch Bottom, Type G, Modify	EA	1	$ _____	$ _____
35	425-2-43		Manholes, P-7, Partial, <10'	EA	1	$ _____	$ _____
36	425-2-61		Manholes, P-8, <10'	EA	6	$ _____	$ _____
37	425-2-71		Manholes, J-7, <10'	EA	1	$ _____	$ _____
38	425-2-93		Manholes, J-8, Partial	EA	2	$ _____	$ _____
39	425-11		Modify Drainage Structure	EA	1	$ _____	$ _____
40	430-174-118		Pipe Culvert, Optional Material, Round, 18" SD	LF	94	$ _____	$ _____
41	430-174-230		Pipe Culvert, Optional Material, Other - Ellip/Arch, 30" SD (24"x38")	LF	47	$ _____	$ _____
42	430-175-115		Pipe Culvert, Optional Material, Round, 15" S/CD	LF	97	$ _____	$ _____
43	430-175-118		Pipe Culvert, Optional Material, Round, 18" S/CD	LF	694	$ _____	$ _____
44	430-175-124		Pipe Culvert, Optional Material, Round, 24" S/CD	LF	1,416	$ _____	$ _____
45	430-175-130		Pipe Culvert, Optional Material, Round, 30" S/CD	LF	59	$ _____	$ _____
46	430-175-230		Pipe Culvert, Optional Material, Other - Ellip/Arch, 30" S/CD (24"x38")	LF	244	$ _____	$ _____
47	430-175-236		Pipe Culvert, Optional Material, Other - Ellip/Arch, 36" S/CD (29"x45")	LF	435	$ _____	$ _____
48	430-175-242		Pipe Culvert, Optional Material, Other - Ellip/Arch, 42" S/CD (34"x53")	LF	471	$ _____	$ _____
49	430-982-133		Mitered End Sect, Optional Round, 30" CD	EA	1	$ _____	$ _____
50	430-984-125		Mitered End Sect, Optional Round, 18" SD	EA	5	$ _____	$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "B" Based on Completion Time of 240 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
51	430-984-633		Mitered End Sect, Optional / Ellip /Arch, 30" SD (24"x38" SD)	EA	3	$ _____	$ _____
52	430-830		Pipe Filling And Plugging - Place Out of Service	CY	8	$ _____	$ _____
53	520-1-7		Concrete Curb & Gutter, Type E	LF	1,027	$ _____	$ _____
54	520-1-10		Concrete Curb & Gutter, Type F	LF	1,967	$ _____	$ _____
55	522-1		Sidewalk Concrete, 4" Thick	SY	901	$ _____	$ _____
56	522-2		Sidewalk Concrete, 6" Thick	SY	255	$ _____	$ _____
57	524-3		Concrete Core Ditch Blocks	CY	27.8	$ _____	$ _____
58	530-3-4		Riprap, Rubble, F&I, Ditch Lining	TN	10	$ _____	$ _____
59	570-1-2		Performance Turf, Sod (Incl. Fert. And Water)	SY	25,721	$ _____	$ _____
			SUBTOTAL (ROADWAY ONLY)				$ _____
			REMEDIATION OF PETROLEUM IMPACTED SOIL AND GROUNDWATER				
			ACTIVITIES (all categories include labor, fuel, equipment & expendables)				
60	CON_1		Contaminated Soil Excavation - (includes loading of excavated soils)	CY	1,000	$ _____	$ _____
61	CON_2		Transport - Impacted Soil	TN	75	$ _____	$ _____
62	CON_3		Disposal - Impacted Soil	TN	75	$ _____	$ _____
63	CON_4		Dewatering System Installation: (specify # of points: _____) (system	LS	1	$ _____	$ _____
64	CON_5		Dewatering System Operation:	DAY	20	$ _____	$ _____
65	CON_6		Holding Tank (specify tank size: _____ gallons)	LS	1	$ _____	$ _____
66	CON_7		Mobilization	LS	1	$ _____	$ _____
67	CON_8		Well Abandonment	DAY	2	$ _____	$ _____
			SUBTOTAL (REMEDIATION OF PETROLEUM IMPACTED SOIL AND GROUNDWATER ONLY)				$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "B" Based on Completion Time of 240 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
			SIGNING AND MARKING				
68	700-20-11		Sign Single Post, F&I, Less Than 12 SF	AS	33	$ _____	$ _____
69	700-20-12		Sign Single Post, F&I, 12-20 SF	AS	4	$ _____	$ _____
70	700-20-40		Sign Single Post, Relocate	AS	3	$ _____	$ _____
71	700-20-60		Sign Single Post, Remove	AS	11	$ _____	$ _____
72	700-48-48		Sign Panels, Relocate, 15 Or Less	EA	4	$ _____	$ _____
73	700-48-58		Sign Panels, Replace, 15 Or Less	EA	2	$ _____	$ _____
74	705-10-1		Type I Object Marker	EA	2	$ _____	$ _____
75	705-10-4		Type 4 Object Marker	EA	5	$ _____	$ _____
76	706-3		Retro-Reflective Pavement Markers	EA	289	$ _____	$ _____
77	711-11-111		Thermoplastic, Standard, White, Solid, 6"	LF	6,811	$ _____	$ _____
78	711-11-122		Thermoplastic, Standard, White, Solid, 8"	LF	1,596	$ _____	$ _____
79	711-11-123		Thermoplastic, Standard, White, Solid, 12"	LF	137	$ _____	$ _____
80	711-11-124		Thermoplastic, Standard, White, Solid, 18"	LF	1,580	$ _____	$ _____
81	711-11-125		Thermoplastic, Standard, White, Solid, 24"	LF	91	$ _____	$ _____
82	711-11-131		Thermoplastic, Standard, White, Skip, 6"	LF	845	$ _____	$ _____
83	711-11-151		Thermoplastic, Standard, White, Dotted / Guideline / 6-10 Gap Extension, 6"	LF	459	$ _____	$ _____
84	711-11-160		Thermoplastic, Standard, White, Message	EA	8	$ _____	$ _____
85	711-11-170		Thermoplastic, Standard, White, Arrow	EA	23	$ _____	$ _____
86	711-11-211		Thermoplastic, Standard, Yellow, Solid, 6"	LF	6,917	$ _____	$ _____
87	711-11-224		Thermoplastic, Standard, Yellow, Solid, 18"	LF	153	$ _____	$ _____
88	711-11-260		Thermoplastic, Standard, Yellow, Dotted / Guideline / 6-10 Gap Extension, 6"	LF	302	$ _____	$ _____
			SUBTOTAL (SIGNING AND MARKING ONLY)				$ _____

Bidder Name: _____

Authorized Signature: _____

BID FORM

(Submit in Triplicate) Section 00300

US 301 @ FORT HAMER ROAD INTERSECTION IMPROVEMENTS

Bid "B" Based on Completion Time of 240 Calendar Days

PAY ITEM NO.	FDOT ITEM NUMBER		DESCRIPTION	UNITS	QTY.	BID PRICE PER UNIT ($)	TOTAL BID PRICE ($)
			ROADWAY LIGHTING				
89	555-1-2		Directional Bore, 6" to less than 12"	LF	120	$ _____	$ _____
90	715-1-12		Lighting Conductors, F&I, insul. No. 6	LF	4,000	$ _____	$ _____
91	715-1-13		Lighting Conductors, F&I, insul. No. 4	LF	1,620	$ _____	$ _____
92	715-1-70		Lighting Conductors, Remove	LF	1,740	$ _____	$ _____
93	715-2-11		Conduit, F&I, Underground (Min. 2-inch Lighting Conduit at 1,820 LF and 3-inch Communication Conduit at 1,780 LF)	LF	3,600	$ _____	$ _____
94	715-4-123		Light Pole Complete, F&I, 130 MPH, 50'	EA	5	$ _____	$ _____
95	715-7-11		Load Center, F&I, Secondary Voltage	EA	1	$ _____	$ _____
96	715-14-11		Lighting, Pull Box, F&I, Roadside, Moulded	EA	13	$ _____	$ _____
97	715-14-51		Lighting, Pull Box, Remove, Roadside	EA	3	$ _____	$ _____
98	715-31-1		Lighting Routine Maintenance	LU	3	$ _____	$ _____
99	715-500-1		Pole Cable Distribution System, Conventional	EA	8	$ _____	$ _____
100	715-540-000		Light Pole Complete, Relocate	EA	3	$ _____	$ _____
101	783-5-1		Fiber Optic Pull Box	EA	2	$ _____	$ _____
102	783-6-1		Fiber Optic Splice Box	EA	3	$ _____	$ _____
			SUBTOTAL (ROADWAY LIGHTING ONLY)				$ _____
			DISCRETIONARY WORK (USED ONLY WITH COUNTY APPROVAL)				$200,000.00
			TOTAL PRICE FOR BID "B" - Based on Completion Time of <u>240</u> Calendar Days				$ _____

Bidder Name: _____

Authorized Signature: _____

CONTRACT DRAWINGS

US 301 (SR 43) AND FT. HAMER ROAD INTERSECTION IMPROVEMENTS

(FROM BRITT ROAD TO US 301)

FOR

MANATEE COUNTY, FLORIDA

COUNTY PROJECT NUMBER: 6061960

RELATED STANDARDS AND SPECIFICATIONS

DESCRIPTION

A. MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION, AND MAINTENANCE FOR STREETS AND HIGHWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION, (FLORIDA GREEN BOOK), (2010),

B. FDOT DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM, (JANUARY 2012),

C. AASHTO, GUIDE FOR PLANNING, DESIGN, AND OPERATION OF PEDESTRIAN FACILITIES, (2004),

D. FHWA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD), (2009),

E. CHAPTER 14-96 AND 14-97, FLORIDA ADMINISTRATIVE CODE RULE FOR FDOT CONNECTION PERMIT.

F. CHAPTER 14-86, FLORIDA ADMINISTRATIVE CODE RULE FOR FDOT DRAINAGE PERMIT.

G. FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010.

H. SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMITTING (ERP) INFORMATION MANUAL, LATEST EDITION

I. MANATEE COUNTY DRAINAGE MANUAL, LATEST EDITION AND STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (JUNE 2007).

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

UTILITY WARNING NOTE

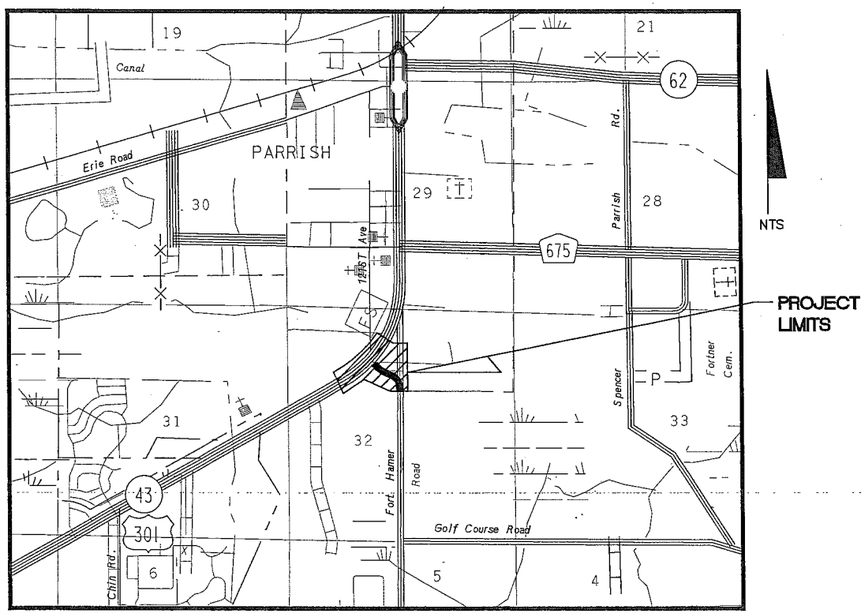
ABOVE GROUND AND / OR UNDERGROUND UTILITIES MAY BE IN THE AREA OF THIS PROJECT – PROCEED WITH CAUTION – THE CONTRACTOR SHALL CALL SUNSHINE STATE "ONE CALL" AT 1-800-432-4770 AND THE UTILITY OWNERS IN ADVANCE OF BEGINNING WORK, IN ACCORDANCE WITH CHAPTER 556, FLORIDA STATUTES.

SUMMARY OF REVISIONS		
DATE	DESCRIPTION	
1	REVISED SHEETS 18, 34, 51, 54 & 71	TJB 5-7-2013

LENGTH OF PROJECT	TOTAL	
	LIN. FT.	MILES
FT HAMER ROAD	1,411.69 LF	0.267
GROSS LENGTH OF PROJECT	1,411.69 LF	0.267

ROAD CLASSIFICATION: FT HAMER ROAD – URBAN ARTERIAL
ROAD CLASSIFICATION: US 301 – URBAN ARTERIAL
ROAD CLASSIFICATION: 60TH STREET EAST – URBAN LOCAL
ROAD CLASSIFICATION: DORIS STREET EAST – URBAN LOCAL
DESIGN SPEED: 45 MPH (FT HAMER ROAD) 45 MPH (US 301)

48 HOURS BEFORE DIGGING
"CALL SUNSHINE"
1-800-432-4770



COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
LIGHTING AND COMMUNICATIONS PLANS

INDEX OF ROADWAY PLANS

PLANS PREPARED BY:

Cardno TBE
381 Park Place Blvd, Suite 300, Clearwater, Florida 33759
www.cardnotbe.com 727.539.3505
Certificate of Authorization No. 3843

TOMMY L. FULTON LICENSE No. 39722 STATE OF FLORIDA PROFESSIONAL ENGINEER

ENGINEER OF RECORD

TOMMY L FULTON, PE 39722
NAME P.E. LICENSE NO.

DATE

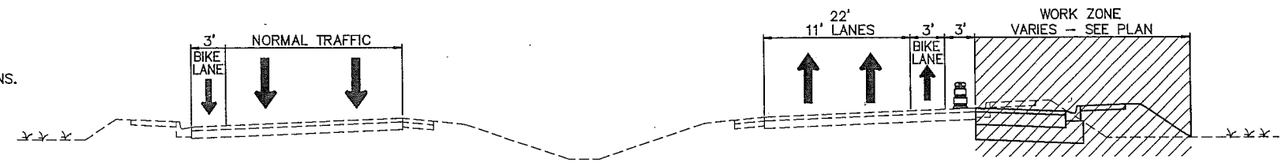
DATE: 8-15-2012
SHEET: 1

FILE: J:\0619360\193008.03\ACAD\dwg\CV193008003-1.dwg LAST SAVED: Tue, 05/07/13-2:12p PLOTTED: Tue, 05/07/13-2:13p BY: Tim.Bowe

CONSTRUCTION PHASING NOTES US HWY 301:

PHASE I :

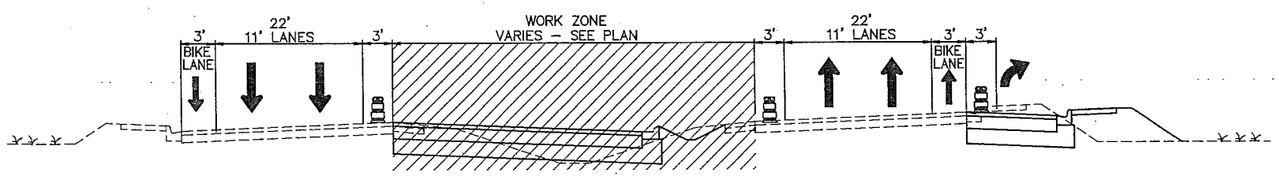
INSTALL INITIAL PROJECT SIGNING ON US 301 AS NECESSARY FOR PHASE I WHILE MAINTAINING THE EXISTING TRAFFIC PATTERNS.
REDUCE NORTHBOUND LANE WIDTHS AND SHIFT TRAFFIC. SOUTHBOUND TRAFFIC WILL REMAIN NORMAL TRAFFIC PATTERN. CLOSE DORIS ROAD AND 60TH STREET EAST AT US 301.
CONSTRUCT RIGHT TURN LANE (NORTHBOUND), EMBANKMENT, DRAINAGE AND TURNOUT TO FT. HAMER ROAD.
CONSTRUCT ROAD IMPROVEMENTS, SIDEWALKS AND EMBANKMENT AT DORIS ROAD AND AT 60TH STREET EAST TERMINAL POINTS.



STA. 191+40 TO 201+00

PHASE II :

MODIFY THE PHASE I SIGNAGE AS NECESSARY FOR PHASE II.
REDUCE SOUTHBOUND LANE WIDTHS AND SHIFT TRAFFIC. KEEP NEWLY CONSTRUCTED NORTHBOUND RIGHT TURN LANE CLOSED.
CONSTRUCT LEFT TURN LANE (SOUTHBOUND), EMBANKMENT, AND DRAINAGE.
OPEN ROADWAY AT THE INTERSECTION OF FT. HAMER ROAD AND US 301



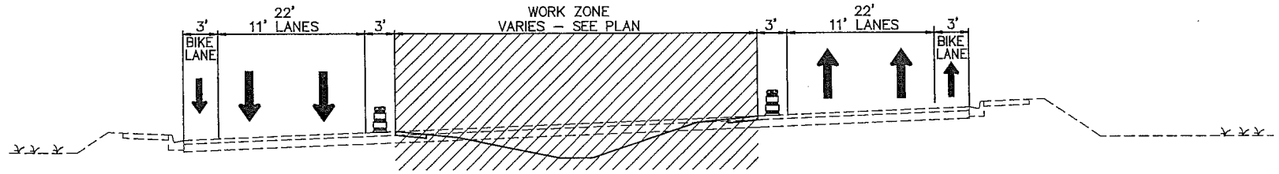
STA. 190+80 TO 202+00

PHASE III :

MODIFY THE PHASE II SIGNAGE AS NECESSARY FOR PHASE III.
REDUCE NORTHBOUND AND SOUTHBOUND LANE WIDTHS AND SHIFT TRAFFIC.
CLOSE MEDIAN OPENING ON US 301 AT EXISTING FT HAMER RD.
CONSTRUCT MEDIAN, EMBANKMENT AND DRAINAGE

PHASE IV:

MODIFY THE PHASE III SIGNAGE AS NECESSARY FOR PHASE IV.
MILL 3/4" AND RESURFACE WITH FC-5 (80LB/SY) ALL AREAS ALONG US 301 AFFECTED BY TEMPORARY STRIPING
INSTALL STRIPING AS SHOWN ON PLANS AND TO MATCH ORIGINAL CONFIGURATIONS WHERE NOT SHOWN ON PLANS.
OPEN ROADWAY COMPLETELY



STA. 202+80 TO 211+12

⚠1

MAINTENANCE OF TRAFFIC NOTES

1. NO DAY TIME LANE CLOSURES WILL BE ALLOWED FROM 9:00 AM TO 4:00 PM.
2. LANE CLOSURES SHALL COMPLY WITH THE FDOT CONNECTION PERMIT APPROVED FOR PROJECT.

TOMMY L. FULTON LICENSE No. 39722 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE
⚠1	ADDED NOTES FOR LANES CLOSURES	TJB	5-7-2013

MANATEE COUNTY

US 301 AND FT. HAMER ROAD
INTERSECTION IMPROVEMENTS
(FROM BRITT ROAD TO US 301)

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
www.cardnotbe.com - 727.531.3505
Certificate of Authorization No. 3843

TOMMY L. FULTON, P.E.
LIC. NO.: 39722 DATE

DESIGNED TLF
DRAWN JJH
Q.C.
APPROVED

MAINTENANCE OF TRAFFIC PHASING NOTES US 301

PROJECT NO: 00193-008-003
DATE: 2-2-2012
SHEET NO: 51

FILE: J:\00193\00193008.03\ACAD\dwg\MOT19300803-1.dwg LAST SAVED: Tue, 05/07/13-2:22p PLOTTED: Tue, 05/07/13-2:23p BY: Tim.Bowe

CURVE DATA											
Curve #	Alignment	PI STA	Radius	Length	Delta	Tangent	Chord Bearing	Chord Length	PC	PT	e
C9	C/L OF CONST. US 301	204+04.81	1410.40	1484.690	60°18'49"	819.451	N30° 06' 48"E	1417.08	195+85.36	210+70.05	RC
C8	C/L OF CONST. FT HAMER RD	124+34.69	400.00	312.300	44°44'01"	164.597	N23° 02' 04"W	304.43	122+70.10	125+82.40	RC
C2	C/L OF R/W FT HAMER RD	22+96.35	4385.00	400.139	5°13'42"	200.209	N45° 38' 52"W	400.00	20+96.14	24+96.28	N/A

LEGEND

WIDENING

MILLING AND RESURFACING

POINT OF INTERSECTION
STA. 196+01.40 C/L OF CONSTRUCTION US 301 =
STA. 125+27.19 C/L OF CONSTRUCTION FT HAMER ROAD

STA. 195+21.51 BEGIN MILLING & RESURFACING SOUTH BOUND LANES US 301

EXISTING R/W

BEGIN CONSTRUCTION
STA. 190+80.00
BEGIN MILLING & RESURFACING
NORTH BOUND LANES US 301

US HIGHWAY 301

SAW CUT AND MATCH EXISTING

CONST. FLARED ENDING

CONST. TYPE E CURB AND GUTTER

CONNECT TO EXISTING MANHOLE
INVERT EL = 40.17

C/L OF CONSTRUCTION US 301

FLOWABLE FILL
70 LF OF 24" RCP

POINT OF INTERSECTION
STA. 195+34.73 C/L OF CONSTRUCTION US 301=
STA. 254+35.16 C/L OF R/W FT HAMER ROAD

CONST. CONC. PIPE COLLAR FDOT INDEX 280

CONST. 31 LF 18" RCP AT 0.26%

CONST. PIPE PLUG FDOT INDEX 280

CONST. 13 LF 18" RCP AT 3.15%

1215T AVE EAST

MATCH LINE STA 197+00.00

CONNECT TO EXISTING INLET
INVERT EL = 42.49

CONST. 97 LF 15" RCP AT 0.13%

SAW CUT AND MATCH EXISTING

REMOVE EXISTING DITCH BOTTOM INLET AND PIPE

CONST. 6" CONC S/W

CONST. TYPE F CURB AND GUTTER

PROPOSED R/W

CONST. TURNOUT FDOT INDEX 515

EXISTING R/W

CONST. 18" RCP

CONST. CURB RAMP (TYP) FDOT INDEX 304

CONST. 18" RCP

CONST. 24" RCP

C/L OF CONSTRUCTION FT HAMER RD

C/L OF R/W FT HAMER RD

FT HAMER ROAD

PARCEL ID #4862.0000/9

PROPOSED R/W

STA. 192+47.89
BEGIN PVMT WIDENING
RT. TURN LANE

TOMMY L. FULTON
LICENSE
No. 39722
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE
1	REVISED BEGIN MILL & RESURFACE LIMITS SB LANE	TJB	5-7-2013

MANATEE COUNTY

US 301 AND FT. HAMER ROAD INTERSECTION IMPROVEMENTS (FROM BRITT ROAD TO US 301)

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
www.cardnotbe.com - 727.531.3505
Certificate of Authorization No. 3843

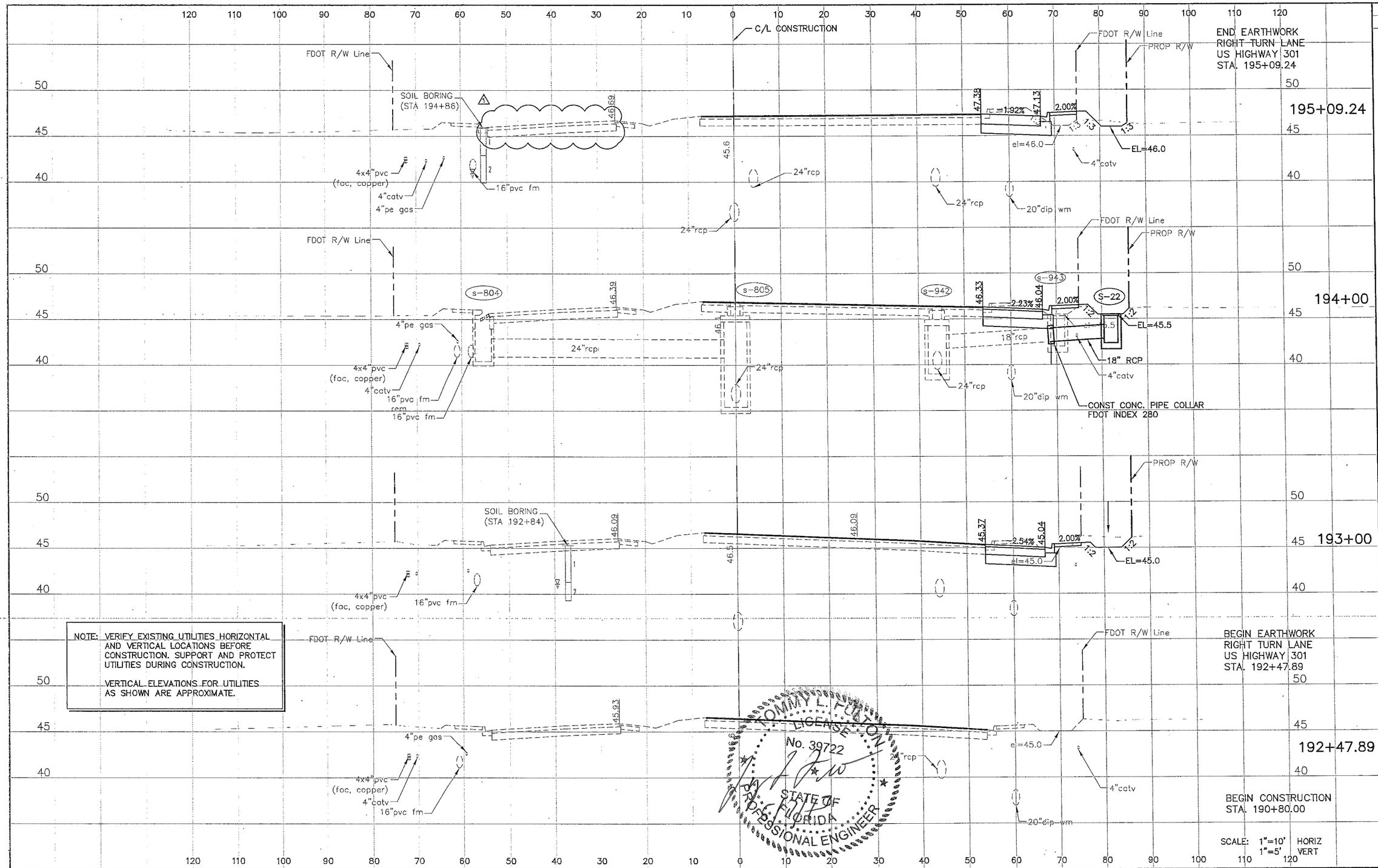
TOMMY L. FULTON, P.E.
LIC. NO.: 39722 DATE

DESIGNED TLF
DRAWN JJH
Q.C.
APPROVED

PLAN
US HIGHWAY 301

PROJECT NO: 00193-008-003
DATE: 2-2-2012
SHEET NO: 18

FILE: J:\00193\20193008.03\ACAD\dwg\pp19300803-3.dwg LAST SAVED: Tue, 05/07/13-9:46a PLOTTED: Tue, 05/07/13-10:18a BY: Tim.Bowe



EXC		FILL	
A	V	A	V
25		9	
	101		26
25		4	
	106		7
32		0	
	31		0
0		0	

NOTE: VERIFY EXISTING UTILITIES HORIZONTAL AND VERTICAL LOCATIONS BEFORE CONSTRUCTION. SUPPORT AND PROTECT UTILITIES DURING CONSTRUCTION.

VERTICAL ELEVATIONS FOR UTILITIES AS SHOWN ARE APPROXIMATE.

TOMMY L. FULTON LICENSE No. 39722 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE
1	REVISED BEGIN MILL & RESURFACE LIMITS SB LANE	TJB	5-7-2013

MANATEE COUNTY

US 301 AND FT. HAMER ROAD
INTERSECTION IMPROVEMENTS
(FROM BRITT ROAD TO US 301)

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
www.cardnotbe.com - 727.531.3505
Certificate of Authorization No. 3843

TOMMY L. FULTON, P.E.
LIC. NO.: 39722 DATE

DESIGNED TLF
DRAWN JJH
Q.C.
APPROVED

CROSS SECTIONS
US HIGHWAY 301

PROJECT NO: 00193-008-003
DATE: 2-2-2012
SHEET NO: 34

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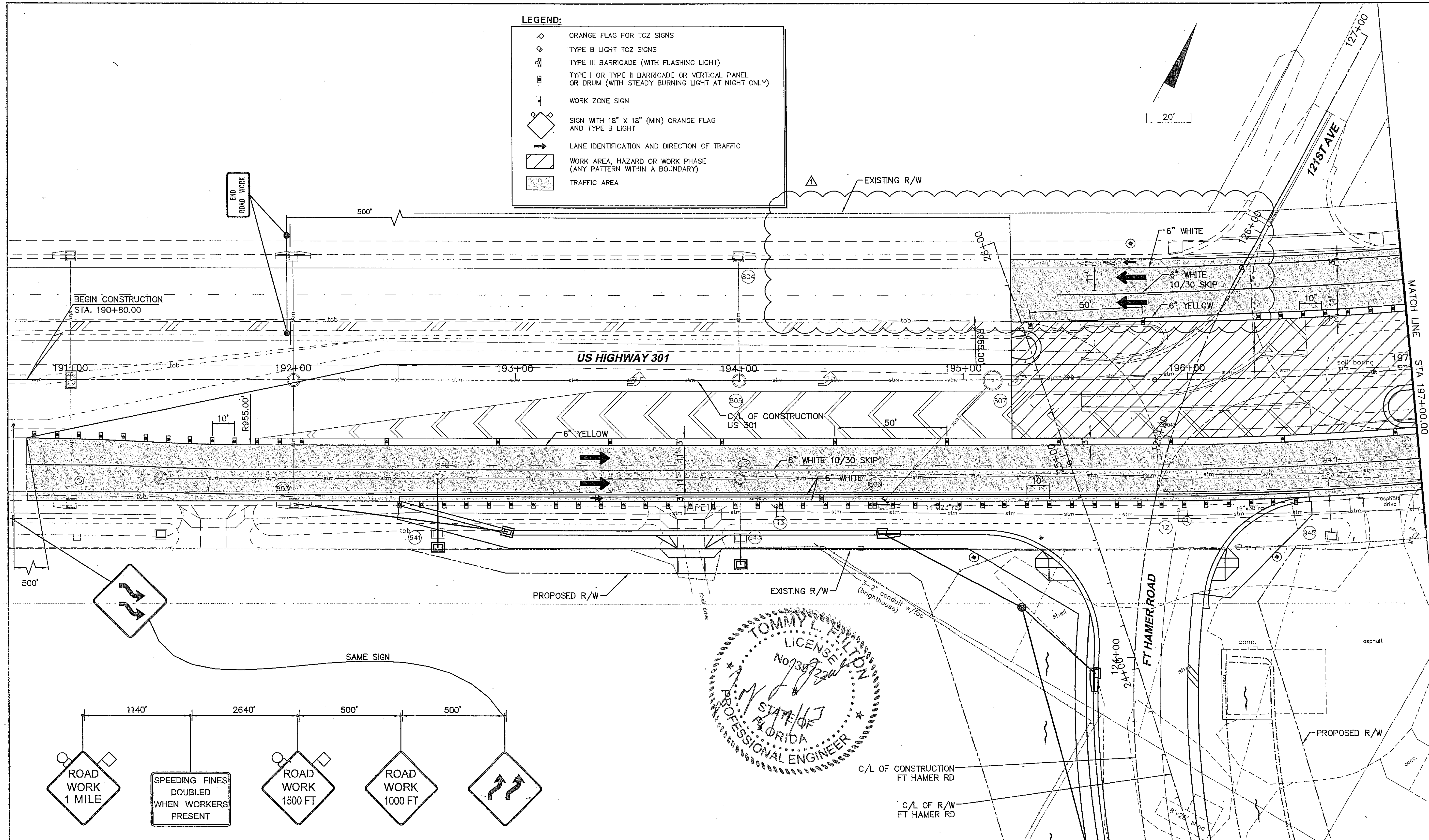
LEGEND:
ORANGE FLAG FOR TCZ SIGNS
TYPE B LIGHT TCZ SIGNS
TYPE III BARRICADE (WITH FLASHING LIGHT)
TYPE I OR TYPE II BARRICADE OR VERTICAL PANEL OR DRUM (WITH STEADY BURNING LIGHT AT NIGHT ONLY)
WORK ZONE SIGN
SIGN WITH 18" X 18" (MIN) ORANGE FLAG AND TYPE B LIGHT
LANE IDENTIFICATION AND DIRECTION OF TRAFFIC
WORK AREA, HAZARD OR WORK PHASE (ANY PATTERN WITHIN A BOUNDARY)
TRAFFIC AREA
20'
121ST AVE
EXISTING R/W
END ROAD WORK
500'
BEGIN CONSTRUCTION
STA. 190+80.00
US HIGHWAY 301
191+00
192+00
193+00
194+00
195+00
196+00
197
R955.00'
C/L OF CONSTRUCTION US 301
6" WHITE
6" WHITE 10/30 SKIP
6" YELLOW
50'
10'
MATCH LINE STA 197+00.00
6" WHITE 10/30 SKIP
6" WHITE
PROPOSED R/W
EXISTING R/W
FT HAMER ROAD
SAME SIGN
1140'
2640'
500'
500'
ROAD WORK 1 MILE
SPEEDING FINES DOUBLED WHEN WORKERS PRESENT
ROAD WORK 1500 FT
ROAD WORK 1000 FT
C/L OF CONSTRUCTION FT HAMER RD
C/L OF R/W FT HAMER RD
PROPOSED R/W
TOMMY L. FULTON LICENSE No. 39722 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE
1	REVISED BEGIN MILL & RESURFACE LIMITS SB LANE	TJB	5-7-2013

MANATEE COUNTY

US 301 AND FT. HAMER ROAD INTERSECTION IMPROVEMENTS (FROM BRITT ROAD TO US 301)

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
www.cardnotbe.com - 727.531.3505
Certificate of Authorization No. 3843

TOMMY L. FULTON, P.E.
LIC. NO.: 39722 DATE

DESIGNED	TLF
DRAWN	JJH
Q.C.	
APPROVED	

MAINTENANCE OF TRAFFIC PHASE II US HIGHWAY 301

PROJECT NO: 00193-008-003
DATE: 2-2-2012
SHEET NO: 54

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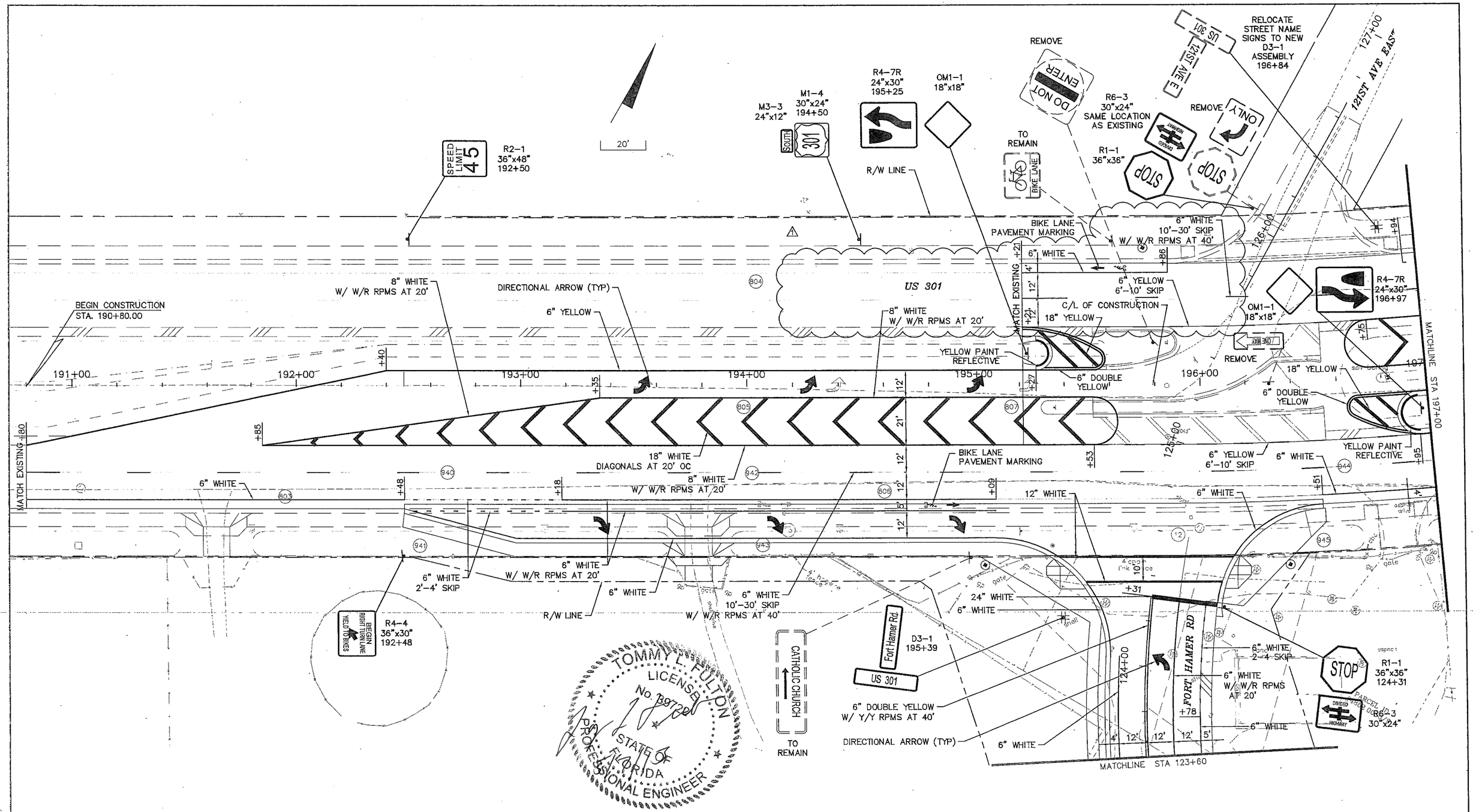

TOMMY L. FULTON LICENSED No. 39722 STATE OF FLORIDA PROFESSIONAL ENGINEER

NO.	DESCRIPTION	BY	DATE
1	REVISED BEGIN MILL & RESURFACE LIMITS SB LANE	TJB	5-7-2013

MANATEE COUNTY

US 301 AND FT. HAMER ROAD INTERSECTION IMPROVEMENTS (FROM BRITT ROAD TO US 301)

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
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Certificate of Authorization No. 3843

TOMMY L. FULTON, P.E.
LIC. NO.: 39722 DATE

DESIGNED TLF
DRAWN JJH
Q.C.
APPROVED

SIGNING AND PAVEMENT MARKING US HIGHWAY 301

PROJECT NO: 00193-008-003
DATE: 2-2-2012
SHEET NO: 71

FILE: J:\00193\00193006.03\ACAD\dwg\M19300803-1.dwg LAST SAVED: Tue, 05/07/13-10:15a PLOTTED: Tue, 05/07/13-10:15a BY: Tim.Bowe

TABLE 1: WATER LEVEL ELEVATION DATA

Facility Name:	Herrera Property	All Measurements = Feet	
Address:	12107 60th Street East	FP = Free Product	
City, State:	Parrish, Florida	TOC = Top of Casing	
County:	Manatee County	ELEV = Elevation	
FDEP FAC#:	41/9201948	DTW = Depth To Water	
AET Project #:	24043.04	NS = Not Sampled	
		NL = Well not Located	

WELL NO.	MW-1	MW-2	MW-3	MW-4	MW-4R
DIAMETER (IN)	2	2	2	2	2
WELL DEPTH (FT)	15	15	15	15	15
SCREEN INTERVAL (FT)	2.5 - 15	2.5 - 15	2.5 - 15	2.5 - 15	2 - 15
TOC ELEVATION (FT)	49.72	49.29	49.60	49.55	49.23

DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP			
7/12/2001	42.40	7.32		42.29	6.99		42.44	7.16		42.35	7.20				
12/20/2001	44.36	5.36		44.21	5.08		NS	NS		44.26	5.29				
5/14/2002	41.44	8.28		41.32	7.97		NS	NS		41.34	8.21				
11/1/2004	DESTROYED			DESTROYED			DESTROYED			DESTROYED					
3/2/2005	DESTROYED			DESTROYED			DESTROYED			DESTROYED			44.77	4.46	
7/12/2005	DESTROYED			DESTROYED			DESTROYED			DESTROYED			46.83	2.40	
8/2/2005	DESTROYED			DESTROYED			DESTROYED			DESTROYED			46.89	2.34	
4/21/2006	DESTROYED			DESTROYED			DESTROYED			DESTROYED			40.30	8.93	
7/5/2006	DESTROYED			DESTROYED			DESTROYED			DESTROYED			41.59	7.64	
10/12/2006	DESTROYED			DESTROYED			DESTROYED			DESTROYED			45.12	4.11	
5/17/2007	DESTROYED			DESTROYED			DESTROYED			DESTROYED			41.08	8.15	
8/15/2007	DESTROYED			DESTROYED			DESTROYED			DESTROYED			44.13	5.10	0.00
11/15/2007	DESTROYED			DESTROYED			DESTROYED			DESTROYED			42.30	6.93	0.00
3/29/2011	DESTROYED			DESTROYED			DESTROYED			DESTROYED			41.25	7.98	
7/27/2011													42.19	7.04	
12/30/2011													42.29	6.94	
3/6/2012													40.78	8.45	
7/27/2012													45.03	4.20	
12/3/2012													42.90	6.33	
4/17/2013													41.51	7.72	

WELL NO.	MW-5	MW-6	MW-6R	MW-7	MW-8
DIAMETER (IN)	2	2	2	2	2
WELL DEPTH (FT)	15	15	15	15	15
SCREEN INTERVAL (FT)	2.5 - 15	2.5 - 15	2 - 15	2.5 - 15	2.5 - 15
TOC ELEVATION (FT)	49.86	49.36	49.44	49.78	48.95

DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
7/12/2001	42.35	7.51		42.11	7.25					42.18	7.80		41.78	7.17	
12/20/2001	44.21	5.65		44.06	5.30					44.03	5.72		43.89	5.06	
5/14/2002	41.29	8.57		41.19	8.17					41.13	8.65		40.12	8.83	
11/1/2004	DESTROYED			DESTROYED						46.08	3.70		45.88	3.07	
3/2/2005	DESTROYED			DESTROYED			45.29	4.15		45.93	3.85		46.15	2.80	
7/12/2005	DESTROYED			DESTROYED			48.06	1.38		NS	NS		48.15	0.80	
8/2/2005	DESTROYED			DESTROYED			47.99	1.45		47.76	2.02		47.90	1.05	
3/16/2006	DESTROYED			DESTROYED			41.80	7.64		41.73	8.05		43.02	5.93	
7/5/2006	DESTROYED			DESTROYED			42.24	7.20		42.11	7.67		42.26	6.69	
10/12/2006	DESTROYED			DESTROYED						46.34	3.44		46.05	2.90	
5/17/2007	DESTROYED			DESTROYED			41.62	7.82		41.52	8.26				
8/15/2007	DESTROYED			DESTROYED			44.65	4.79	0.00	44.56	5.22	0.00			
11/15/2007	DESTROYED			DESTROYED			42.82	6.62	0.00	42.77	7.01	0.00			
7/27/2011							42.68	6.76							
12/30/2011							not gauge								
3/6/2012							41.24	8.20							
7/27/2012													45.88	3.07	
12/3/2012													43.81	5.14	
4/17/2013													obstruction @ 6.23		

TABLE 1: WATER LEVEL ELEVATION DATA

Facility Name:	Herrera Property	All Measurements = Feet
Address:	12107 60th Street East	FP = Free Product
City, State:	Parrish, Florida	TOC = Top of Casing
County:	Manatee County	ELEV = Elevation
FDEP FAC#:	41/9201948	DTW = Depth To Water
AET Project #:	24043.04	NS = Not Sampled
		NL = Well not Located

WELL NO.	MW-9	MW-10	MW-11	MW-12	MW-13
DIAMETER (IN)	2	2	2	2	2
WELL DEPTH (FT)	15	15	15	15	15
SCREEN INTERVAL (FT)	2.5 - 15	2.5 - 15	2.5 - 15	2.5 - 15	2.5 - 15
TOC ELEVATION (FT)	49.69	49.59	49.62	49.19	49.56

DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
7/12/2001	42.26	7.43													
12/20/2001	44.19	5.50		43.97	5.47		43.85	5.04		44.14	5.42		43.96	5.06	
5/14/2002	41.28	8.41		41.15	8.44		41.06	8.56		41.25	7.94		41.12	8.44	
11/1/2004	45.96	3.73		46.02	3.57		45.83	3.79		45.71	3.48		45.79	3.77	
3/2/2005	45.59	4.10		45.79	3.80		45.97	3.65		45.63	3.56		45.75	3.81	
7/12/2005	44.84	1.85		NS	NS		NS	NS		NS	NS		NS	NS	
8/2/2005	47.57	2.12		47.87	1.72		47.92	1.70		47.11	2.08		47.58	1.98	
3/16/2006	NL	NL		41.67	7.92		41.74	7.88		NL	NL		NL	NL	
7/5/2006	42.08	7.61		42.09	7.50		42.33	7.29		DESTROYED			DESTROYED		
10/12/2006	46.30	3.39		46.06	3.53		46.01	3.61		DESTROYED			DESTROYED		
5/17/2007	41.56	8.13		41.38	8.21					DESTROYED			DESTROYED		
8/15/2007	44.69	5.00	0.00	44.43	5.16	0.00				DESTROYED			DESTROYED		
11/15/2007	42.82	6.87	0.00	42.66	6.93	0.00				DESTROYED			DESTROYED		
3/29/2011	41.74	7.95								DESTROYED			DESTROYED		
7/27/2011	42.74	6.95													
12/30/2011	42.84	6.85													
3/6/2012	41.29	8.40													
7/27/2012	45.77	3.92		45.60	3.99										
12/3/2012	43.33	6.36		43.22	6.37										
4/17/2013	42.02	7.67		41.85	7.74										

WELL NO.	MW-14	MW-15	MW-15R	MW-16	MW-17
DIAMETER (IN)	2	2	2	2	2
WELL DEPTH (FT)	15	15	15	15	12
SCREEN INTERVAL (FT)	2.5 - 15	2.5 - 15	2 - 15	2.5 - 15	2 - 12
TOC ELEVATION (FT)	49.90	49.77	49.93	49.73	49.80

DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
7/12/2001															
12/20/2001	44.00	5.60		43.85	4.85					43.76	4.62				
5/14/2002	41.14	8.76		41.04	8.73					40.97	8.76		40.88	8.92	
11/1/2004	46.18	3.72		DESTROYED						DESTROYED			DESTROYED		
3/2/2005	45.79	4.11		DESTROYED			45.09	4.84		DESTROYED			DESTROYED		
7/12/2005	48.25	1.65		DESTROYED			47.32	2.61		DESTROYED			DESTROYED		
8/2/2005	48.22	1.68		DESTROYED			47.37	2.56		DESTROYED			DESTROYED		
3/16/2006	41.68	8.22		DESTROYED			41.76	8.17		DESTROYED			DESTROYED		
7/5/2006	42.01	7.89		DESTROYED			42.26	7.67		DESTROYED			DESTROYED		
10/12/2006	46.37	3.53		DESTROYED			45.59	4.34		DESTROYED			DESTROYED		
5/17/2007	41.29	8.61		DESTROYED						DESTROYED			DESTROYED		
8/15/2007	44.29	5.61	0.00	DESTROYED						DESTROYED			DESTROYED		
11/15/2007	42.58	7.32	0.00	DESTROYED						DESTROYED			DESTROYED		
3/6/2012				DESTROYED			41.15	8.78		DESTROYED			DESTROYED		

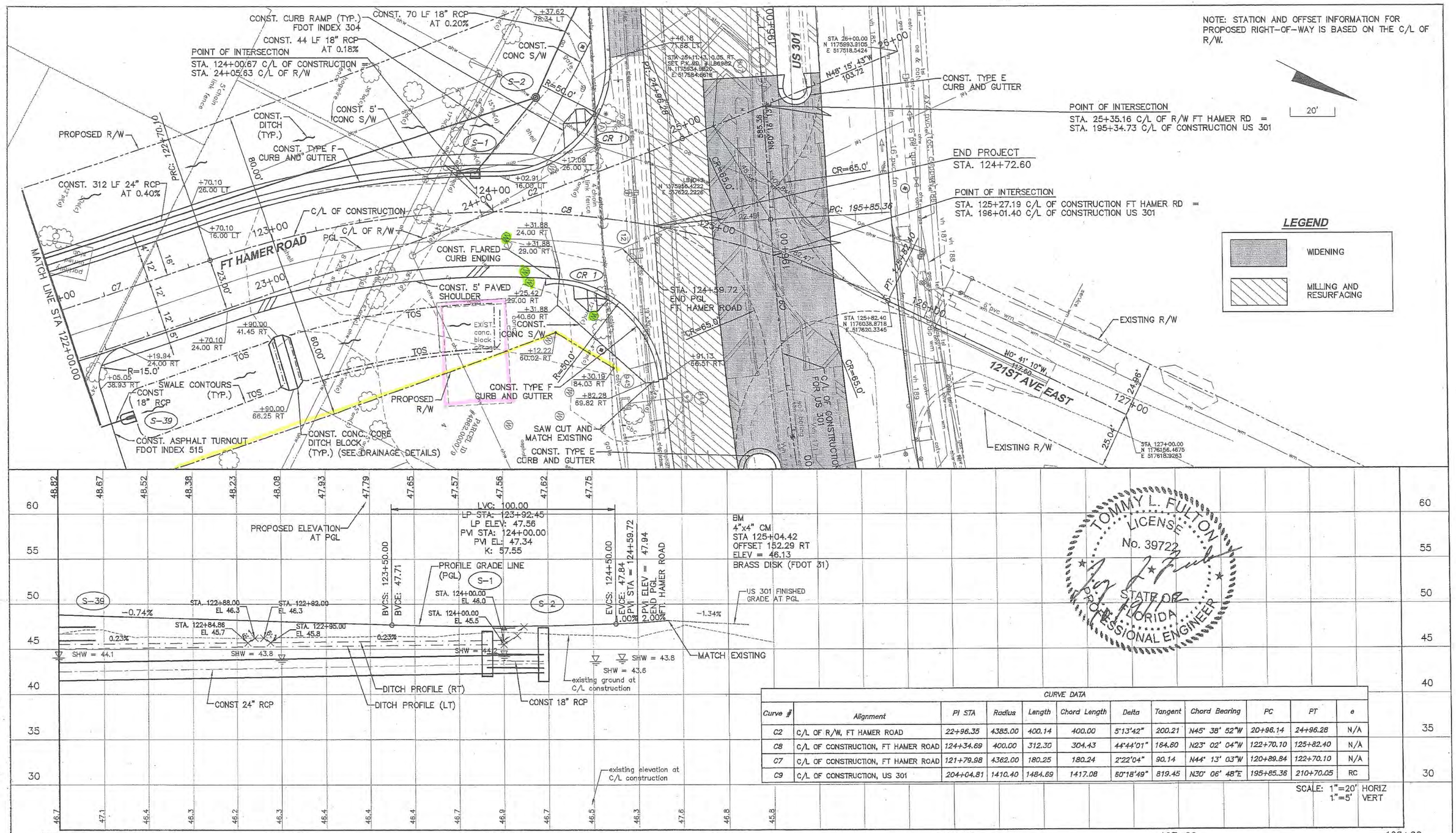
TABLE 1: WATER LEVEL ELEVATION DATA

Facility Name:	Herrera Property	All Measurements = Feet	
Address:	12107 60th Street East	FP = Free Product	
City, State:	Parrish, Florida	TOC = Top of Casing	
County:	Manatee County	ELEV = Elevation	
FDEP FAC#:	41/9201948	DTW = Depth To Water	
AET Project #:	24043.04	NS = Not Sampled	
		NL = Well not Located	

WELL NO.	MW-18			MW-19			MW-20			MW-21			MW-22		
DIAMETER (IN)	2			2			2			2			2		
WELL DEPTH (FT)	12			12			15			15			15		
SCREEN INTERVAL (FT)	2 - 12			2 - 12			2 - 15			2 - 15			2 - 15		
TOC ELEVATION (FT)	49.89			49.82			50.02			50.10			49.88		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
7/12/2001															
12/20/2001															
5/14/2002	40.82	9.07		40.92	8.96										
11/1/2004	DESTROYED			DESTROYED											
3/2/2005	DESTROYED			DESTROYED			45.53	4.49		45.79	4.34		45.84	4.04	
7/12/2005	DESTROYED			DESTROYED			NS	NS		48.69	1.41		NS	NS	
8/2/2005	DESTROYED			DESTROYED			48.44	1.58		48.70	1.40		47.77	2.11	
3/16/2006	DESTROYED			DESTROYED			NL	NL		42.33	7.77		42.27	7.61	
7/5/2006	DESTROYED			DESTROYED			42.36	7.66		42.70	7.40		42.44	7.44	
10/12/2006	DESTROYED			DESTROYED			46.16	3.86		46.91	3.19		46.23	3.65	
5/17/2007	DESTROYED			DESTROYED			not found			42.06	8.04		42.08	7.80	
8/15/2007	DESTROYED			DESTROYED			not found			45.08	5.02	0.00	45.13	4.75	0.00
11/15/2007	DESTROYED			DESTROYED			not found			43.20	6.90	0.00	43.30	6.58	0.00
3/29/2011	DESTROYED			DESTROYED			42.00	8.02							
7/27/2011							not found			43.24	6.86		not found		
12/30/2011							not found			44.05	6.05		not found		
3/6/2012							41.62	8.40		41.76	8.34		41.72	8.16	
7/27/2012										46.41	3.69				
12/3/2012										44.47	5.63				
4/17/2013							42.29	7.73		42.51	7.59				

WELL NO.	DW-1			DW-2			MW-23			MW-24		
DIAMETER (IN)	2			2			2			2		
WELL DEPTH (FT)	25			25			15			15		
SCREEN INTERVAL (FT)	20 - 25			20 - 25			2 - 15			2 - 15		
TOC ELEVATION (FT)	49.61			49.57			49.93			50.72		
DATE	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP	ELEV	DTW	FP
7/12/2001												
12/20/2001	44.10	5.45		43.98	5.43							
5/14/2002	41.13	8.48		41.15	8.42							
11/1/2004	44.99	4.62		44.92	4.65							
3/2/2005	45.02	4.59		44.89	4.68							
7/12/2005	NS	NS		NS	NS		47.81	2.12		48.02	2.70	
8/2/2005	45.87	3.74		45.76	3.81		47.76	2.17		47.79	2.93	
3/16/2006	41.57	8.04		41.49	8.08		well not found			42.58	8.14	
4/21/2006	NS	NS		NS	NS		41.29	8.64		NS	NS	
7/5/2006	41.95	7.66		41.87	7.70		42.67	7.26		43.12	7.60	
10/12/2006	45.35	4.26		45.29	4.28		46.47	3.46		46.34	4.38	
5/17/2007							42.08	7.85				
8/15/2007							45.04	4.89	0.00			
11/15/2007							43.09	6.84	0.00			
12/30/2011							43.30	6.63				
3/6/2012	41.06	8.55					41.83	8.10				
7/27/2012							46.00	3.93				
12/3/2012							43.92	6.01				

Locations of Wells to be abandoned hi-lighted in Green



CURVE DATA											
Curve #	Alignment	PI STA	Radius	Length	Chord Length	Delta	Tangent	Chord Bearing	PC	PT	e
C2	C/L OF R/W, FT HAMER ROAD	22+96.35	4385.00	400.14	400.00	5°13'42"	200.21	N45° 38' 52"W	20+96.14	24+96.28	N/A
C8	C/L OF CONSTRUCTION, FT HAMER ROAD	124+34.69	400.00	312.30	304.43	44°44'01"	164.60	N23° 02' 04"W	122+70.10	125+82.40	N/A
C7	C/L OF CONSTRUCTION, FT HAMER ROAD	121+79.98	4362.00	180.25	180.24	2°22'04"	90.14	N44° 13' 03"W	120+89.84	122+70.10	N/A
C9	C/L OF CONSTRUCTION, US 301	204+04.81	1410.40	1484.69	1417.08	60°18'49"	819.45	N30° 06' 48"E	195+85.36	210+70.05	RC

SCALE: 1"=20' HORIZ
1"=5' VERT

NO.	DESCRIPTION	BY	DATE

MANATEE COUNTY

US 301 AND FT. HAMER ROAD INTERSECTION IMPROVEMENTS (FROM BRITT ROAD TO US 301)

Cardno TBE
380 Park Place Blvd., Suite 300, Clearwater, Florida 33759
www.cardnotbe.com - 727.531.3505
Certificate of Authorization No. 3843

TOMMY L. FULTON, P.E.
LIC. NO.: 39722 DATE

DESIGNED TLF
DRAWN JJH
Q.C.
APPROVED

PLAN AND PROFILE FT HAMER ROAD

PROJECT NO: 00193-008-003
DATE: 2-2-2012
SHEET NO: 18

FILE: J:\00193\00193008.03\ACAD\dwg\pp18300803-1.dwg LAST SAVED: Tue, 01/31/12-3:44p PLOTTED: Tue, 10/09/12-12:02p BY: Tim.Bowe

Locations of Wells to be Abandoned- circled in Red

C:\Users\Lauren Jensen\Desktop\LAKELAND CAD FILES\24043-07 HERRERA PROPERTY.dwg, 2-SM, 4/29/2013 4:12:58 PM

U.S. HWY 301

60TH ST. EAST

FIBER OPTIC

GRASS

MW-17

MW-18

UNDERGROUND TEL.

PROPERTY LINE

MW-11

MW-16

MW-19

HOUSE

~LANDSCAPED AREA~

MW-13

DRAINAGE DITCH

CHAIN LINK FENCE

MW-8

MW-15

MW-15R

MW-24

MW-10

MW-6

MW-6R

DW-2

MW-12

MW-2

MW-21

MW-14

ASPHALT

PETE HERRERA PROPERTY

DW-1

MW-9

ONE STORY CONCRETE BLOCK GARAGE

CONCRETE SIDEWALK

MW-23

MW-4R

MW-4

FORMER UST

MW-20

MW-1

MW-5

POTABLE WELL

FORMER DIESEL PUMP ISLAND

MW-22

MW-3

MW-7

FENCE

PROPOSED R/W

SCALE

0 5 10 20 FEET

	DEPTH (FT.)
MW-4R	15
6R	15
9	15
20	15
22	15
23	15
DW-1	25
POTABLE WELL	?

LEGEND

- —X—X— FENCE
- — —UG— — UNDERGROUND UTILITIES
- — —OH— — OVERHEAD UTILITIES
- UTILITY POLE
- MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- ABANDONED MONITORING WELL LOCATION

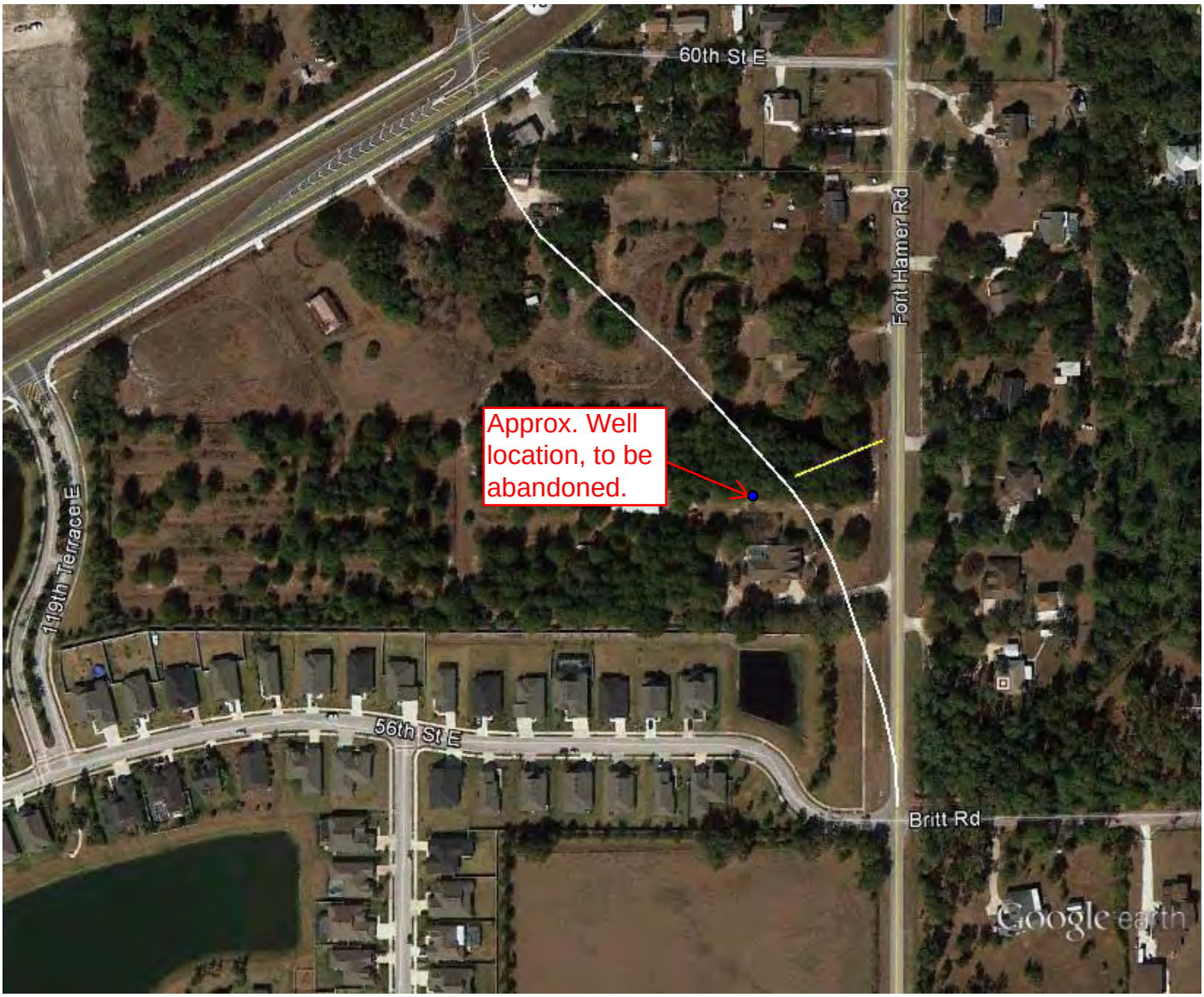
Advanced Environmental TECHNOLOGIES, LLC

HERRERA PROPERTY
12107 60th STREET
PARRISH, FLORIDA MANATEE COUNTY
FDEP FAC. ID NO.: 41 9201948

SITE MAP

FIGURE 2

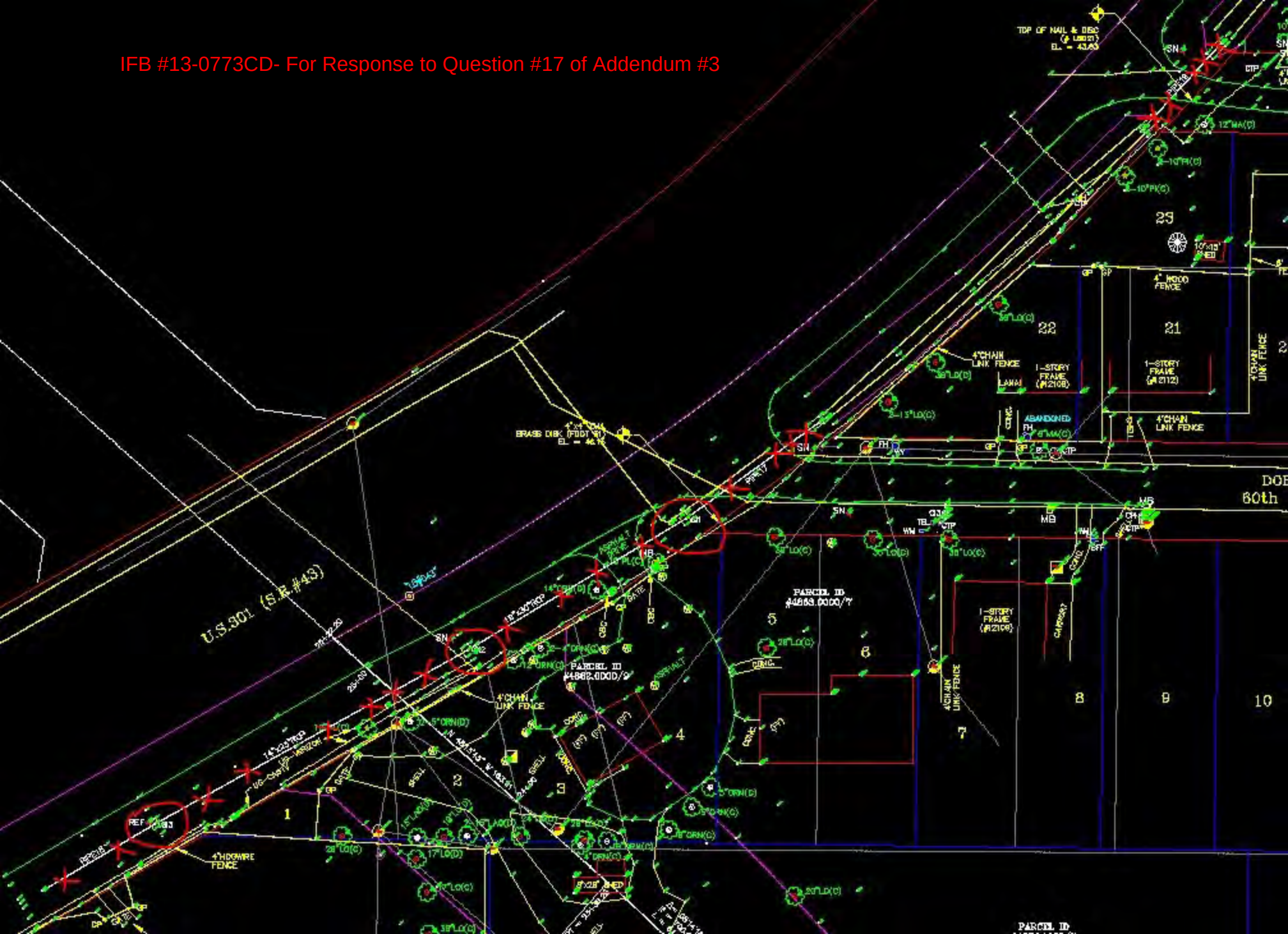
PROJECT NO. 24043.09



Google earth

feet 1000
meters 300

IFB #13-0773CD- For Response to Question #17 of Addendum #3



Limited Phase II
Environmental Site Assessment

for the

Fort Hamer Road & US 301 Intersection Improvement Project

Manatee County Project No. 6061960

prepared for:

Manatee County – Public Works Department
1022 26th Avenue East
Bradenton, FL 34208

prepared by:

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Cardno TBE Project No. 00193-008-03

November 2010

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1.0 EXECUTIVE SUMMARY

Cardno TBE has completed a Limited Phase II Environmental Site Assessment of the study area identified as the "US 301 and Ft. Hamer Road Intersection Improvements (from Britt Road to US 301) in Parrish, Manatee County, Florida; subsequently referred in this report as the "study area" or "subject site." This assessment was prepared in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-97, Re-approved 2002).

The purpose of the Limited Phase II ESA was to evaluate the potential for environmental impacts from identified contaminants found within the proposed roadway rights-of-way, as well as the proposed pond sites. The specific purpose of this limited environmental assessment activities was to determine if current or former arsenic, pesticide or petrochemical storage/handling have the potential to impact either soil or groundwater quality as a result of historical releases of these materials.

This assessment included the installation of sixteen (16) soil borings and three (3) temporary groundwater monitor wells (as well as collection of groundwater samples from three existing monitor wells) within the study area site boundaries for the assessment of soil and groundwater to determine the presence of metals, petroleum and pesticide constituents.

This assessment has revealed the following:

Soil Impacts:

- **Total Recoverable Petroleum Hydrocarbons (TRPH)** was detected in shallow soils above the State's direct-exposure criteria within the proposed roadway improvement area located in the west portion of the Herrera Property (Parcel ID No. 48341007). TRPH was also encountered in shallow soil collected near the west corner of the Herrera garage structure located within the proposed improvement area. This detection was below cleanup criteria, but indicative of the potential for wide-spread petroleum impacts to shallow soils within this parcel (Parcel ID No. 486200009).

Groundwater Impacts:

- **Isopropylbenzene** (a/k/a cumene) was detected above State cleanup target levels in the groundwater collected from one of the existing monitor wells (MW-4R) located within the Herrera property. Cumene, an aromatic hydrocarbon, is a constituent of refined fuels. It's presence above regulatory criteria indicates dissolved-phase petroleum impacts to groundwater in the vicinity of the former underground diesel fuel storage

tanks west of the garage/storage structure located on the Herrera property (and within the proposed roadway improvement location).

- Low-level impacts of **TRPH, Naphthalenes and Benzenes** were encountered in MW-4R, MW-7 and TMW-1 above laboratory analysis detection limits, but below cleanup target levels. While these detections do not require remedial efforts for regulatory compliance, they do indicate wide-spread dissolved-phase impacts to groundwater within the Herrera property which could influence subsurface activity anticipated during the roadway improvement project (such as dewatering, soil excavation/disposal, etc.).

Other Potential Environmental Concerns:

- **Hydraulic Lift Removal:** Prior to the anticipated demolition of the Herrera garage structure, any remaining hydraulic lifts within the structure would require removal per the Chapter 62-761 Rule.

- **Asbestos and Lead-based Paint:** Based on the recorded age(s) of the on-site structure(s) anticipated to be impacted by the proposed roadway improvements, asbestos and lead-based paint surveys would be required prior to any demolition activity.

Conclusion

This limited assessment has revealed soil and groundwater impacts within the Herrera properties which will require consideration during the proposed roadway improvement project. These considerations will likely include:

- Applicable materials handling plan(s) for soil and groundwater impacts encountered during construction
- Screening for asbestos-containing materials and lead-based paint (as part of the anticipated demolition plan) of the on-site structure(s)
- Hydraulic lift removal per Chapter 62-761 criteria

2.0 INTRODUCTION

Cardno TBE was retained by the Manatee County Public Works to perform a Limited Phase II Environmental Site Assessment (ESA) for the study area located in Parrish, Florida. For reference purposes, a USGS vicinity map for the site is provided on **Figure 1** and the approximate study area boundaries are depicted on **Figure 2.**

2.1 Purpose

The primary purpose of environmental assessment activities at this site was to determine if current or former arsenic, pesticide or petrochemical storage and handling have impacted either soil or groundwater quality as a result of historical releases of these materials. The scope for this Phase II ESA was designed based on the above criteria.

2.2 Scope of Services

The scope of work for this assessment was in general accordance with the American Society of Testing and Materials (ASTM) Standard Practices for Environmental Site Assessments: Phase II ESA Process (ASTM Designation: E1903-97). These methodologies are described as representing good commercial and customary practice for conducting a Phase II ESA of a property for the purpose of evaluating recognized environmental conditions.

This investigation has been identified as a "limited" investigation as its purpose is to identify impacts related to known current and/or historical land use, and included just the portions of the parcels anticipated to be impacted by the proposed roadway improvement project.

2.2.1 Soil Assessment

- Advancement of soil borings via direct-push technology at sixteen (16) locations within the proposed ROW and pond sites.
- Collection of soil samples from three discrete depth intervals from each boring location (0.5', 2' and 4' bls) and screened using an Organic Vapor Analyzer utilizing a flame Ionization detector as specified in Rule 62-770.200(2), FAC, to determine if volatile compounds are present.
- Laboratory analysis of six (6) samples exhibiting organic vapor concentrations above background readings, or in areas most likely to intercept contaminants. Samples analyzed by an accredited laboratory to evaluate the potential soil impacts above FDEP soil cleanup target levels utilizing the following parameters:

  For samples collected from areas suspected of petroleum impacts:
  - EPA Method 8260 for volatile organic compounds (BTEX/MTBE)
  - EPA Method 8270 for polynuclear aromatic hydrocarbons (PAHs)
  - FLPRO for total recoverable hydrocarbons

For samples collected from areas suspect of petroleum and herbicide/pesticide impacts:

- The above-listed methods
- EPA Method 8081 for organochlorine pesticides
- EPA Method 8321 for chlorinated herbicides

2.2.2 Groundwater Assessment

- Installation and sampling of three (3) temporary, small-diameter monitor wells in the areas most likely to contain subsurface impacts. Wells were installed to a depth between 14 and 15 feet below land surface for collection of groundwater samples.
- Upon review of available agency data related to the Herrera Property located within the north portion of the study area, Cardno TBE personnel were able to utilize three existing permanent groundwater monitor wells installed on the property as part of the FDEP Bureau of Petroleum Storage Systems cleanup program.
- Samples were submitted for laboratory analysis of the following parameters:

  For samples collected from areas suspected of petroleum impacts:

  - EPA Method 8260 for volatile organic compounds
  - EPA Method 8270 for polynuclear aromatic hydrocarbons (PAHs)
  - FLPRO for total recoverable hydrocarbons
  - EPA Method 6010 for lead
  - EPA Method 8011 for EDB

  For samples collected from areas suspect of petroleum and herbicide/pesticide impacts:

  - The above-listed methods
  - EPA Method 8081 for organochlorine pesticides
  - EPA Method 8321 for chlorinated herbicides

2.3 Limitations /Exceptions of Assessment

The conclusions and recommendations contained within this report are based on the data developed during the Limited Phase II ESA investigation. This report was prepared for the Client, and is intended solely for their use. This report is not intended for third-party use without the expressed written consent of the Client and Cardno TBE. This report has been prepared in general accordance with 40 CFR Part 312 Standards and Practices for All Appropriate Inquiries and ASTM E 1903-97 Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process. No other warranty, expressed or implied, is made.

2.4 Limiting Conditions and Methodologies Used

No ESA can eliminate all uncertainty. Furthermore, any sample, either surface or subsurface, taken for chemical analysis may or may not be representative of a larger population. Professional judgment and interpretation are inherent in the process and uncertainty is inevitable. Additional assessment may be able to reduce the uncertainty. Even when Phase II ESA work is executed with an appropriate site-specific standard of care, certain conditions present especially difficult detection problems. Such conditions may include, but are not limited to, complex geological settings, the fate and transport characteristics of certain hazardous substances and petroleum products, the distribution of existing contamination, physical limitations imposed by the location of utilities and other man-made objects, and the limitations of assessment technologies.

Phase II ESAs do not generally require an exhaustive assessment of environmental conditions on a property. There is a point at which the cost of information obtained and the time required to obtain it outweigh the usefulness of the information and, in fact, may be a material detriment to the orderly completion of transactions. If hazardous substance or petroleum releases are confirmed on a parcel of property, the extent of further assessment is related to the degree of uncertainty that is acceptable to the user with respect to the real estate transaction. Measurements and sampling data only represent the site conditions at the time of data collection. Therefore, the usability of data collected as part of this Phase II ESA may have a finite lifetime depending on the application and use being made of the data. An environmental professional should evaluate whether the generated data are appropriate for any subsequent use beyond the original purpose for which it was collected.

3.0 PHASE II ESA ACTIVITIES

3.1 Scope of Assessment

3.1.1 Supplemental Records Review

No supplement records review was conducted for this assessment.

3.1.2 Conceptual Site Model and Sampling Plan

The conceptual site model takes into consideration the potential distributions of contaminants with respect to the properties and anticipated fate and transport characteristics of contaminants in a setting such as that being assessed. The sampling plan was designed to provide for the collection of potentially contaminated environmental media, if they occur, at locations and depths where the highest concentrations are likely to occur. The sampling plan developed for this project was based on the proximity of potential environmental concerns (including on-site activities).

3.1.3 Chemical Testing Plan

The chemical testing plan was designed to detect the contaminants suspected to be present in the samples collected. This testing plan included tests which provide quality assurance (QA) and techniques that provide quality control (QC) over the chemical analysis. A completed chain of custody record accompanied each sample shipment to the analytical laboratory. Chain of custody records provide written documentation regarding sample collection and handling, identify the persons involved in the chain of sample possession, and a written record of requested analytical parameters.

3.1.4 Deviations from the Work Plan

There were no significant deviations from the work plan.

3.2 Field Explorations and Methods

3.2.1 Test Pits

No test pits were excavated as part of this Phase II ESA.

3.2.2 Soil Borings

Fifteen (15) borings were excavated to the water table within the boundaries of the study area depicted on **Figure 2**. At the time of this assessment, the water table was encountered approximately four feet below land surface.

Samples were recovered at approximate two-foot increments using direct-push technology (Geoprobe™) for screening of combustible vapors via a Flame Ionization Detector (FID). Copies of the field sampling logs are included in **Appendix A.**

3.2.3 Monitor Well Installations

Three (3) temporary shallow groundwater monitor wells were installed in soil boring excavations in areas deemed most likely to intercept migrating contaminants related to current and/or historic land uses. These wells consisted of one-inch PVC pipe with 10 feet of slotted screen per FDEP Standard Operating Procedures. All wells were installed to a depth of between 14 and 15 feet below land surface.

3.3 Sampling and Chemical Analyses

3.3.1 Soil

Due to lack of FID readings within the vadose zone (area between the surface and the water table) indicating significant petroleum impacts, soil samples were collected from borings anticipated to offer a characterization of on-site shallow soils. Samples were submitted to Sun Labs for laboratory analysis for the analyses listed in Section 2.2.1.

3.3.2 Groundwater

Groundwater samples collected from the three temporary and three existing permanent monitor wells were submitted to Sun Labs for the laboratory analyses listed in Section 2.2.2.

3.3.3 Other

No other chemical analyses were performed as part of this Limited Phase II ESA.

4.0 EVALUATION AND PRESENTATION OF RESULTS

4.1 Analytical Data

4.1.1 Soil

Comparison of the laboratory analysis results to Chapter 62-777 Cleanup Target Levels (CTLs) of the collected soil samples revealed the following:

- ***Total Petroleum Recoverable Hydrocarbons (TRPH)*** was detected in shallow soils above the State's direct-exposure criteria within the proposed roadway improvement area located in the west portion of the Herrera Property (Parcel ID No. 48341007). TRPH was also encountered in shallow soil collected near the west corner of the Herrera garage structure located within the proposed improvement area. This detection was below cleanup criteria, but indicative of relatively wide-spread petroleum impacts to shallow soils within this parcel (Parcel ID No. 486200009).

- ***Organochlorine pesticides and chlorinated herbicides:***
  Laboratory analysis of the two soil samples collected in areas suspect of these impacts revealed no detections above CTLs and/or the analyses detection limits.

4.2.1 Groundwater

Comparison of the laboratory analysis results to Chapter 62-777 Cleanup Target Levels (CTLs) of the six collected groundwater samples revealed the following:

- ***Petroleum constituents (VOC, PAH's and TRPH):***
  MW-4R (existing monitor well located within the Herrera property) exhibited levels of VOCs (ethylbenzene, isopropylbenzene and trimethylbenzenes) above analysis detection limits. With the exception of isopropylbenzene, the levels of these constituents were below the applicable CTLs.

  Isopropylbenzene (a/k/a cumene), an aromatic hydrocarbon, is a constituent of refined fuels. It's presence above regulatory criteria indicates dissolved-phase petroleum impacts to groundwater in the vicinity of the former underground diesel fuel storage tanks on the Herrera Property west of the on-site garage/storage structure (and within the proposed roadway improvement location).

  Similar constituents were encountered in MW-7, but well below CTLs. However, the detection of these constituents indicates the potential for horizontal migration of contaminants.

- ***Organochlorine pesticides and chlorinated herbicides:***

  Laboratory analysis of the two soil samples collected in areas suspect of these impacts revealed no detections above CTLs and/or the analyses detection limits.

A copy of the laboratory analyses reports is included as **Appendix B.**

5.0 CONCLUSION

This limited assessment has revealed soil and groundwater impacts within the Herrera properties which will require consideration during the proposed roadway improvement project. These considerations will likely include:

- Applicable materials handling plan(s) for soil and groundwater impacts encountered during construction
- Screening for asbestos-containing materials and lead-based paint (as part of the anticipated demolition plan) of the on-site structure(s)
- Hydraulic lift removal per Chapter 62-761 criteria

6.0 STATEMENT OF QUALITY AND PROFESSIONAL CERTIFICATION

I declare that I have the specific qualifications based on education, training and/or experience to assess a property of the nature, history and setting of the subject property.

CARDNO TBE

Shawn Lasseter
Environmental Specialist

Date: 11/12/2010

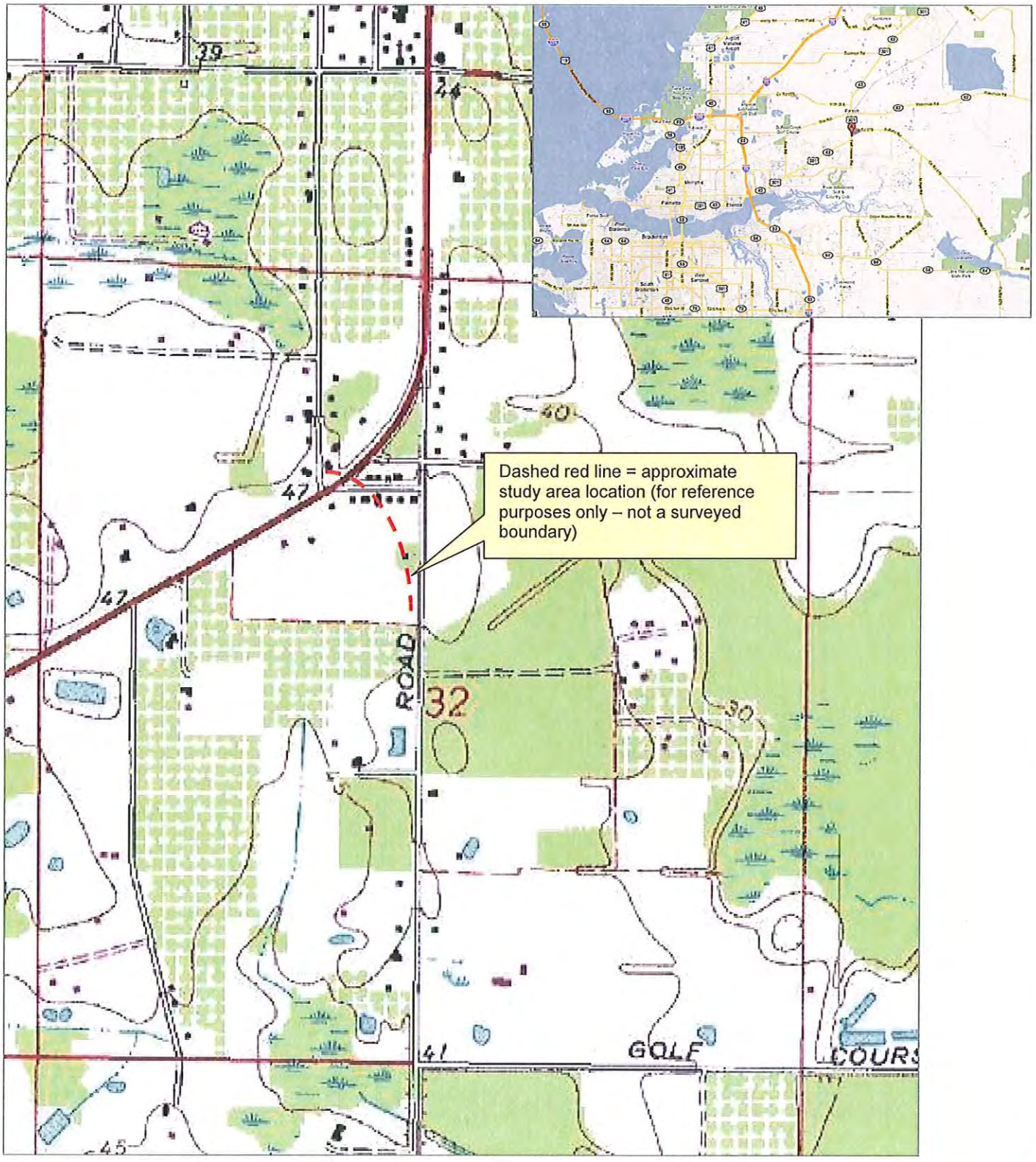
I declare that I meet the definition of Environmental Professional as defined in 40 CFR Part 312.10 and that I have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. I further certify that, in my professional judgment, this report meets the general requirements of ASTM Method E 1903-97, Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process, and was prepared by me or under my direct responsible charge.

CARDNO TBE

Richard L. Hagberg, PG
Director

Date: 11/12/2010

Figures



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US 301 & Ft Hamer Road
Proposed Intersection Improvements
Parrish, Manatee County, Florida

Figure 1
USGS/Site Vicinity Map

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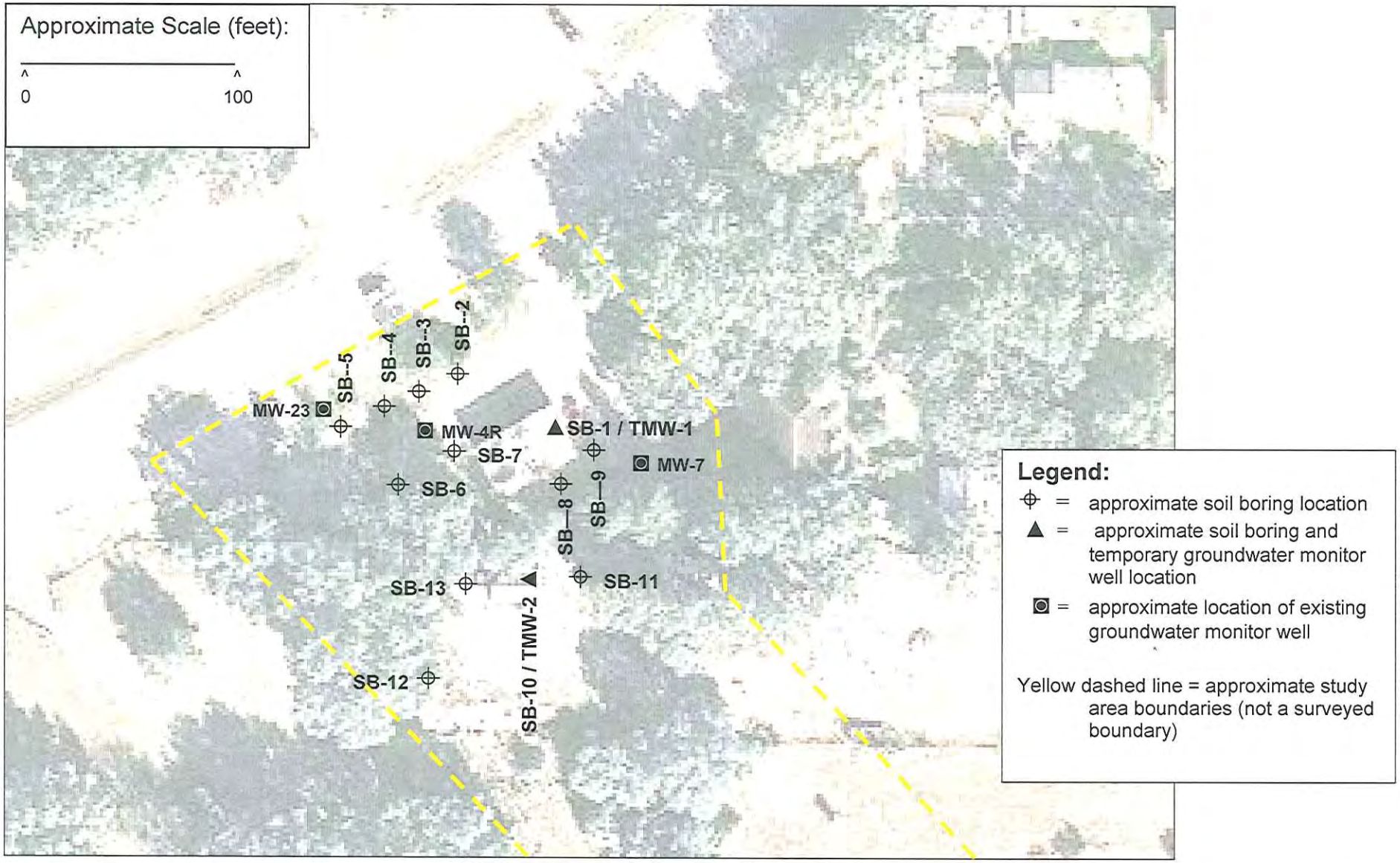
US 301 & Ft Hamer Road
Proposed Intersection Improvements
Parrish, Manatee County, Florida

Figure 2
Study Area Map



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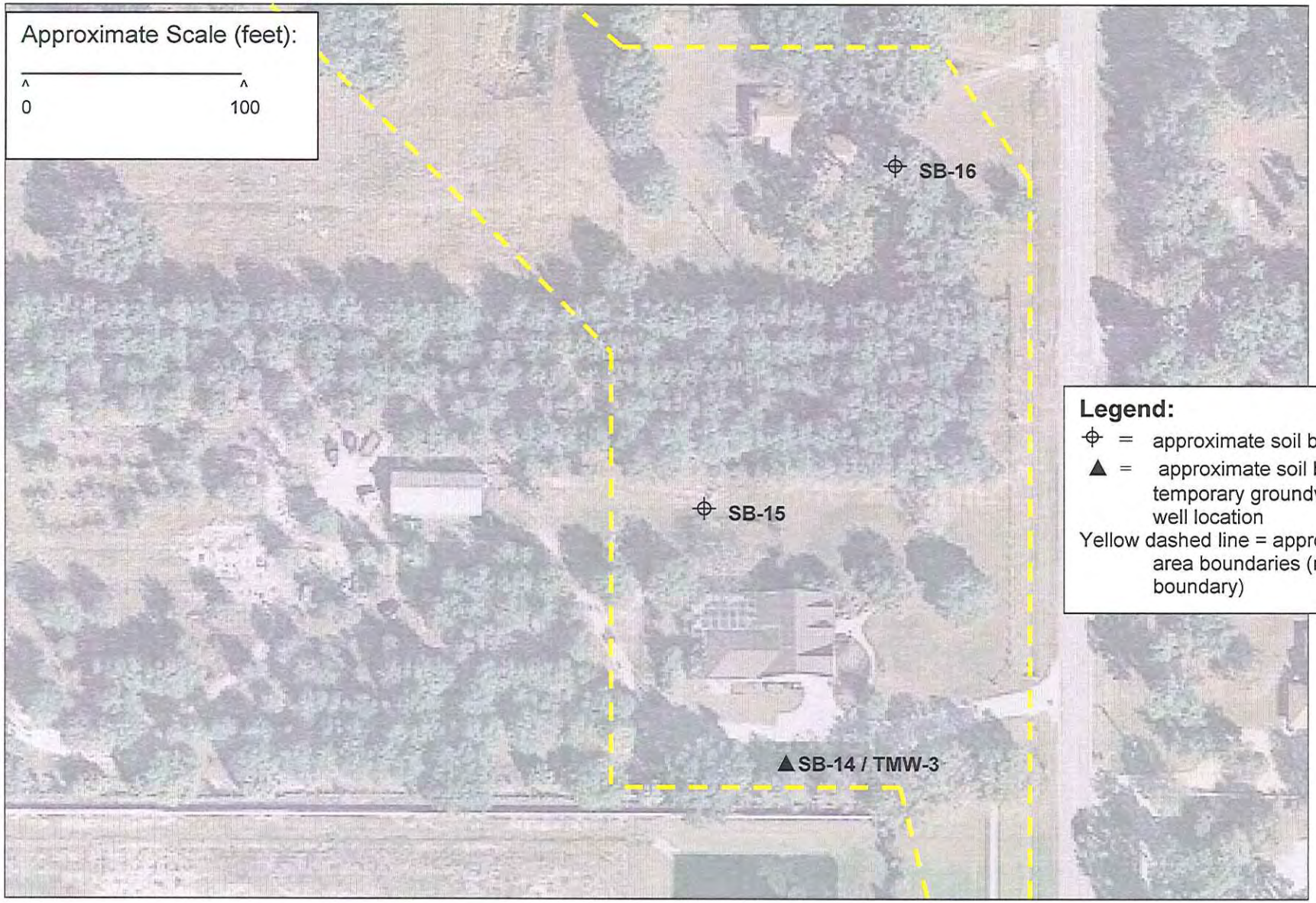
US 301 & Ft Hamer Road
Proposed Intersection Improvements
Parrish, Manatee County,

Figure 3
Sampling Location Map - North



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US 301 & Ft Hamer Road
Proposed Intersection Improvements
Parrish, Manatee County,

Figure 4
Sampling Location Map - South

Tables

Table 1
Soil Analytical Summary
Fort Hamer Road & US 301 Roadway Improvements

Method	Parameter	Units	DE-Residential	DE-Comm/Indust	Leach-GW	SS-1 (SB-7 @ 0.5 - 2 feet bls)		SS-2 (SB-10 @ 0.5 - 2 feet bls)		SS-3 (SB-11 @ 0.5 - 2 feet bls)		SS-4 (SB-12 @ 0.5 - 2 feet bls)		SS-5 (SB-14 @ 0.5 - 2 feet bls)		SS-6 (SB-16 @ 0.5 - 2 feet bls)	
	Date Collected					10/7/2010		10/7/2010		10/11/2010		10/11/2010		10/11/2010		10/8/2010	
						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
Volatile Organic Compounds (BTEX/MTBE)																	
8260	Benzene	mg/kg	1.2	1.7	0.007	0.00053	U	0.00058	U	0.00055	U	0.00056	U	0.00076	U	0.00056	U
8260	Ethylbenzene	mg/kg	1500	9200	0.6	0.00061	U	0.00066	U	0.00062	U	0.00064	U	0.00087	U	0.00064	U
8260	MTBE	mg/kg	4400	24000	0.09	0.0015	U	0.0017	U	0.0016	U	0.0016	U	0.0022	U	0.0016	U
8260	Toluene	mg/kg	7500	60000	0.5	0.0023	U	0.0025	U	0.0024	U	0.0024	U	0.0033	U	0.0024	U
8260	Total Xylenes	mg/kg	130	700	0.2	0.0023	U	0.0025	U	0.0024	U	0.0024	U	0.0033	U	0.0024	U
Polynuclear Aromatic Hydrocarbons (PAHs)																	
8270	Acenaphthene	mg/kg	2400	20000	2.1	0.0024	U	0.0044	U	0.0022	U	0.0022	U	0.0023	U	0.0022	U
8270	Acenaphthylene	mg/kg	1800	20000	27	0.0025	U	0.0046	U	0.0023	U	0.0023	U	0.0024	U	0.0023	U
8270	Anthracene	mg/kg	21000	300000	2500	0.002	U	0.0036	U	0.0018	U	0.0018	U	0.0018	U	0.0018	U
8270	Benzo(a)anthracene	mg/kg	#	#	0.8	0.0017	U	0.0032	U	0.0016	U	0.0015	U	0.0016	U	0.0016	U
8270	Benzo(a)pyrene	mg/kg	0.1	0.7	8	0.0023	U	0.0042	U	0.0021	U	0.0021	U	0.0022	U	0.0021	U
8270	Benzo(b)fluoranthene	mg/kg	#	#	2.4	0.0031	U	0.0056	U	0.0028	U	0.0028	U	0.0029	U	0.0029	U
8270	Benzo(g,h,i)perylene	mg/kg	2500	52000	32000	0.0079	U	0.014	U	0.0071	U	0.0071	U	0.0075	U	0.0073	U
8270	Benzo(k)fluoranthene	mg/kg	#	#	24	0.0022	U	0.004	U	0.002	U	0.002	U	0.0021	U	0.002	U
8270	Chrysene	mg/kg	#	#	77	0.0014	U	0.0024	U	0.0012	U	0.0012	U	0.0013	U	0.0013	U
8270	Dibenzo(a,h)anthracene	mg/kg	#	#	0.7	0.0084	U	0.015	U	0.0075	U	0.0075	U	0.0079	U	0.0078	U
8270	Fluoranthene	mg/kg	3200	59000	1200	**0.018**		0.0048	U	0.0024	U	0.0024	U	0.0025	U	0.0024	U
8270	Fluorene	mg/kg	2600	33000	160	0.0021	U	0.0038	U	0.0019	U	0.0019	U	0.002	U	0.0019	U
8270	Indeno(1,2,3-cd)pyrene	mg/kg	#	#	6.6	0.0083	U	0.015	U	0.0074	U	0.0074	U	0.0078	U	0.0077	U
8270	Methylnaphthalene, 1-	mg/kg	200	1800	3.1	0.0038	U	0.0068	U	0.0034	U	0.0034	U	0.0036	U	0.0035	U
8270	Methylnaphthalene, 2-	mg/kg	210	2100	8.5	0.0032	U	0.0058	U	0.0029	U	0.0029	U	0.003	U	0.003	U
8270	Naphthalene	mg/kg	55	300	1.2	0.0063	U	0.011	U	0.0057	U	0.0057	U	0.006	U	0.0059	U
8270	Phenanthrene	mg/kg	2200	36000	250	0.0032	U	0.0058	U	0.0029	U	0.0029	U	0.003	U	0.003	U
8270	Pyrene	mg/kg	2400	45000	880	**0.026**	I	0.014	U	0.0071	U	0.0071	U	0.0075	U	0.0073	U
Florida Petroleum Range Organics																	
FLPRO	TRPH	mg/kg	460	2700	340	**150**		**840**		4.9	U	4.9	U	**6.1**	I	5.1	U
Organochlorine Pesticides																	
8081	Aldrin	mg/kg	0.06	0.3	0.2			0.0023	U					0.0024	U		
8081	BHC, a-	mg/kg	0.1	0.6	0.0003			0.003	U					0.0032	U		
8081	BHC, b-	mg/kg	0.5	2.4	0.001			0.0019	U					0.002	U		
8081	BHC, d-	mg/kg	24	490	0.2			0.0023	U					0.0024	U		
8081	Chlordane, a-	mg/kg	NE	NE	NE			0.0024	U					0.0025	U		

Table 1
Soil Analytical Summary
Fort Hamer Road & US 301 Roadway Improvements

Method	Parameter	Units	DE-Residential	DE-Comm/Indust	Leach-GW	SS-1 (SB-7 @ 0.5 - 2 feet bls)		SS-2 (SB-10 @ 0.5 - 2 feet bls)		SS-3 (SB-11 @ 0.5 - 2 feet bls)		SS-4 (SB-12 @ 0.5 - 2 feet bls)		SS-5 (SB-14 @ 0.5 - 2 feet bls)		SS-6 (SB-16 @ 0.5 - 2 feet bls)	
	Date Collected					10/7/2010		10/7/2010		10/11/2010		10/11/2010		10/11/2010		10/8/2010	
						Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
8081	Chlordane, g-	mg/kg	NE	NE	NE			0.0018	U					0.0018	U		
8081	DDD, 4,4'-	mg/kg	4.2	22	5.8			0.0019	U					0.002	U		
8081	DDE, 4,4'-	mg/kg	2.9	15	18			0.0018	U					0.0018	U		
8081	DDT, 4,4'-	mg/kg	2.9	15	11			0.00067	U					0.0007	U		
8081	Dieldrin	mg/kg	0.06	0.3	0.002			0.0017	U					0.0017	U		
8081	Endosulfan I (alpha)	mg/kg	NE	NE	NE			0.0017	U					0.0017	U		
8081	Endosulfan II (beta)	mg/kg	NE	NE	NE			0.0017	U					0.0017	U		
8081	Endosulfan sulfate	mg/kg	NE	NE	NE			0.0012	U					0.0013	U		
8081	Endrin	mg/kg	25	510	1			0.0018	U					0.0018	U		
8081	Endrin aldehyde	mg/kg	NE	NE	NE			0.0017	U					0.0017	U		
8081	Endrin ketone	mg/kg	NE	NE	NE			0.0014	U					0.0014	U		
8081	Heptachlor	mg/kg	0.2	1	23			0.002	U					0.0021	U		
8081	Heptachlor epoxide	mg/kg	0.1	0.5	0.6			0.0018	U					0.0018	U		
8081	Lindane	mg/kg	0.7	2.5	0.009			0.00062	U					0.00065	U		
8081	Methoxychlor	mg/kg	420	8800	160			0.002	U					0.0021	U		
8081	Mirex	mg/kg	NE	NE	NE			0.0067	U					0.007	U		
8081	Toxaphene	mg/kg	0.9	4.5	31			0.077	U					0.08	U		
Chlorinated Herbicides																	
8321	D, 2,4-	mg/kg	770	13000	0.7			0.033	U					0.035	U		
8321	DB, 2,4-	mg/kg	NE	NE	NE			0.0092	U					0.0096	U		
8321	Dicamba	mg/kg	2300	40000	2.6			0.021	U					0.022	U		
8321	Dichlorprop	mg/kg	370	5300	0.3			0.0074	U					0.0077	U		
8321	MCPA	mg/kg	35	500	0.02			0.003	U					0.0032	U		
8321	MCPP	mg/kg	64	800	0.03			0.0093	U					0.0097	U		
8321	Picloram	mg/kg	NE	NE	NE			0.023	U					0.024	U		
8321	T, 2,4,5-	mg/kg	690	9500	0.4			0.0074	U					0.0077	U		

LEGEND:
U = Compound was analyzed for, but not detected above analysis detection limits
I = Reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
NOTES:
This summary is provided for the convenience of our clients. The signed, hardcopy report is the official report.

Table 2
Groundwater Analytical Summary
Fort Hamer Road & US 301 Roadway Improvements

Method	Parameter	Units	GCTL	NADSC	MW-4R		MW-7		MW-23		TMW-1		TMW-2		TMW-3	
	Date Collected				10/8/2010		10/8/2010		10/8/2010		10/11/2010		3/10/2010		3/10/2010	
					Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual	Result	Qual
6010	Lead	ug/L	15	150	4.4	U	4.4	U	4.4	U	4.4	U	4.4	U	4.4	U
Volatile Organic Compounds																
8260	Acetone	ug/L	6300	63000	0.6	U	**4.9**	I	0.6	U	**3.4**	I	**8.5**		**2.2**	I
8260	Benzene	ug/L	1	100	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Bromochloromethane	ug/L	91	910	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Bromodichloromethane	ug/L	0.6	60	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Bromoform	ug/L	4.4	440	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
8260	Bromomethane	ug/L	9.8	98	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
8260	Butanone, 2-	ug/L	4200	42000	0.4	U	**3.3**	I	0.4	U	**3.3**	I	**3.8**	I	**4.1**	I
8260	Carbon disulfide	ug/L	700	7000	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
8260	Carbon tetrachloride	ug/L	3	300	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Chlorobenzene	ug/L	100	1000	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Chloroethane	ug/L	12	1200	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
8260	Chloroform	ug/L	70	700	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Chloromethane	ug/L	2.7	270	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Dibromochloromethane	ug/L	0.4	40	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
8260	Dibromomethane	ug/L	70	700	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Dichlorobenzene, 1,2-	ug/L	600	6000	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Dichlorobenzene, 1,3-	ug/L	210	2100	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
8260	Dichlorobenzene, 1,4-	ug/L	75	750	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
8260	Dichlorodifluoromethane	ug/L	1400	14000	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
8260	Dichloroethane, 1,1-	ug/L	70	700	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Dichloroethane, 1,2-	ug/L	3	30	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Dichloroethene, 1,1-	ug/L	7	70	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U	0.15	U
8260	Dichloroethene, cis-1,2-	ug/L	70	700	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Dichloroethene, trans-1,2-	ug/L	100	1000	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Dichloropropane, 1,2-	ug/L	5	50	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Dichloropropene, 1,3-	ug/L	0.4	40	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Ethylbenzene	ug/L	30	300	**8.9**		0.2	U	0.2	U	**0.2**	I	0.2	U	**0.2**	I
8260	Hexanone, 2-	ug/L	280	2800	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Methyl-2-pentanone, 4-	ug/L	560	5600	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Methylene Chloride	ug/L	5	50	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
8260	MTBE	ug/L	20	200	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
8260	isopropylbenzene	ug/L	0.8	8	**4**		0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Styrene	ug/L	100	1000	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Tetrachloroethane, 1,1,2,2-	ug/L	0.2	2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Tetrachloroethene	ug/L	3	30	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U

Table 2
Groundwater Analytical Summary
Fort Hamer Road & US 301 Roadway Improvements

8260	Toluene	ug/L	40	400	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
8260	Trichloroethane, 1,1,1-	ug/L	200	2000	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
8260	Trichloroethane, 1,1,2-	ug/L	5	500	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
8260	Trichloroethene	ug/L	3	30	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Trichlorofluoromethane	ug/L	2100	21000	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
8260	Trimethylbenzene, 1,2,4-	ug/L	10	100	**1.1**		0.2	U	0.2	U	**0.84**		0.2	U	0.2	U
8260	Trimethylbenzene, 1,3,5-	ug/L	10	100	**2.7**		0.2	U	0.2	U	0.32	I	0.2	U	0.2	U
8260	Vinyl acetate	ug/L	88	880	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U	0.25	U
8260	Vinyl chloride	ug/L	1	10	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U	0.09	U
8260	Total Xylenes	ug/L	20	200	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U	0.4	U
Petroleum Range Organics																
FLPRO	Petroleum Range Organics	ug/L	5000	50000	**830**		46	U	46	U	46	U	46	U	46	U
EDB																
8011	1,2-Dibromoethane	ug/L	0.02	2	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U	0.006	U
Petroleum Range Organics																
8270	Acenaphthene	ug/L	20	200	**1.6**		0.028	U	0.028	U	0.028	U	0.028	U	0.028	U
8270	Acenaphthylene	ug/L	210	2100	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U
8270	Anthracene	ug/L	2100	21000	**0.21**		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
8270	Benzo(a)anthracene	ug/L	0.05	5	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
8270	Benzo(a)pyrene	ug/L	0.2	20	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U	0.009	U
8270	Benzo(b)fluoranthene	ug/L	0.05	5	0.007	U	0.007	U	0.007	U	0.007	U	0.007	U	0.007	U
8270	Benzo(g,h,i)perylene	ug/L	210	2100	0.012	U	0.012	U	0.012	U	0.012	U	0.012	U	0.012	U
8270	Benzo(k)fluoranthene	ug/L	0.5	50	0.017	U	0.017	U	0.017	U	0.017	U	0.017	U	0.017	U
8270	Chrysene	ug/L	4.8	480	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U	0.01	U
8270	Dibenzo(a,h)anthracene	ug/L	0.005	0.5	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
8270	Fluoranthene	ug/L	280	2800	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U
8270	Fluorene	ug/L	280	2800	**2.5**		0.03	U	0.03	U	0.03	U	0.03	U	0.03	U
8270	Indeno(1,2,3-cd)pyrene	ug/L	0.05	5	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U	0.011	U
8270	Methylnaphthalene, 1-	ug/L	28	280	**13**		**0.16**		0.028	U	0.028	U	0.028	U	0.028	U
8270	Methylnaphthalene, 2-	ug/L	28	280	**8.9**		**0.21**		0.025	U	0.025	U	0.025	U	0.025	U
8270	Naphthalene	ug/L	14**	140	**4.3**		0.031	U	0.031	U	0.031	U	0.031	U	0.031	U
8270	Phenanthrene	ug/L	210	2100	**2.6**		**0.15**		0.026	U	0.026	U	0.026	U	0.026	U
8270	Pyrene	ug/L	210	2100	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U	0.022	U
Chlorinated Herbicides																
8321	DB, 2,4-	ug/L	56	560									1.1	U	1.1	U
8321	Dicamba	ug/L	210	2100									0.35	U	0.35	U
8321	Dichlorprop	ug/L	35	350									0.32	U	0.32	U
8321	Dinoseb	ug/L	7	70									0.18	U	0.18	U
8321	MCPA	ug/L	3.5	35									0.21	U	0.21	U
8321	MCPP	ug/L	7	70									0.15	U	0.15	U
8321	T, 2,4,5-	ug/L	70	700									0.23	U	0.23	U
8321	TP, 2,4,5 (Silvex)	ug/L	50	500									0.28	U	0.28	U

Table 2
Groundwater Analytical Summary
Fort Hamer Road & US 301 Roadway Improvements

Organochlorine Pesticides																
8081	Aldrin	ug/L	0.002	0.2									0.002	U	0.002	U
8081	BHC, a-	ug/L	0.006	0.6									0.0023	U	0.0023	U
8081	BHC, b-	ug/L	0.02	2									0.003	U	0.003	U
8081	BHC, d-	ug/L	2.1	21									0.0023	U	0.0023	U
8081	Chlordane, a-	ug/L	2***	NE									0.0019	U	0.0019	U
8081	Chlordane, g-	ug/L	2***	NE									0.0021	U	0.0021	U
8081	DDD, 4,4'-	ug/L	0.1	10									0.0016	U	0.0016	U
8081	DDE, 4,4'-	ug/L	0.1	10									0.0017	U	0.0017	U
8081	DDT, 4,4'-	ug/L	0.1	10									0.002	U	0.002	U
8081	Dieldrin	ug/L	0.002	0.2									0.0014	U	0.0014	U
8081	Endosulfan I	ug/L	NE	NE									0.0019	U	0.0019	U
8081	Endosulfan II	ug/L	NE	NE									0.0018	U	0.0018	U
8081	Endosulfan sulfate	ug/L	NE	NE									0.0027	U	0.0027	U
8081	Endrin	ug/L	2	20									0.0018	U	0.0018	U
8081	Endrin aldehyde	ug/L	NE	NE									0.0019	U	0.0019	U
8081	Endrin ketone	ug/L	NE	NE									0.0016	U	0.0016	U
8081	Heptachlor	ug/L	0.4	4									0.0024	U	0.0024	U
8081	Heptachlor epoxide	ug/L	0.2	20									0.0022	U	0.0022	U
8081	Lindane	ug/L	0.2	2									0.0024	U	0.0024	U
8081	Methoxychlor	ug/L	40	400									0.0018	U	0.0018	U
8081	Mirex	ug/L	1.4	14									0.015	U	0.015	U
8081	Toxaphene	ug/L	3	300									0.044	U	0.044	U

LEGEND:
U = Compound was analyzed for, but not detected above analysis detection limits
I = Reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

NOTES:
This summary is provided for the convenience of our clients. The signed, hardcopy report is the official report.

Unless noted by º, units have been converted to ug/L (water) or mg/kg (solids) for ease of comparison with Chapter 62-770 Cleanup Target Levels.

Appendix A
Field Logs

Cardno TBE

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: US 301 & Ft. Hamer Rd	SITE LOCATION: Parrish, FL	
WELL NO: MW-4R	SAMPLE ID: MW-4R	DATE: 10-8-20

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4.85 feet to 14.85 feet	STATIC DEPTH TO WATER (feet): 5.20	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.85 feet – 5.20 feet) X .16 gallons/foot = 1.5 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 15:55	PURGING ENDED AT: 16:19	TOTAL VOLUME PURGED (gallons): 2.4

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
16:10	1.5	1.5	.10	5.57	5.54	25.51	373	.14	4.99	Clear	Sl. Petro
16:13	1.30	1.8	.10	5.57	5.56	25.53	379	.13	4.77	"	"
16:16	1.30	2.1	.10	5.57	5.57	25.52	381	.13	4.75	"	"
16:19	1.30	2.4	.10	5.57	5.57	25.52	380	.12	4.75	"	"

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dana Kress/Cardno TBE	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 16:20	SAMPLING ENDED AT: 16:30
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-4R	3	CG	40ml	HCl	—	—	8260	RFPP	50
	3	CG	40ml	HCl	—	—	EDB	RFPP	50
	1	AG	1Liter	—	—	—	PAH	APP	400
	1	AG	500ml	HCl	—	—	FL PRO	APP	400
↓	1	P	250ml	HNO3	—	—	Lead	APP	400

REMARKS: KAG

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: US 301 & Ft. Homer Rd.		SITE LOCATION: Parrish, FL	
WELL NO: MW-7	SAMPLE ID: MW-7		DATE: 10-8-10

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH 4.65 feet to 14.65 feet	STATIC DEPTH TO WATER (feet): 4.44	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.65 feet – 4.44 feet) X .16 gallons/foot = 1.6 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 14:32	PURGING ENDED AT: 14:57	TOTAL VOLUME PURGED (gallons): 2.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14:48	1.6	1.6	.10	6.01	5.44	25.71	2210	.41	3.2	clear	none
14:51	.30	1.9	.10	6.01	5.96	25.72	2213	.42	3.1	↓	↓
14:54	.30	2.2	.10	6.01	5.96	25.73	2214	.41	3.1		
14:57	.30	2.5	.10	6.01	5.97	25.73	2214	.40	3.1		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dana Kees / Cardno TEC	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 15:00	SAMPLING ENDED AT: 15:11
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-7	3	CG	40ml	HCl	—	—	8260	RFPP	50
|	3	CG	40ml	HCl	—	—	EDB	RFPP	50
|	1	AG	1Ltr	—	—	—	PAH	APP	400
|	1	AG	500ml	HCl	—	—	FL-PRO	APP	400
↓	1	P	250ml	HNO3	—	—	Lead	APP	400

REMARKS: RAG

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: US 301 & Ft. Hamer Rd.		SITE LOCATION: Parrish, FL	
WELL NO: MW-23	SAMPLE ID: MW-23		DATE: 10-8-10

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4.7 feet to 14.7 feet	STATIC DEPTH TO WATER (feet): 4.87	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.70 feet – 4.87 feet) X .16 gallons/foot = 1.6 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6	PURGING INITIATED AT: 15:16	PURGING ENDED AT: 15:41	TOTAL VOLUME PURGED (gallons): 2.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
15:32	1.6	1.6	.10	5.38	6.04	26.33	593	.21	10.88	clear	none
15:35	.30	1.9	.10	5.38	6.07	26.32	592	.20	9.77	↓	↓
15:38	.30	2.2	.10	5.38	6.06	26.33	591	.20	9.76		
15:41	.30	2.5	.10	5.38	6.06	26.33	591	.21	9.76		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dana Kress / Cardno TBE	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 15:42	SAMPLING ENDED AT: 15:52
PUMP OR TUBING DEPTH IN WELL (feet): 6	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-23	3	CG	40ml	HCl	—	—	8260	RFPP	50
	3	CG	40ml	HCl	—	—	EDB	RFPP	50
	1	AG	1Liter	—	—	—	PAH	~~APP~~ RFPP	400
	1	AG	500ml	HCl	—	—	FL-PRO	APP	400
↓	1	P	250ml	HNO3	—	—	Lead	APP	400

REMARKS: KAG

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: US 301 & Ft. Homer Rd.	SITE LOCATION: Parrish, FL	
WELL NO: TMW-1	SAMPLE ID: TMW-1	DATE: 10-11-10

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 5.53	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet – 5.53 feet) X .04 gallons/foot = .34 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8	PURGING INITIATED AT: 09:45	PURGING ENDED AT: 10:06	TOTAL VOLUME PURGED (gallons): 1.05

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
09:57	.34	.34	.08	7.80	6.11	26.35	411	.22	7.77	clear	Sl. Petro?
10:00	.24	.58	.08	7.80	6.12	26.37	419	.23	7.51	↓	↓
10:03	.24	.82	.08	7.80	6.12	26.36	415	.23	7.52		
10:06	.24	1.06	.08	7.80	6.12	26.36	414	.24	7.51		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dana Ness / Cardno TBE	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:08	SAMPLING ENDED AT: 10:23
PUMP OR TUBING DEPTH IN WELL (feet): 8	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
TMW-1	~~X~~ 3	CG	40 ml	HCl	—	—	8260	RFPP	50
	~~CG~~ 3	CG	40ml	HCl	—	—	EDB	RFPP	50
	~~AG~~ 1	AG	1Liter	—	—	—	PAH	APP	400
	~~AG~~ 1	AG	500ml	HCl	—	—	FL-PRO	APP	400
↓	~~X~~ 1	P	250ml	HNO3	—	—	Lead	APP	400

REMARKS:
QC Sample

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: US 301 & Ft. Hamer Rd.	SITE LOCATION: Parrish, FL	
WELL NO: TMW-2	SAMPLE ID: TMW-2	DATE: 10-11-10

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 5.15	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet – 5.15 feet) X .04 gallons/foot = .35 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 10:43	PURGING ENDED AT: 11:02	TOTAL VOLUME PURGED (gallons): 1.07

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or ~~µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:53	.35	.35	.08	6.20	6.27	26.36	299	.18	5.91	clear	none
10:56	.24	.59	.08	6.20	6.23	26.37	297	.17	5.92	↓	↓
10:59	.24	.83	.08	6.20	6.23	26.37	296	.18	5.91		
11:02	.24	1.07	.08	6.20	6.23	26.38	297	.17	5.90		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dana Bass / Cardno TBE	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10:05	SAMPLING ENDED AT: 11:15
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
TMW-2	3	CG	40ml	HCl	—	—	8260	RFPP	50
	3	CG	40ml	HCl	—	—	EDB	RFPP	50
	1	AG	1Liter	—	—	—	PAH	APP	400
	1	AG	500ml	HCl	—	—	FL-PRO	APP	400
	1	P	250ml	HNO3	—	—	Lead	APP	400
	2	AG	1Liter	—	—	—	Pest/Herb	APP	400

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: US 301 & Ft. Hamer Rd.	SITE LOCATION: Parrish, FL	
WELL NO: TMW-3	SAMPLE ID: TMW-3	DATE: 10-11-10

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/4	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 4.80	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet – 4.80 feet) X .04 gallons/foot = .37 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7	PURGING INITIATED AT: 12:22	PURGING ENDED AT: 12:42	TOTAL VOLUME PURGED (gallons): 1.09

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm ~~or µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
12:33	.37	.37	.08	6.16	6.21	26.31	599	.41	4.77	Clear	Sulphur
12:36	.24	.61	.08	6.16	6.23	26.33	601	.41	4.71	↓	↓
12:39	.24	.85	.08	6.16	6.22	26.34	603	.42	4.69		
12:42	.24	1.09	.08	6.16	6.22	26.34	602	.42	4.68	↓	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dana Kress / Cardno TBE	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 12:45	SAMPLING ENDED AT: 13:03
PUMP OR TUBING DEPTH IN WELL (feet): 7	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
TMW-3	3	CG	40ml	HCl	—	—	8260	RFPP	50
↓	3	CG	40ml	HCl	—	—	EDB	RFPP	50
↓	1	AG	1Liter	—	—	—	PAH	APP	400
↓	1	AG	500ml	HCl	—	—	FL-PRO	APP	400
↓	1	P	250ml	HNO3	—	—	Lead	APP	400
↓	6	AG	1Liter	—	—	—	Herb/Pest	APP	400

REMARKS: QC

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

BORING LOG

Page 1 of 2

Boring/Well Number: SB-1	Permit Number:		FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 10.40 AM ☐ PM End Time: 11.16 AM ☐ PM	
Environmental Contractor: Cardno TBE	Geologist's Name:		Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): 5	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 15
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 5 +/-	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	-	<1	0-1	F.G.S., DK. Brown, no odor		D	
				<1	-	<1	2-3	F.G.S., Brown-Tan, no odor		D	
				<1	-	<1	4-5	F.G.S., DK. Brown, no odor		D	
				<1	-	<1	6-7	Sandy clay, Gray-Brown, sl. petro odor?		W	
				24	71	<1	8-9	Sandy clay, med. stiff, Gray-Green-Tan, petro odor		M	
				730	374		10-11	Sandy clay, med. soft, Gray-Brown, petro odor		M	
				<1	-	<1	12	Sl. dryey sand, Gray-Tan sl. petro odor?		W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

Boring/Well Number:	FDEP Facility Identification Number:	Site Name:	Borehole Start Date:
SB-1		US 301 & Ft. Hamer Rd.	End Date:

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							13				
				<1	–	<1	14	sl. clayey sand, Gray-Tan, sl. petro odor?		W	
				<1	–	<1	15	↓ ↓		W	
							16				
							17				
							18				
							19				
							20				
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Boring/Well Number: SB-2	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 & Ft. Hamer Rd	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 10:19 ☒ AM ☐ PM End Time: 11:31 ☒ AM ☐ PM
Environmental Contractor: Cardno TBE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): 4-5	Borehole Diameter (inches): 3 1/4
Borehole Depth (feet): 10		
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA
OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0-1	F.G.S., Brown - Tan, no odor		D	
				<1	–	<1	2	F.G.S., Tan-Brown, no odor		D	
				<1	–	<1	4	↓ ↓		M/W	
				<1	–	<1	6	sl. clayey sand, Brown-Gray, sl. petro odor?		M/W	
				<1	–	<1	8	sl. clayey sand, Gray-Tan, sl. petro odor		M/W	
				117	72		10	↓ ↓		M/W	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Boring/Well Number: SB-3	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 11:33 ☒ AM ☐ PM End Time: 11:46 ☒ AM ☐ PM
Environmental Contractor: Cardno TBE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4
Borehole Depth (feet): 10		
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA
OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0 (50')	F.G.S., Tan-Brown, no odor		D	
				<1	–	<1	2	F.G.S., Gray-Brown, no odor		D	
							3				
				<1	–	<1	4	F.G.S., Brown, no odor		M/W	
							5				
				<1	–	<1	6	Sandy clay, red, stiff,		M/W	
							7	Gray-Brown, sl. petro odor			
				316	<1	316	8			M/W	
							9				
				313	<1	313	10			M/W	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: SB-4	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 11:48 ☒ AM ☐ PM End Time: 12:03 ☐ AM ☒ PM
Environmental Contractor: Cardno TBE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): N/A	Borehole Diameter (inches): 3¼
Borehole Depth (feet): 10		
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well):
OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0-1	F.G.S., Tan-Brown, no odor		D	
				<1	–	<1	2	F.G.S., Tan-Gray, no odor		D	
							3				
				<1	–	<1	4	F.G.S., DK. Gray - DK. Brown, silty, no odor		M/W	
							5				
				<1	–	<1	6	F.G.S., Tan-Brown, no odor		W/S	
							7				
				<1	–	<1	8	Sl. clayey sand, Gray - Tan, no odor		M	
							9				
				<1	–	<1	10			M	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

BORING LOG

Boring/Well Number: SB-5	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Homer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 12:45 ☐ AM ☒ PM End Time: 13:03 ☐ AM ☒ PM
Environmental Contractor: Carlton TBE	Geologist's Name:	Environmental Technician's Name: Dave Bress

Drilling Company: Referral Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	-	<1	0-1	F.G.S., Brown, no odor		D	
				<1	-	<1	2-3	F.G.S., Brown-Tan, no odor		D	
				<1	-	<1	4-5	F.G.S., Tan-Brown, no odor		M/W	
				<1	-	<1	6-7	Sl. Clayey sand, Tan-Gray, no odor		M/W	
				<1	-	<1	8-9			M	
				<1	-	<1	10-11			M	
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: SB-6	Permit Number:		FDEP Facility Identification Number:
Site Name: US 301 & Ft. Hamer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 13:07 ☐ AM ☒ PM End Time: 13:17 ☐ AM ☒ PM	
Environmental Contractor: Cardno TBE	Geologist's Name:		Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0 1	F.G.S., Dk. Brown, small rocks, no odor		D	
				<1	–	<1	2 3	F.G.S., white, no odor		D	
				<1	–	<1	4 5	F.G.S., Tan - Brown, no odor		M	
				<1	–	<1	6 7			W	
				<1	–	<1	8 9	Sl. clayey sand, Gray - Tan, no odor		M	
				<1	–	<1	10 11 12			M	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

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BORING LOG

Boring/Well Number: SB-7	Permit Number:		FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 13:25 ☐ AM ☒ PM End Time: 13:45 ☐ AM ☒ PM	
Environmental Contractor: Carlyn TSE	Geologist's Name:		Environmental Technician's Name: Dana Kress
Drilling Company: Deforest Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				92	55		0-1'	F.G.S., DK. Brown - Brown, small rocks, sl. petro odor		D	SS-1 .5'-2' @ 16:05
				<1	–	<1	2	F.G.S., Brown - Gray, sl. petro odor?		D	
							3				
				<1	–	<1	4			sl. M	
							5				
				<1	–	<1	6	F.G.S., Brown - DK. Brown, petro odor?		S	
							7				
				134	25.5	<1	8	F.G.S., Brown, petro odor		W	
							9				
				13	50	<1	10	sl. clayey sand, Gray - Tan, petro odor		M	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

Boring/Well Number: SB-8	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd.	Borehole Start Date: 10-7-10 / End Date: 10-7-10	Borehole Start Time: 13:47 ☐ AM ☒ PM / End Time: 13:59 ☐ AM ☒ PM
Environmental Contractor: Cardno TBE	Geologist's Name:	Environmental Technician's Name: Dana Kress

Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	(.50') 1	F.G.S., Black, no odor		D	
				<1	–	<1	(2)	F.G.S., Tan-White, no odor		D	
							3				
				<1	–	<1	(4)	F.G.S., Gray-Brown, no odor		M/W	
							5				
				<1	–	<1	(6)	F.G.S., Sl. hard pan, Brown, no odor		M	
							7				
				<1	–	<1	(8)	Sl. clayey sand, Gray-Tan, no odor		M	
							9				
				<1	–	<1	(10)			M	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

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Boring/Well Number: SB-9	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Henry Rd	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 14:04 ☐ AM ☒ PM End Time: 14:20 ☐ AM ☒ PM
Environmental Contractor: Cardno TSE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): 3	Borehole Diameter (inches): 3 1/4
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA
		Borehole Depth (feet): 10
		OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	-	<1	0 1	F.G.S., Black, no odor		D	
				<1	-	<1	2 3	F.G.S., Gray-Brown, no odor		D	
				<1	-	<1	4 5	F.G.S., DK. Gray, no odor		M/W	
				25	56	<1	6 7	F.G.S., sl. hard pan, Brown, sl. petro odor?		M	
				50	38		8 9	sl. clayey sand, Brown-Gray, sl. petro odor		M/W	
				<1	-	<1	10 11 12	↓ ↓		M/W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: SB10	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 14:24 ☐ AM ☒ PM End Time: 14:38 ☐ AM ☒ PM
Environmental Contractor: Cardno TBE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA
Borehole Depth (feet): 10	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID	

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	-	<1	0 (0.5')	F.G.S., Tan-white, no odor		D	SS-2 .5'-2' @ 14:45
				<1	-	<1	2 3	↓ ↓		D	
				103	270	<1	4 5	F.G.S., OK. Brown, ~~no odor~~ (organic odor)		M/W	
				6	23	<1	6 7	F.G.S., Brown, ~~no odor~~ (organic odor)		W	
				5	31	<1	8 9	F.G.S., Sl. hard pan, Brown, ~~no odor~~ (organic odor)		M/W	
				2	12	<1	10 11 12	Sl. clayey sand, Brown, ~~no odor~~ (organic odor)		M	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

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Boring/Well Number: SB-11	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 14:42 ☐ AM ☒ PM End Time: 15:02 ☐ AM ☒ PM
Environmental Contractor: Cardno TSE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4
Borehole Depth (feet): 10		
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA
OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0-1'	F.G.S., Gray, no odor		D	SS-3 @ 0'-2' @ 11:38
				<1	–	<1	2 3	F.G.S., White, no odor		D	10-11-10
				17	48	<1	4 5	F.G.S., Brown, organic odor		M/W	
				<1	–	<1	6 7	F.G.S., Sl. hard pan, Brown, organic odor		M	
				<1	–	<1	8 9	Sandy clay, med. stiff, Gray to Tan - Green, no odor		M	
				<1	–	<1	10 11 12	Sandy clay, soft - med., Gray, no odor		M	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: SB-12	Permit Number:		FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamner Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 15:06 ☐ AM ☒ PM End Time: 15:15 ☐ AM ☒ PM	
Environmental Contractor: Cardno TBE	Geologist's Name:		Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA / DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0 1	F. G.S., White - Tan, no odor		D	SS-4 @ 0'-2' @ 11:56 10-11-10
				<1	–	<1	2 3	↓ ↓		D	
				<1	–	<1	4 5	F.G.S., DK. Gray, no odor		M/W	
				<1	–	<1	6 7	Sl. clayey sand, Gray-brown, no odor		M/W	
				<1	–	<1	8 9	Sandy clay, med. stiff, Gray - Green - Tan, no odor		M	
				<1	–	<1	10 11 12	Sl. clayey sand, Gray, organic odor		M	

Sample Type Codes: PH = Post Hole; HA = Hand Auger; SS = Split Spoon; ST = Shelby Tube; DP = Direct Push; SC = Sonic Core; DC = Drill Cuttings

Moisture Content Codes: D = Dry; M = Moist; W = Wet; S = Saturated

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Boring/Well Number: SB-13	Permit Number:	FDEP Facility Identification Number:
Site Name: US 301 + Ft. Homer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 15:20 ☐ AM ☒ PM End Time: 15:34 ☐ AM ☒ PM
Environmental Contractor: Cardno TBE	Geologist's Name:	Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 3/4
Borehole Depth (feet): 10		
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA
OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID		

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	--	<1	0-1	F.G.S., Gray-Brown, no odor		D	
				<1	-	<1	2	F.G.S., Tan-White, no odor		D	
							3				
				<1	-	<1	4	F.G.S., Brown, organic odor		M/W	
							5				
				<1	-	<1	6	F.G.S., sl. clayey, Brown, organic odor		M/W	
							7				
				<1	-	<1	8			M	
							9				
				<1	-	<1	10			M	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

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Boring/Well Number: SB-14	Permit Number:		FDEP Facility Identification Number:
Site Name: US 301 + FT. Homer Rd.	Borehole Start Date: 10-7-10 End Date: 10-7-10	Borehole Start Time: 15:57 ☐ AM ☒ PM End Time: 16:11 ☐ AM ☒ PM	
Environmental Contractor: Cardno TBE	Geologist's Name:		Environmental Technician's Name: Dana Kress
Drilling Company: Prefered Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	–	<1	0-1'	F.G.S., Gray, no odor		D	SS-5 ,5'-2' @13:20
				<1	–	<1	2 3	F.G.S., Brown-Dk. Brown, no odor		D	10-11-10
				<1	–	<1	4 5	F.G.S., Tan-Brown, no odor		M	
				<1	–	<1	6 7	F.G.S., Sl. clayey, Brown, no odor		M/W	
				<1	–	<1	8 9	F.G.S., Tan, small rocks or limerock, no odor		S	
				<1	–	<1	10 11 12	F.G.S., Gray-Tan, sl. clayey, no odor		W	

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

Page 1 of _____

Boring/Well Number:	Permit Number:	FDEP Facility Identification Number:
SB-15		
Site Name:	**Borehole Start Date:** 10-7-10 **End Date:** 10-7-10	**Borehole Start Time:** 16:17 ☐ AM ☒ PM **End Time:** 16:33 ☐ AM ☒ PM
US 301 & Ft. Hoover Rd.		
Environmental Contractor:	**Geologist's Name:**	**Environmental Technician's Name:**
Cardno TSC		Dana Gross

Drilling Company:	Pavement Thickness (inches):	Borehole Diameter (inches):	Borehole Depth (feet):
Preferred Drilling	NA	3 1/4	10

Drilling Method(s):	Apparent Borehole DTW (in feet from soil moisture content):	Measured Well DTW (in feet after water recharges in well):	OVA (list model and check type):
HA/DPT	4-5	NA	Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☒ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
				<1	—	<1	1	F, G, S, Gray, no odor		D	
				<1	—	<1	2			D	
							3				
				<1	—	<1	4	F G S, Tan-Brown, no odor		M/W	
							5				
				<1	—	<1	6	F G S, S/ clayey, Gray-Tan, no odor		W	
							7				
				<1	—	<1	8			M/W	
							9				
				<1	—	<1	10	F, G, S, Tan-Gray, no odor		W	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

BORING LOG

Page 1 of _____

Boring/Well Number: SB-1K	Permit Number:		FDEP Facility Identification Number:
Site Name: US 301 + Ft. Hamer Rd.	Borehole Start Date: 10-8-10 End Date: 10-8-10	Borehole Start Time: 10:58 ☒ AM ☐ PM End Time: 11:08 ☒ AM ☐ PM	
Environmental Contractor: Cardno TSE	Geologist's Name:		Environmental Technician's Name: Dana Kress
Drilling Company: Preferred Drilling	Pavement Thickness (inches): NA	Borehole Diameter (inches): 3 1/4	Borehole Depth (feet): 10
Drilling Method(s): HA/DPT	Apparent Borehole DTW (in feet from soil moisture content): 4-5	Measured Well DTW (in feet after water recharges in well): NA	OVA (list model and check type): Photovac MicroFID ☒ FID ☐ PID

Disposition of Drill Cuttings [check method(s)]: ☐ Drum ☐ Spread ☑ Backfill ☐ Stockpile ☐ Other

(describe if other or multiple items are checked):

Borehole Completion (check one): ☐ Well ☐ Grout ☐ Bentonite ☒ Backfill ☐ Other (describe)

Sample Type	Sample Depth Interval (feet)	Sample Recovery (inches)	SPT Blows (per six inches)	Unfiltered OVA	Filtered OVA	Net OVA	Depth (feet)	Sample Description (include grain size based on USCS, odors, staining, and other remarks)	USCS Symbol	Moisture Content	Lab Soil and Groundwater Samples (list sample number and depth or temporary screen interval)
							0 (SB1)	F.G.S., Tan, no odor		D	SS-6 .5'-2' @ 11:15
							2	F.G.S., Tan-Brown - Dk. Brown, no odor		D	
							3				
							4	F.G.S., Brown, no odor		M/W	
							5				
							6	F.G.S., Sl. clayey, Tan - Gray - no odor		W/S	
							7				
							8	F.G.S., Sl. clayey, Gray - Tan, no odor		W	
							9				
							10	↓ ↓		M	
							11				
							12				

Sample Type Codes: **PH** = Post Hole; **HA** = Hand Auger; **SS** = Split Spoon; **ST** = Shelby Tube; **DP** = Direct Push; **SC** = Sonic Core; **DC** = Drill Cuttings

Moisture Content Codes: **D** = Dry; **M** = Moist; **W** = Wet; **S** = Saturated

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
TMW-1	GS 301 + Ft. Hamer Rd.		10-8-10

Well Location and Type (check appropriate boxes):	Well Purpose:	Well Install Method:
[X] On-Site [ ] Right-of-Way [ ] Off-Site Private Property	[ ] Perched Monitoring [X] Shallow (Water-Table) Monitoring [ ] Intermediate or Deep Monitoring [ ] Remediation or Other (describe)	DPT
[X] Above Grade (AG) [ ] Flush-to-Grade		Surface Casing Install Method:
If AG, list feet of riser above land surface: 1'		NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
15	14		NA	____ feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
1" PVC	[X] Flush-Threaded [ ] Other (describe)	4 feet from 0 feet to 4 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
1" PVC Pre-Pack	0.010 Pre-Pack	10 feet from 4 feet to 14 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
20/30	[X] Yes [ ] No	10 feet from 4 feet to 14 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
Fine Sand Seal	3.5 ~~4~~ feet from ~~0.5~~ feet to ~~4~~ 4 feet

Surface Seal Material:	Surface Seal Length:
grout	.50 feet from 0 feet to .50 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):	
10-8-10	[X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)	

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[ ] Centrifugal [X] Peristaltic [ ] Submersible [ ] Other (describe)	6.77

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
.15	2	[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	5	33	[ ] Yes [X] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
cloudy - Brown, no odor	clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
TMW-2	US 301 + Ft. Homer Rd.		10-8-10

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [X] Above Grade (AG)
- [ ] Flush-to-Grade

If AG, list feet of riser above land surface: 1'

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: DPT

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
14	14		NA	____ feet by NA feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
1" PVC	[X] Flush-Threaded [ ] Other (describe)	4 feet from 0 feet to 4 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
1" PVC Pre-Pack	0.010 Pre-Pack	10 feet from 4 feet to 14 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
20/30	[X] Yes [ ] No	10 feet from 4 feet to 14 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
Fine Sand seal	3.5 feet from .50 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
grout	.50 feet from 0 feet to .50 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
10-8-10	[X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[ ] Centrifugal [X] Peristaltic [ ] Submersible [ ] Other (describe)	6.87

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
.15	2-3	[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	5	33	[ ] Yes [X] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
cloudy - brown, no odor	clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Florida Department of Environmental Protection - Division of Waste Management - Bureau of Petroleum Storage Systems

WELL CONSTRUCTION AND DEVELOPMENT LOG

WELL CONSTRUCTION DATA

Well Number:	Site Name:	FDEP Facility I.D. Number:	Well Install Date(s):
TMW-3	US 301 & Ft. Hamer Rd.		10-8-10

Well Location and Type (check appropriate boxes):
- [X] On-Site
- [ ] Right-of-Way
- [ ] Off-Site Private Property
- [X] Above Grade (AG)
- [ ] Flush-to-Grade

If AG, list feet of riser above land surface: 1'

Well Purpose:
- [ ] Perched Monitoring
- [X] Shallow (Water-Table) Monitoring
- [ ] Intermediate or Deep Monitoring
- [ ] Remediation or Other (describe)

Well Install Method: DPT

Surface Casing Install Method: NA

Borehole Depth (feet):	Well Depth (feet):	Borehole Diameter (inches):	Manhole Diameter (inches):	Well Pad Size:
14	14		NA	NA feet by ____ feet

Riser Diameter and Material:	Riser/Screen Connections:	Riser Length:
1" PVC	[X] Flush-Threaded [ ] Other (describe)	4 feet from 0 feet to 4 feet

Screen Diameter and Material:	Screen Slot Size:	Screen Length:
1" PVC Pre-Pack	0.010 Pre-Pack	10 feet from 4 feet to 14 feet

1st Surface Casing Material:	1st Surface Casing I.D. (inches):	1st Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

2nd Surface Casing Material:	2nd Surface Casing I.D. (inches):	2nd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

3rd Surface Casing Material:	3rd Surface Casing I.D. (inches):	3rd Surface Casing Length:
also check: [ ] Permanent [ ] Temporary		____ feet from 0 feet to ____ feet

Filter Pack Material and Size:	Prepacked Filter Around Screen (check one):	Filter Pack Length:
20/30	[X] Yes [ ] No	10 feet from 4 feet to 14 feet

Filter Pack Seal Material and Size:	Filter Pack Seal Length:
Fine Sand Seal	3.5 feet from .50 feet to 4 feet

Surface Seal Material:	Surface Seal Length:
grout	.50 feet from 0 feet to .50 feet

WELL DEVELOPMENT DATA

Well Development Date:	Well Development Method (check one):
10-8-10	[X] Surge/Pump [ ] Pump [ ] Compressed Air [ ] Other (describe)

Development Pump Type (check):	Depth to Groundwater (before developing in feet):
[ ] Centrifugal [X] Peristaltic [ ] Submersible [ ] Other (describe)	6.77

Pumping Rate (gallons per minute):	Maximum Drawdown of Groundwater During Development (feet):	Well Purged Dry (check one):
.15	2 1/-	[ ] Yes [X] No

Pumping Condition (check one):	Total Development Water Removed (gallons):	Development Duration (minutes):	Development Water Drummed (check one):
[X] Continuous [ ] Intermittent	5	33	[ ] Yes [X] No

Water Appearance (color and odor) At Start of Development:	Water Appearance (color and odor) At End of Development:
Cloudy - Tan, no odor	clear, none

WELL CONSTRUCTION OR DEVELOPMENT REMARKS

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) Mini RAE FID/PhotoVac **INSTRUMENT #** CZ5F313

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP

☐ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☒ OTHER 500 ppm Methane

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0.0 Ambient Air

Standard B 500 ppm Methane, Peterson Env.; exp. 5-13-11

Standard C _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
10/10/07	10:00	A	0.0	0.0	—	yes	init	BLK
"	"	B	500	499.7	—	yes	init	BLK
10/10/07	13:00	A	0.0	0.0	—	yes	cont	BLK
"	"	B	500	499.6	—	yes	cont	BLK
10/10/08	10:30	A	0.0	0.0	—	yes	init	BLK
"	"	B	500	499.7	—	yes	init	

Appendix B

Laboratory Analyses Reports

Cardno TBE

October 25, 2010

Rick Hagberg
Cardno TBE, Inc.
380 Park Place Blvd.
Suite 300
Clearwater, FL 33759

Re: SunLabs Project Number: **101011.02**
Client Project Description: **Manatee**

Dear Mr. Hagberg:

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

Sample Number	Sample Description	Date Collected		Date Received
110331	MW-4R	10/08/10	16:20	10/08/10
110332	MW-7	10/08/10	15:00	10/08/10
110333	MW-23	10/08/10	15:42	10/08/10
110334	SS-1	10/08/10	16:05	10/08/10
110335	SS-2	10/08/10	14:45	10/08/10
110336	SS-6	10/08/10	11:15	10/08/10
110478	TMW-1	10/11/10	10:08	10/12/10
110479	TMW-2	10/11/10	11:05	10/12/10
110480	TMW-3	10/11/10	12:45	10/12/10
110481	SS-3 .50'-2'	10/11/10	11:38	10/12/10
110482	SS-4 .50'-2'	10/11/10	11:56	10/12/10
110483	SS-5 .50'-2'	10/11/10	13:20	10/12/10

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.

QC Batch D6248 had a few exceptions for VOC's on the MS and MSD. The LCS and LCSD were acceptable, so the out of control was attributed to matrix. Results were also biased high on the MS and MSD and all the samples were non-detect for these analytes.

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, Inc.
5460 Beaumont Center Blvd., Suite 520
Tampa, Florida 33634

Phone: 813-881-9401
Fax: 813-354-4661
Email: Info@SunLabsInc.com

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110331**
Sample Designation **MW-4R**

Matrix: Groundwater
Date Collected: 10/08/10 16:20
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
Date Analyzed			10/12/10	1				10/12/10 16:55	
4-Bromofluorobenzene (66-125)	8260	%	110	1			DEP-SURR-	10/12/10 16:55	
Dibromofluoromethane (61-137)	8260	%	93	1			186-85-37	10/12/10 16:55	
Toluene-d8 (69-128)	8260	%	109	1			DEP-SURR-	10/12/10 16:55	
Acetone	8260	ug/L	0.6 U	1	0.6	5	67-64-1	10/12/10 16:55	
Benzene	8260	ug/L	0.1 U	1	0.1	0.5	71-43-2	10/12/10 16:55	
Bromochloromethane	8260	ug/L	0.2 U	1	0.2	0.8	74-97-5	10/12/10 16:55	
Bromodichloromethane	8260	ug/L	0.1 U	1	0.1	0.5	75-27-4	10/12/10 16:55	
Bromoform	8260	ug/L	0.3 U	1	0.3	1.2	75-25-2	10/12/10 16:55	
Bromomethane	8260	ug/L	0.4 U	1	0.4	1.6	74-83-9	10/12/10 16:55	
2-Butanone	8260	ug/L	0.4 U	1	0.4	5	78-93-3	10/12/10 16:55	
Carbon disulfide	8260	ug/L	0.25 U	1	0.25	5	75-15-0	10/12/10 16:55	
Carbon tetrachloride	8260	ug/L	0.2 U	1	0.2	0.8	56-23-5	10/12/10 16:55	
Chlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-90-7	10/12/10 16:55	
Chloroethane	8260	ug/L	0.3 U	1	0.3	1.2	75-00-3	10/12/10 16:55	
Chloroform	8260	ug/L	0.1 U	1	0.1	0.5	67-66-3	10/12/10 16:55	
Chloromethane	8260	ug/L	0.1 U	1	0.1	0.5	74-87-3	10/12/10 16:55	
Dibromochloromethane	8260	ug/L	0.15 U	1	0.15	0.6	124-48-1	10/12/10 16:55	
Dibromomethane	8260	ug/L	0.1 U	1	0.1	0.5	74-95-3	10/12/10 16:55	
1,2-Dichlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-50-1	10/12/10 16:55	
1,3-Dichlorobenzene	8260	ug/L	0.3 U	1	0.3	1.2	541-73-1	10/12/10 16:55	
1,4-Dichlorobenzene	8260	ug/L	0.4 U	1	0.4	1.6	106-46-7	10/12/10 16:55	
Dichlorodifluoromethane	8260	ug/L	0.3 U	1	0.3	1.2	75-71-8	10/12/10 16:55	
1,1-Dichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	75-34-3	10/12/10 16:55	
1,2-Dichloroethane	8260	ug/L	0.2 U	1	0.2	0.8	107-06-2	10/12/10 16:55	
1,1-Dichloroethene	8260	ug/L	0.15 U	1	0.15	0.6	75-35-4	10/12/10 16:55	
cis-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-59-2	10/12/10 16:55	
trans-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-60-5	10/12/10 16:55	
1,2-Dichloropropane	8260	ug/L	0.1 U	1	0.1	0.5	78-87-5	10/12/10 16:55	
1,3-Dichloropropene	8260	ug/L	0.2 U	1	0.2	0.8	542-75-6	10/12/10 16:55	
Ethylbenzene	8260	ug/L	8.9	1	0.2	0.5	100-41-4	10/12/10 16:55	
2-Hexanone	8260	ug/L	0.2 U	1	0.2	5	591-78-6	10/12/10 16:55	
4-Methyl-2-pentanone	8260	ug/L	0.2 U	1	0.2	5	108-10-1	10/12/10 16:55	
Methylene Chloride	8260	ug/L	1.7 U	1	1.7	6.8	75-09-2	10/12/10 16:55	
MTBE	8260	ug/L	0.05 U	1	0.05	0.5	1634-04-4	10/12/10 16:55	
isopropylbenzene	8260	ug/L	4.0	1	0.2	0.8	98-82-8	10/12/10 16:55	
Styrene	8260	ug/L	0.1 U	1	0.1	0.5	100-42-5	10/12/10 16:55	
1,1,2,2-Tetrachloroethane	8260	ug/L	0.2 U	1	0.2	0.8	79-34-5	10/12/10 16:55	
Tetrachloroethene	8260	ug/L	0.25 U	1	0.25	1	127-18-4	10/12/10 16:55	
Toluene	8260	ug/L	0.3 U	1	0.3	0.5	108-88-3	10/12/10 16:55	
1,1,1-Trichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	71-55-6	10/12/10 16:55	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110331**
Sample Designation **MW-4R**

Matrix: Groundwater
Date Collected: 10/08/10 16:20
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
1,1,2-Trichloroethane	8260	ug/L	0.7 U	1	0.7	2.8	79-00-5	10/12/10 16:55	
Trichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	79-01-6	10/12/10 16:55	
Trichlorofluoromethane	8260	ug/L	0.2 U	1	0.2	0.8	75-69-4	10/12/10 16:55	
1,2,4-Trimethylbenzene	8260	ug/L	1.1	1	0.2	0.8	95-63-6	10/12/10 16:55	
1,3,5-Trimethylbenzene	8260	ug/L	2.7	1	0.2	0.8	108-67-8	10/12/10 16:55	
Vinyl acetate	8260	ug/L	0.25 U	1	0.25	5	108-05-4	10/12/10 16:55	
Vinyl chloride	8260	ug/L	0.09 U	1	0.09	0.5	75-01-4	10/12/10 16:55	
Total Xylenes	8260	ug/L	0.4 U	1	0.4	1.6	1330-20-7	10/12/10 16:55	
Petroleum Range Organics(C8-C40)									
Date Extracted			10/15/10						10/15/10 14:00
Date Analyzed			10/18/10	1				10/18/10 22:48	
C-39 (40-140)	FLPRO	%	65	1		1		10/18/10 22:48	10/15/10 14:00
o-Terphenyl (40-140)	FLPRO	%	82	1		1	84-15-1	10/18/10 22:48	10/15/10 14:00
Petroleum Range Organics	FLPRO	ug/L	830	1	46	300		10/18/10 22:48	10/15/10 14:00
1,2-Dibromoethane by EPA Method 8011									
Date Extracted			10/14/10						10/14/10 12:00
Date Analyzed			10/15/10	1				10/15/10 00:16	
1,2-Dibromoethane	8011	ug/L	0.006 U	1	0.006	0.024	106-93-4	10/15/10 00:16	10/14/10 12:00
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3510		10/14/10						10/14/10 11:30
Date Analyzed	8270		10/15/2010	1				10/15/10 07:01	
Terphenyl-d14 (3-130)	8270	%	60	1			DEP-SURR-	10/15/10 07:01	10/14/10 11:30
Acenaphthene	8270	ug/L	1.6	1	0.028	0.11	83-32-9	10/15/10 07:01	10/14/10 11:30
Acenaphthylene	8270	ug/L	0.022 U	1	0.022	0.09	208-96-8	10/15/10 07:01	10/14/10 11:30
Anthracene	8270	ug/L	0.21	1	0.02	0.08	120-12-7	10/15/10 07:01	10/14/10 11:30
Benzo(a)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	56-55-3	10/15/10 07:01	10/14/10 11:30
Benzo(a)pyrene	8270	ug/L	0.009 U	1	0.009	0.036	50-32-8	10/15/10 07:01	10/14/10 11:30
Benzo(b)fluoranthene	8270	ug/L	0.007 U	1	0.007	0.028	205-99-2	10/15/10 07:01	10/14/10 11:30
Benzo(g,h,i)perylene	8270	ug/L	0.012 U	1	0.012	0.048	191-24-2	10/15/10 07:01	10/14/10 11:30
Benzo(k)fluoranthene	8270	ug/L	0.017 U	1	0.017	0.068	207-08-9	10/15/10 07:01	10/14/10 11:30
Chrysene	8270	ug/L	0.01 U	1	0.01	0.04	218-01-9	10/15/10 07:01	10/14/10 11:30
Dibenzo(a,h)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	53-70-3	10/15/10 07:01	10/14/10 11:30
Fluoranthene	8270	ug/L	0.02 U	1	0.02	0.08	206-44-0	10/15/10 07:01	10/14/10 11:30
Fluorene	8270	ug/L	2.5	1	0.03	0.12	86-73-7	10/15/10 07:01	10/14/10 11:30
Indeno(1,2,3-cd)pyrene	8270	ug/L	0.011 U	1	0.011	0.044	193-39-5	10/15/10 07:01	10/14/10 11:30
1-Methylnaphthalene	8270	ug/L	13	5	0.14	0.55	90-12-0	10/15/10 13:40	10/14/10 11:30
2-Methylnaphthalene	8270	ug/L	8.9	5	0.12	0.5	91-57-6	10/15/10 13:40	10/14/10 11:30
Naphthalene	8270	ug/L	4.3	1	0.031	0.12	91-20-3	10/15/10 07:01	10/14/10 11:30

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110331**
Sample Designation **MW-4R**

Matrix: Groundwater
Date Collected: 10/08/10 16:20
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Polynuclear Aromatic Hydrocarbons by Method 8270									
Phenanthrene	8270	ug/L	2.6	1	0.026	0.1	85-01-8	10/15/10 07:01	10/14/10 11:30
Pyrene	8270	ug/L	0.022 U	1	0.022	0.088	129-00-0	10/15/10 07:01	10/14/10 11:30
RCRA Metals ppb									
Date Digested	3005		10/12/10						10/12/10 09:00
Date Analyzed	6010		10/14/10	1				10/14/10 18:49	
Lead	6010	ug/L	4.4 U	1	4.4	18	7439-92-1	10/14/10 18:49	10/12/10 09:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110332**
Sample Designation **MW-7**

Matrix: Groundwater
Date Collected: 10/08/10 15:00
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
Date Analyzed			10/12/10	1				10/12/10 17:16	
4-Bromofluorobenzene (66-125)	8260	%	113	1			DEP-SURR-	10/12/10 17:16	
Dibromofluoromethane (61-137)	8260	%	97	1			186-85-37	10/12/10 17:16	
Toluene-d8 (69-128)	8260	%	112	1			DEP-SURR-	10/12/10 17:16	
Acetone	8260	ug/L	4.9 I	1	0.6	5	67-64-1	10/12/10 17:16	
Benzene	8260	ug/L	0.1 U	1	0.1	0.5	71-43-2	10/12/10 17:16	
Bromochloromethane	8260	ug/L	0.2 U	1	0.2	0.8	74-97-5	10/12/10 17:16	
Bromodichloromethane	8260	ug/L	0.1 U	1	0.1	0.5	75-27-4	10/12/10 17:16	
Bromoform	8260	ug/L	0.3 U	1	0.3	1.2	75-25-2	10/12/10 17:16	
Bromomethane	8260	ug/L	0.4 U	1	0.4	1.6	74-83-9	10/12/10 17:16	
2-Butanone	8260	ug/L	3.3 I	1	0.4	5	78-93-3	10/12/10 17:16	
Carbon disulfide	8260	ug/L	0.25 U	1	0.25	5	75-15-0	10/12/10 17:16	
Carbon tetrachloride	8260	ug/L	0.2 U	1	0.2	0.8	56-23-5	10/12/10 17:16	
Chlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-90-7	10/12/10 17:16	
Chloroethane	8260	ug/L	0.3 U	1	0.3	1.2	75-00-3	10/12/10 17:16	
Chloroform	8260	ug/L	0.1 U	1	0.1	0.5	67-66-3	10/12/10 17:16	
Chloromethane	8260	ug/L	0.1 U	1	0.1	0.5	74-87-3	10/12/10 17:16	
Dibromochloromethane	8260	ug/L	0.15 U	1	0.15	0.6	124-48-1	10/12/10 17:16	
Dibromomethane	8260	ug/L	0.1 U	1	0.1	0.5	74-95-3	10/12/10 17:16	
1,2-Dichlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-50-1	10/12/10 17:16	
1,3-Dichlorobenzene	8260	ug/L	0.3 U	1	0.3	1.2	541-73-1	10/12/10 17:16	
1,4-Dichlorobenzene	8260	ug/L	0.4 U	1	0.4	1.6	106-46-7	10/12/10 17:16	
Dichlorodifluoromethane	8260	ug/L	0.3 U	1	0.3	1.2	75-71-8	10/12/10 17:16	
1,1-Dichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	75-34-3	10/12/10 17:16	
1,2-Dichloroethane	8260	ug/L	0.2 U	1	0.2	0.8	107-06-2	10/12/10 17:16	
1,1-Dichloroethene	8260	ug/L	0.15 U	1	0.15	0.6	75-35-4	10/12/10 17:16	
cis-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-59-2	10/12/10 17:16	
trans-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-60-5	10/12/10 17:16	
1,2-Dichloropropane	8260	ug/L	0.1 U	1	0.1	0.5	78-87-5	10/12/10 17:16	
1,3-Dichloropropene	8260	ug/L	0.2 U	1	0.2	0.8	542-75-6	10/12/10 17:16	
Ethylbenzene	8260	ug/L	0.2 U	1	0.2	0.5	100-41-4	10/12/10 17:16	
2-Hexanone	8260	ug/L	0.2 U	1	0.2	5	591-78-6	10/12/10 17:16	
4-Methyl-2-pentanone	8260	ug/L	0.2 U	1	0.2	5	108-10-1	10/12/10 17:16	
Methylene Chloride	8260	ug/L	1.7 U	1	1.7	6.8	75-09-2	10/12/10 17:16	
MTBE	8260	ug/L	0.05 U	1	0.05	0.5	1634-04-4	10/12/10 17:16	
isopropylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	98-82-8	10/12/10 17:16	
Styrene	8260	ug/L	0.1 U	1	0.1	0.5	100-42-5	10/12/10 17:16	
1,1,2,2-Tetrachloroethane	8260	ug/L	0.2 U	1	0.2	0.8	79-34-5	10/12/10 17:16	
Tetrachloroethene	8260	ug/L	0.25 U	1	0.25	1	127-18-4	10/12/10 17:16	
Toluene	8260	ug/L	0.3 U	1	0.3	0.5	108-88-3	10/12/10 17:16	
1,1,1-Trichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	71-55-6	10/12/10 17:16	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110332**
Sample Designation **MW-7**

Matrix: Groundwater
Date Collected: 10/08/10 15:00
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
1,1,2-Trichloroethane	8260	ug/L	0.7 U	1	0.7	2.8	79-00-5	10/12/10 17:16	
Trichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	79-01-6	10/12/10 17:16	
Trichlorofluoromethane	8260	ug/L	0.2 U	1	0.2	0.8	75-69-4	10/12/10 17:16	
1,2,4-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-63-6	10/12/10 17:16	
1,3,5-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-67-8	10/12/10 17:16	
Vinyl acetate	8260	ug/L	0.25 U	1	0.25	5	108-05-4	10/12/10 17:16	
Vinyl chloride	8260	ug/L	0.09 U	1	0.09	0.5	75-01-4	10/12/10 17:16	
Total Xylenes	8260	ug/L	0.4 U	1	0.4	1.6	1330-20-7	10/12/10 17:16	
Petroleum Range Organics(C8-C40)									
Date Extracted			10/15/10						10/15/10 14:00
Date Analyzed			10/18/10	1				10/18/10 22:57	
C-39 (40-140)	FLPRO	%	61	1		1		10/18/10 22:57	10/15/10 14:00
o-Terphenyl (40-140)	FLPRO	%	82	1		1	84-15-1	10/18/10 22:57	10/15/10 14:00
Petroleum Range Organics	FLPRO	ug/L	46 U	1	46	300		10/18/10 22:57	10/15/10 14:00
1,2-Dibromoethane by EPA Method 8011									
Date Extracted			10/14/10						10/14/10 12:00
Date Analyzed			10/15/10	1				10/15/10 00:31	
1,2-Dibromoethane	8011	ug/L	0.006 U	1	0.006	0.024	106-93-4	10/15/10 00:31	10/14/10 12:00
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3510		10/14/10						10/14/10 11:30
Date Analyzed	8270		10/15/2010	1				10/15/10 07:18	
Terphenyl-d14 (3-130)	8270	%	68	1			DEP-SURR-	10/15/10 07:18	10/14/10 11:30
Acenaphthene	8270	ug/L	0.028 U	1	0.028	0.11	83-32-9	10/15/10 07:18	10/14/10 11:30
Acenaphthylene	8270	ug/L	0.022 U	1	0.022	0.09	208-96-8	10/15/10 07:18	10/14/10 11:30
Anthracene	8270	ug/L	0.02 U	1	0.02	0.08	120-12-7	10/15/10 07:18	10/14/10 11:30
Benzo(a)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	56-55-3	10/15/10 07:18	10/14/10 11:30
Benzo(a)pyrene	8270	ug/L	0.009 U	1	0.009	0.036	50-32-8	10/15/10 07:18	10/14/10 11:30
Benzo(b)fluoranthene	8270	ug/L	0.007 U	1	0.007	0.028	205-99-2	10/15/10 07:18	10/14/10 11:30
Benzo(g,h,i)perylene	8270	ug/L	0.012 U	1	0.012	0.048	191-24-2	10/15/10 07:18	10/14/10 11:30
Benzo(k)fluoranthene	8270	ug/L	0.017 U	1	0.017	0.068	207-08-9	10/15/10 07:18	10/14/10 11:30
Chrysene	8270	ug/L	0.01 U	1	0.01	0.04	218-01-9	10/15/10 07:18	10/14/10 11:30
Dibenzo(a,h)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	53-70-3	10/15/10 07:18	10/14/10 11:30
Fluoranthene	8270	ug/L	0.02 U	1	0.02	0.08	206-44-0	10/15/10 07:18	10/14/10 11:30
Fluorene	8270	ug/L	0.03 U	1	0.03	0.12	86-73-7	10/15/10 07:18	10/14/10 11:30
Indeno(1,2,3-cd)pyrene	8270	ug/L	0.011 U	1	0.011	0.044	193-39-5	10/15/10 07:18	10/14/10 11:30
1-Methylnaphthalene	8270	ug/L	0.16	1	0.028	0.11	90-12-0	10/15/10 07:18	10/14/10 11:30
2-Methylnaphthalene	8270	ug/L	0.21	1	0.025	0.1	91-57-6	10/15/10 07:18	10/14/10 11:30
Naphthalene	8270	ug/L	0.031 U	1	0.031	0.12	91-20-3	10/15/10 07:18	10/14/10 11:30

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110332**
Sample Designation **MW-7**

Matrix: Groundwater
Date Collected: 10/08/10 15:00
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Polynuclear Aromatic Hydrocarbons by Method 8270									
Phenanthrene	8270	ug/L	0.15	1	0.026	0.1	85-01-8	10/15/10 07:18	10/14/10 11:30
Pyrene	8270	ug/L	0.022 U	1	0.022	0.088	129-00-0	10/15/10 07:18	10/14/10 11:30
RCRA Metals ppb									
Date Digested	3005		10/12/10						10/12/10 09:00
Date Analyzed	6010		10/14/10	1				10/14/10 18:51	
Lead	6010	ug/L	4.4 U	1	4.4	18	7439-92-1	10/14/10 18:51	10/12/10 09:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110333**
Sample Designation **MW-23**

Matrix: Groundwater
Date Collected: 10/08/10 15:42
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
Date Analyzed			10/12/10	1				10/12/10 17:36	
4-Bromofluorobenzene (66-125)	8260	%	110	1			DEP-SURR-	10/12/10 17:36	
Dibromofluoromethane (61-137)	8260	%	94	1			186-85-37	10/12/10 17:36	
Toluene-d8 (69-128)	8260	%	110	1			DEP-SURR-	10/12/10 17:36	
Acetone	8260	ug/L	0.6 U	1	0.6	5	67-64-1	10/12/10 17:36	
Benzene	8260	ug/L	0.1 U	1	0.1	0.5	71-43-2	10/12/10 17:36	
Bromochloromethane	8260	ug/L	0.2 U	1	0.2	0.8	74-97-5	10/12/10 17:36	
Bromodichloromethane	8260	ug/L	0.1 U	1	0.1	0.5	75-27-4	10/12/10 17:36	
Bromoform	8260	ug/L	0.3 U	1	0.3	1.2	75-25-2	10/12/10 17:36	
Bromomethane	8260	ug/L	0.4 U	1	0.4	1.6	74-83-9	10/12/10 17:36	
2-Butanone	8260	ug/L	4.3 I	1	0.4	5	78-93-3	10/12/10 17:36	
Carbon disulfide	8260	ug/L	0.25 U	1	0.25	5	75-15-0	10/12/10 17:36	
Carbon tetrachloride	8260	ug/L	0.2 U	1	0.2	0.8	56-23-5	10/12/10 17:36	
Chlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-90-7	10/12/10 17:36	
Chloroethane	8260	ug/L	0.3 U	1	0.3	1.2	75-00-3	10/12/10 17:36	
Chloroform	8260	ug/L	0.1 U	1	0.1	0.5	67-66-3	10/12/10 17:36	
Chloromethane	8260	ug/L	0.1 U	1	0.1	0.5	74-87-3	10/12/10 17:36	
Dibromochloromethane	8260	ug/L	0.15 U	1	0.15	0.6	124-48-1	10/12/10 17:36	
Dibromomethane	8260	ug/L	0.1 U	1	0.1	0.5	74-95-3	10/12/10 17:36	
1,2-Dichlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-50-1	10/12/10 17:36	
1,3-Dichlorobenzene	8260	ug/L	0.3 U	1	0.3	1.2	541-73-1	10/12/10 17:36	
1,4-Dichlorobenzene	8260	ug/L	0.4 U	1	0.4	1.6	106-46-7	10/12/10 17:36	
Dichlorodifluoromethane	8260	ug/L	0.3 U	1	0.3	1.2	75-71-8	10/12/10 17:36	
1,1-Dichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	75-34-3	10/12/10 17:36	
1,2-Dichloroethane	8260	ug/L	0.2 U	1	0.2	0.8	107-06-2	10/12/10 17:36	
1,1-Dichloroethene	8260	ug/L	0.15 U	1	0.15	0.6	75-35-4	10/12/10 17:36	
cis-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-59-2	10/12/10 17:36	
trans-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-60-5	10/12/10 17:36	
1,2-Dichloropropane	8260	ug/L	0.1 U	1	0.1	0.5	78-87-5	10/12/10 17:36	
1,3-Dichloropropene	8260	ug/L	0.2 U	1	0.2	0.8	542-75-6	10/12/10 17:36	
Ethylbenzene	8260	ug/L	0.2 U	1	0.2	0.5	100-41-4	10/12/10 17:36	
2-Hexanone	8260	ug/L	0.2 U	1	0.2	5	591-78-6	10/12/10 17:36	
4-Methyl-2-pentanone	8260	ug/L	0.2 U	1	0.2	5	108-10-1	10/12/10 17:36	
Methylene Chloride	8260	ug/L	1.7 U	1	1.7	6.8	75-09-2	10/12/10 17:36	
MTBE	8260	ug/L	0.05 U	1	0.05	0.5	1634-04-4	10/12/10 17:36	
isopropylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	98-82-8	10/12/10 17:36	
Styrene	8260	ug/L	0.1 U	1	0.1	0.5	100-42-5	10/12/10 17:36	
1,1,2,2-Tetrachloroethane	8260	ug/L	0.2 U	1	0.2	0.8	79-34-5	10/12/10 17:36	
Tetrachloroethene	8260	ug/L	0.25 U	1	0.25	1	127-18-4	10/12/10 17:36	
Toluene	8260	ug/L	0.3 U	1	0.3	0.5	108-88-3	10/12/10 17:36	
1,1,1-Trichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	71-55-6	10/12/10 17:36	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110333**
Sample Designation **MW-23**

Matrix: Groundwater
Date Collected: 10/08/10 15:42
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
1,1,2-Trichloroethane	8260	ug/L	0.7 U	1	0.7	2.8	79-00-5	10/12/10 17:36	
Trichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	79-01-6	10/12/10 17:36	
Trichlorofluoromethane	8260	ug/L	0.2 U	1	0.2	0.8	75-69-4	10/12/10 17:36	
1,2,4-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-63-6	10/12/10 17:36	
1,3,5-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-67-8	10/12/10 17:36	
Vinyl acetate	8260	ug/L	0.25 U	1	0.25	5	108-05-4	10/12/10 17:36	
Vinyl chloride	8260	ug/L	0.09 U	1	0.09	0.5	75-01-4	10/12/10 17:36	
Total Xylenes	8260	ug/L	0.4 U	1	0.4	1.6	1330-20-7	10/12/10 17:36	
Petroleum Range Organics(C8-C40)									
Date Extracted			10/15/10						10/15/10 14:00
Date Analyzed			10/18/10	1				10/18/10 23:05	
C-39 (40-140)	FLPRO	%	62	1		1		10/18/10 23:05	10/15/10 14:00
o-Terphenyl (40-140)	FLPRO	%	82	1		1	84-15-1	10/18/10 23:05	10/15/10 14:00
Petroleum Range Organics	FLPRO	ug/L	46 U	1	46	300		10/18/10 23:05	10/15/10 14:00
1,2-Dibromoethane by EPA Method 8011									
Date Extracted			10/14/10						10/14/10 12:00
Date Analyzed			10/15/10	1				10/15/10 00:46	
1,2-Dibromoethane	8011	ug/L	0.006 U	1	0.006	0.024	106-93-4	10/15/10 00:46	10/14/10 12:00
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3510		10/14/10						10/14/10 11:30
Date Analyzed	8270		10/15/2010	1				10/15/10 07:36	
Terphenyl-d14 (3-130)	8270	%	71	1			DEP-SURR-	10/15/10 07:36	10/14/10 11:30
Acenaphthene	8270	ug/L	0.028 U	1	0.028	0.11	83-32-9	10/15/10 07:36	10/14/10 11:30
Acenaphthylene	8270	ug/L	0.022 U	1	0.022	0.09	208-96-8	10/15/10 07:36	10/14/10 11:30
Anthracene	8270	ug/L	0.02 U	1	0.02	0.08	120-12-7	10/15/10 07:36	10/14/10 11:30
Benzo(a)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	56-55-3	10/15/10 07:36	10/14/10 11:30
Benzo(a)pyrene	8270	ug/L	0.009 U	1	0.009	0.036	50-32-8	10/15/10 07:36	10/14/10 11:30
Benzo(b)fluoranthene	8270	ug/L	0.007 U	1	0.007	0.028	205-99-2	10/15/10 07:36	10/14/10 11:30
Benzo(g,h,i)perylene	8270	ug/L	0.012 U	1	0.012	0.048	191-24-2	10/15/10 07:36	10/14/10 11:30
Benzo(k)fluoranthene	8270	ug/L	0.017 U	1	0.017	0.068	207-08-9	10/15/10 07:36	10/14/10 11:30
Chrysene	8270	ug/L	0.01 U	1	0.01	0.04	218-01-9	10/15/10 07:36	10/14/10 11:30
Dibenzo(a,h)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	53-70-3	10/15/10 07:36	10/14/10 11:30
Fluoranthene	8270	ug/L	0.02 U	1	0.02	0.08	206-44-0	10/15/10 07:36	10/14/10 11:30
Fluorene	8270	ug/L	0.03 U	1	0.03	0.12	86-73-7	10/15/10 07:36	10/14/10 11:30
Indeno(1,2,3-cd)pyrene	8270	ug/L	0.011 U	1	0.011	0.044	193-39-5	10/15/10 07:36	10/14/10 11:30
1-Methylnaphthalene	8270	ug/L	0.028 U	1	0.028	0.11	90-12-0	10/15/10 07:36	10/14/10 11:30
2-Methylnaphthalene	8270	ug/L	0.025 U	1	0.025	0.1	91-57-6	10/15/10 07:36	10/14/10 11:30
Naphthalene	8270	ug/L	0.031 U	1	0.031	0.12	91-20-3	10/15/10 07:36	10/14/10 11:30

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110333**
Sample Designation **MW-23**

Matrix: Groundwater
Date Collected: 10/08/10 15:42
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Polynuclear Aromatic Hydrocarbons by Method 8270									
Phenanthrene	8270	ug/L	0.026 U	1	0.026	0.1	85-01-8	10/15/10 07:36	10/14/10 11:30
Pyrene	8270	ug/L	0.022 U	1	0.022	0.088	129-00-0	10/15/10 07:36	10/14/10 11:30
RCRA Metals ppb									
Date Digested	3005		10/12/10						10/12/10 09:00
Date Analyzed	6010		10/14/10	1				10/14/10 18:53	
Lead	6010	ug/L	4.4 U	1	4.4	18	7439-92-1	10/14/10 18:53	10/12/10 09:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110334**
Sample Designation **SS-1**

Matrix: Soil
Date Collected: 10/08/10 16:05
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results		Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Florida Petroleum Range Organics(C8-C40)										
Date Extracted			10/14/10							10/14/10 16:45
Date Analyzed			10/18/10		1				10/18/10 18:34	
C-39 (40-140)	FLPRO	%	60		1		1.1		10/18/10 18:34	10/14/10 16:45
o-Terphenyl (40-140)	FLPRO	%	84		1		1.1	84-15-1	10/18/10 18:34	10/14/10 16:45
Petroleum Range Organics	FLPRO	mg/kg	150		1	5.5	22		10/18/10 18:34	10/14/10 16:45
Percent Moisture										
% Moisture	160.3M	%	13				0.11		10/12/10	
Polynuclear Aromatic Hydrocarbons by Method 8270										
Date Extracted	3550		10/14/10							10/14/10 16:45
Date Analyzed	8270		10/15/2010		1				10/15/10 19:29	
Terphenyl-d14 (5-139)	8270	%	74		1			DEP-SURR-	10/15/10 19:29	10/14/10 16:45
Acenaphthene	8270	mg/kg	0.0024	U	1	0.0024	0.0097	83-32-9	10/15/10 19:29	10/14/10 16:45
Acenaphthylene	8270	mg/kg	0.0025	U	1	0.0025	0.01	208-96-8	10/15/10 19:29	10/14/10 16:45
Anthracene	8270	mg/kg	0.002	U	1	0.002	0.0078	120-12-7	10/15/10 19:29	10/14/10 16:45
Benzo(a)anthracene	8270	mg/kg	0.0017	U	1	0.0017	0.0069	56-55-3	10/15/10 19:29	10/14/10 16:45
Benzo(a)pyrene	8270	mg/kg	0.0023	U	1	0.0023	0.0092	50-32-8	10/15/10 19:29	10/14/10 16:45
Benzo(b)fluoranthene	8270	mg/kg	0.0031	U	1	0.0031	0.012	205-99-2	10/15/10 19:29	10/14/10 16:45
Benzo(g,h,i)perylene	8270	mg/kg	0.0079	U	1	0.0079	0.032	191-24-2	10/15/10 19:29	10/14/10 16:45
Benzo(k)fluoranthene	8270	mg/kg	0.0022	U	1	0.0022	0.0087	207-08-9	10/15/10 19:29	10/14/10 16:45
Chrysene	8270	mg/kg	0.0014	U	1	0.0014	0.0055	218-01-9	10/15/10 19:29	10/14/10 16:45
Dibenzo(a,h)anthracene	8270	mg/kg	0.0084	U	1	0.0084	0.033	53-70-3	10/15/10 19:29	10/14/10 16:45
Fluoranthene	8270	mg/kg	0.018		1	0.0026	0.011	206-44-0	10/15/10 19:29	10/14/10 16:45
Fluorene	8270	mg/kg	0.0021	U	1	0.0021	0.0083	86-73-7	10/15/10 19:29	10/14/10 16:45
Indeno(1,2,3-cd)pyrene	8270	mg/kg	0.0083	U	1	0.0083	0.033	193-39-5	10/15/10 19:29	10/14/10 16:45
1-Methylnaphthalene	8270	mg/kg	0.0038	U	1	0.0038	0.015	90-12-0	10/15/10 19:29	10/14/10 16:45
2-Methylnaphthalene	8270	mg/kg	0.0032	U	1	0.0032	0.013	91-57-6	10/15/10 19:29	10/14/10 16:45
Naphthalene	8270	mg/kg	0.0063	U	1	0.0063	0.025	91-20-3	10/15/10 19:29	10/14/10 16:45
Phenanthrene	8270	mg/kg	0.0032	U	1	0.0032	0.013	85-01-8	10/15/10 19:29	10/14/10 16:45
Pyrene	8270	mg/kg	0.026	I	1	0.0079	0.032	129-00-0	10/15/10 19:29	10/14/10 16:45
Volatile Organic Compounds (BTEX/MTBE)										
Date Analyzed			10/12/10		1				10/12/10 18:36	
Toluene-d8 (49-134)	8260	%	97		1			DEP-SURR-	10/12/10 18:36	
Benzene	8260	mg/kg	0.00053	U	1	0.00053	0.0038	71-43-2	10/12/10 18:36	
Ethylbenzene	8260	mg/kg	0.00061	U	1	0.00061	0.0038	100-41-4	10/12/10 18:36	
MTBE	8260	mg/kg	0.0015	U	1	0.0015	0.0061	1634-04-4	10/12/10 18:36	
Toluene	8260	mg/kg	0.0023	U	1	0.0023	0.0067	108-88-3	10/12/10 18:36	
Total Xylenes	8260	mg/kg	0.0023	U	1	0.0023	0.0094	1330-20-7	10/12/10 18:36	
Total VOA	8260	mg/kg	0.00053	U	1	0.00053	0.0038		10/12/10 18:36	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110335**
Sample Designation **SS-2**

Matrix: Soil
Date Collected: 10/08/10 14:45
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Organochlorine Pesticides by EPA Method 8081									
Date Extracted	3545a		10/12/10						10/12/10 17:15
Date Analyzed			10/21/2010	1				10/21/10 08:46	
2,4,5,6-tetrachloro-m-xylene (16-141)	8081	%	72	1		1	DEP-SURR-	10/21/10 08:46	10/12/10 17:15
Aldrin	8081	mg/kg	0.0023 U	1	0.0023	0.0092	309-00-2	10/21/10 08:46	10/12/10 17:15
a-BHC	8081	mg/kg	0.003 U	1	0.003	0.012	319-84-6	10/21/10 08:46	10/12/10 17:15
b-BHC	8081	mg/kg	0.0019 U	1	0.0019	0.0075	319-85-7	10/21/10 08:46	10/12/10 17:15
d-BHC	8081	mg/kg	0.0023 U	1	0.0023	0.0092	319-86-8	10/21/10 08:46	10/12/10 17:15
a-Chlordane	8081	mg/kg	0.0024 U	1	0.0024	0.0096	5103-71-9	10/21/10 08:46	10/12/10 17:15
g-Chlordane	8081	mg/kg	0.0018 U	1	0.0018	0.0071	5103-74-2	10/21/10 08:46	10/12/10 17:15
4,4'-DDD	8081	mg/kg	0.0019 U	1	0.0019	0.0075	72-54-8	10/21/10 08:46	10/12/10 17:15
4,4'-DDE	8081	mg/kg	0.0018 U	1	0.0018	0.0071	72-55-9	10/21/10 08:46	10/12/10 17:15
4,4'-DDT	8081	mg/kg	0.00067 U	1	0.00067	0.0027	50-29-3	10/21/10 08:46	10/12/10 17:15
Dieldrin	8081	mg/kg	0.0017 U	1	0.0017	0.0067	60-57-1	10/21/10 08:46	10/12/10 17:15
Endosulfan I	8081	mg/kg	0.0017 U	1	0.0017	0.0067	959-98-8	10/21/10 08:46	10/12/10 17:15
Endosulfan II	8081	mg/kg	0.0017 U	1	0.0017	0.0067	33213-65-9	10/21/10 08:46	10/12/10 17:15
Endosulfan sulfate	8081	mg/kg	0.0012 U	1	0.0012	0.005	1031-07-8	10/21/10 08:46	10/12/10 17:15
Endrin	8081	mg/kg	0.0018 U	1	0.0018	0.0071	72-20-8	10/21/10 08:46	10/12/10 17:15
Endrin aldehyde	8081	mg/kg	0.0017 U	1	0.0017	0.0067	7421-93-4	10/21/10 08:46	10/12/10 17:15
Endrin ketone	8081	mg/kg	0.0014 U	1	0.0014	0.0054	53494-70-5	10/21/10 08:46	10/12/10 17:15
Heptachlor	8081	mg/kg	0.002 U	1	0.002	0.0079	76-44-8	10/21/10 08:46	10/12/10 17:15
Heptachlor epoxide	8081	mg/kg	0.0018 U	1	0.0018	0.0071	1024-57-3	10/21/10 08:46	10/12/10 17:15
Lindane	8081	mg/kg	0.00062 U	1	0.00062	0.0026	58-89-9	10/21/10 08:46	10/12/10 17:15
Methoxychlor	8081	mg/kg	0.002 U	1	0.002	0.0079	72-43-5	10/21/10 08:46	10/12/10 17:15
Mirex	8081	mg/kg	0.0067 U	1	0.0067	0.027	2385-85-5	10/21/10 08:46	10/12/10 17:15
Toxaphene	8081	mg/kg	0.077 U	1	0.077	0.31	8001-35-2	10/21/10 08:46	10/12/10 17:15
Chlorinated Herbicides by EPA 8321									
Date Extracted	8321		10/14/10						10/14/10 11:30
Date Analyzed			10/18/10	1				10/18/10 11:31	
2,4-Dichlorophenylacetic acid (5-111)	8321	%	70	1		1	DEP-SURR-	10/18/10 11:31	10/14/10 11:30
2,4-D	8321	ug/kg	33 U	1	33	140	94-75-7	10/18/10 11:31	10/14/10 11:30
2,4-DB	8321	ug/kg	9.2 U	1	9.2	36	94-82-6	10/18/10 11:31	10/14/10 11:30
Dicamba	8321	ug/kg	21 U	1	21	83	1918-00-9	10/18/10 11:31	10/14/10 11:30
Dichlorprop	8321	ug/kg	7.4 U	1	7.4	29	120-36-5	10/18/10 11:31	10/14/10 11:30
Dinoseb	8321	ug/kg	2.4 U	1	2.4	9.6	88-85-7	10/18/10 11:31	10/14/10 11:30
MCPA	8321	ug/kg	3 U	1	3	12	94-74-6	10/18/10 11:31	10/14/10 11:30
MCPP	8321	ug/kg	9.3 U	1	9.3	38	93-65-2	10/18/10 11:31	10/14/10 11:30
Picloram	8321	ug/kg	23 U	1	23	92	1918-02-1	10/18/10 11:31	10/14/10 11:30
2,4,5-T	8321	ug/kg	7.4 U	1	7.4	29	93-76-5	10/18/10 11:31	10/14/10 11:30
2,4,5-TP	8321	ug/kg	7.5 U	1	7.5	30	93-72-1	10/18/10 11:31	10/14/10 11:30

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110335**
Sample Designation **SS-2**

Matrix: Soil
Date Collected: 10/08/10 14:45
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Florida Petroleum Range Organics(C8-C40)									
Date Extracted			10/14/10						10/14/10 16:45
Date Analyzed			10/18/10	1				10/18/10 18:43	
C-39 (40-140)	FLPRO	%	115	5		5		10/18/10 18:43	10/14/10 16:45
o-Terphenyl (40-140)	FLPRO	%	90	5		5	84-15-1	10/18/10 18:43	10/14/10 16:45
Petroleum Range Organics	FLPRO	mg/kg	840	5	25	100		10/18/10 18:43	10/14/10 16:45
Percent Moisture									
% Moisture	160.3M	%	4			0.1		10/12/10	
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3550		10/14/10						10/14/10 16:45
Date Analyzed	8270		10/18/2010	2				10/18/10 17:20	
Terphenyl-d14 (5-139)	8270	%	97	2			DEP-SURR-	10/18/10 17:20	10/14/10 16:45
Acenaphthene	8270	mg/kg	0.0044 U	2	0.0044	0.018	83-32-9	10/18/10 17:20	10/14/10 16:45
Acenaphthylene	8270	mg/kg	0.0046 U	2	0.0046	0.018	208-96-8	10/18/10 17:20	10/14/10 16:45
Anthracene	8270	mg/kg	0.0036 U	2	0.0036	0.014	120-12-7	10/18/10 17:20	10/14/10 16:45
Benzo(a)anthracene	8270	mg/kg	0.0032 U	2	0.0032	0.012	56-55-3	10/18/10 17:20	10/14/10 16:45
Benzo(a)pyrene	8270	mg/kg	0.0042 U	2	0.0042	0.017	50-32-8	10/18/10 17:20	10/14/10 16:45
Benzo(b)fluoranthene	8270	mg/kg	0.0056 U	2	0.0056	0.022	205-99-2	10/18/10 17:20	10/14/10 16:45
Benzo(g,h,i)perylene	8270	mg/kg	0.014 U	2	0.014	0.058	191-24-2	10/18/10 17:20	10/14/10 16:45
Benzo(k)fluoranthene	8270	mg/kg	0.004 U	2	0.004	0.016	207-08-9	10/18/10 17:20	10/14/10 16:45
Chrysene	8270	mg/kg	0.0024 U	2	0.0024	0.01	218-01-9	10/18/10 17:20	10/14/10 16:45
Dibenzo(a,h)anthracene	8270	mg/kg	0.015 U	2	0.015	0.06	53-70-3	10/18/10 17:20	10/14/10 16:45
Fluoranthene	8270	mg/kg	0.0048 U	2	0.0048	0.019	206-44-0	10/18/10 17:20	10/14/10 16:45
Fluorene	8270	mg/kg	0.0038 U	2	0.0038	0.015	86-73-7	10/18/10 17:20	10/14/10 16:45
Indeno(1,2,3-cd)pyrene	8270	mg/kg	0.015 U	2	0.015	0.06	193-39-5	10/18/10 17:20	10/14/10 16:45
1-Methylnaphthalene	8270	mg/kg	0.0068 U	2	0.0068	0.028	90-12-0	10/18/10 17:20	10/14/10 16:45
2-Methylnaphthalene	8270	mg/kg	0.0058 U	2	0.0058	0.024	91-57-6	10/18/10 17:20	10/14/10 16:45
Naphthalene	8270	mg/kg	0.011 U	2	0.011	0.046	91-20-3	10/18/10 17:20	10/14/10 16:45
Phenanthrene	8270	mg/kg	0.0058 U	2	0.0058	0.024	85-01-8	10/18/10 17:20	10/14/10 16:45
Pyrene	8270	mg/kg	0.014 U	2	0.014	0.058	129-00-0	10/18/10 17:20	10/14/10 16:45
Volatile Organic Compounds (BTEX/MTBE)									
Date Analyzed			10/12/10	1				10/12/10 19:00	
Toluene-d8 (49-134)	8260	%	100	1			DEP-SURR-	10/12/10 19:00	
Benzene	8260	mg/kg	0.00058 U	1	0.00058	0.0042	71-43-2	10/12/10 19:00	
Ethylbenzene	8260	mg/kg	0.00066 U	1	0.00066	0.0042	100-41-4	10/12/10 19:00	
MTBE	8260	mg/kg	0.0017 U	1	0.0017	0.0066	1634-04-4	10/12/10 19:00	
Toluene	8260	mg/kg	0.0025 U	1	0.0025	0.0075	108-88-3	10/12/10 19:00	
Total Xylenes	8260	mg/kg	0.0025 U	1	0.0025	0.0096	1330-20-7	10/12/10 19:00	
Total VOA	8260	mg/kg	0.00058 U	1	0.00058	0.0042		10/12/10 19:00	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110336**
Sample Designation **SS-6**

Matrix: Soil
Date Collected: 10/08/10 11:15
Date Received: 10/08/10 17:40

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Florida Petroleum Range Organics(C8-C40)									
Date Extracted			10/14/10						10/14/10 16:45
Date Analyzed			10/18/10	1				10/18/10 19:08	
C-39 (40-140)	FLPRO	%	64	1		1.1		10/18/10 19:08	10/14/10 16:45
o-Terphenyl (40-140)	FLPRO	%	81	1		1.1	84-15-1	10/18/10 19:08	10/14/10 16:45
Petroleum Range Organics	FLPRO	mg/kg	5.1 U	1	5.1	20		10/18/10 19:08	10/14/10 16:45
Percent Moisture									
% Moisture	160.3M	%	6			0.11		10/12/10	
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3550		10/14/10						10/14/10 16:45
Date Analyzed	8270		10/15/2010	1				10/15/10 20:24	
Terphenyl-d14 (5-139)	8270	%	70	1			DEP-SURR-	10/15/10 20:24	10/14/10 16:45
Acenaphthene	8270	mg/kg	0.0022 U	1	0.0022	0.0089	83-32-9	10/15/10 20:24	10/14/10 16:45
Acenaphthylene	8270	mg/kg	0.0023 U	1	0.0023	0.0094	208-96-8	10/15/10 20:24	10/14/10 16:45
Anthracene	8270	mg/kg	0.0018 U	1	0.0018	0.0072	120-12-7	10/15/10 20:24	10/14/10 16:45
Benzo(a)anthracene	8270	mg/kg	0.0016 U	1	0.0016	0.0064	56-55-3	10/15/10 20:24	10/14/10 16:45
Benzo(a)pyrene	8270	mg/kg	0.0021 U	1	0.0021	0.0085	50-32-8	10/15/10 20:24	10/14/10 16:45
Benzo(b)fluoranthene	8270	mg/kg	0.0029 U	1	0.0029	0.011	205-99-2	10/15/10 20:24	10/14/10 16:45
Benzo(g,h,i)perylene	8270	mg/kg	0.0073 U	1	0.0073	0.029	191-24-2	10/15/10 20:24	10/14/10 16:45
Benzo(k)fluoranthene	8270	mg/kg	0.002 U	1	0.002	0.0081	207-08-9	10/15/10 20:24	10/14/10 16:45
Chrysene	8270	mg/kg	0.0013 U	1	0.0013	0.0051	218-01-9	10/15/10 20:24	10/14/10 16:45
Dibenzo(a,h)anthracene	8270	mg/kg	0.0078 U	1	0.0078	0.031	53-70-3	10/15/10 20:24	10/14/10 16:45
Fluoranthene	8270	mg/kg	0.0024 U	1	0.0024	0.0098	206-44-0	10/15/10 20:24	10/14/10 16:45
Fluorene	8270	mg/kg	0.0019 U	1	0.0019	0.0077	86-73-7	10/15/10 20:24	10/14/10 16:45
Indeno(1,2,3-cd)pyrene	8270	mg/kg	0.0077 U	1	0.0077	0.031	193-39-5	10/15/10 20:24	10/14/10 16:45
1-Methylnaphthalene	8270	mg/kg	0.0035 U	1	0.0035	0.014	90-12-0	10/15/10 20:24	10/14/10 16:45
2-Methylnaphthalene	8270	mg/kg	0.003 U	1	0.003	0.012	91-57-6	10/15/10 20:24	10/14/10 16:45
Naphthalene	8270	mg/kg	0.0059 U	1	0.0059	0.023	91-20-3	10/15/10 20:24	10/14/10 16:45
Phenanthrene	8270	mg/kg	0.003 U	1	0.003	0.012	85-01-8	10/15/10 20:24	10/14/10 16:45
Pyrene	8270	mg/kg	0.0073 U	1	0.0073	0.03	129-00-0	10/15/10 20:24	10/14/10 16:45
Volatile Organic Compounds (BTEX/MTBE)									
Date Analyzed			10/12/10	1				10/12/10 19:25	
Toluene-d8 (49-134)	8260	%	99	1			DEP-SURR-	10/12/10 19:25	
Benzene	8260	mg/kg	0.00056 U	1	0.00056	0.004	71-43-2	10/12/10 19:25	
Ethylbenzene	8260	mg/kg	0.00064 U	1	0.00064	0.004	100-41-4	10/12/10 19:25	
MTBE	8260	mg/kg	0.0016 U	1	0.0016	0.0064	1634-04-4	10/12/10 19:25	
Toluene	8260	mg/kg	0.0024 U	1	0.0024	0.0073	108-88-3	10/12/10 19:25	
Total Xylenes	8260	mg/kg	0.0024 U	1	0.0024	0.0098	1330-20-7	10/12/10 19:25	
Total VOA	8260	mg/kg	0.00056 U	1	0.00056	0.004		10/12/10 19:25	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110478**
Sample Designation **TMW-1**

Matrix: Groundwater
Date Collected: 10/11/10 10:08
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
Date Analyzed			10/12/10	1				10/12/10 18:57	
4-Bromofluorobenzene (66-125)	8260	%	104	1			DEP-SURR-	10/12/10 18:57	
Dibromofluoromethane (61-137)	8260	%	88	1			186-85-37	10/12/10 18:57	
Toluene-d8 (69-128)	8260	%	109	1			DEP-SURR-	10/12/10 18:57	
Acetone	8260	ug/L	3.4 I	1	0.6	5	67-64-1	10/12/10 18:57	
Benzene	8260	ug/L	0.1 U	1	0.1	0.5	71-43-2	10/12/10 18:57	
Bromochloromethane	8260	ug/L	0.2 U	1	0.2	0.8	74-97-5	10/12/10 18:57	
Bromodichloromethane	8260	ug/L	0.1 U	1	0.1	0.5	75-27-4	10/12/10 18:57	
Bromoform	8260	ug/L	0.3 U	1	0.3	1.2	75-25-2	10/12/10 18:57	
Bromomethane	8260	ug/L	0.4 U	1	0.4	1.6	74-83-9	10/12/10 18:57	
2-Butanone	8260	ug/L	0.4 U	1	0.4	5	78-93-3	10/12/10 18:57	
Carbon disulfide	8260	ug/L	0.25 U	1	0.25	5	75-15-0	10/12/10 18:57	
Carbon tetrachloride	8260	ug/L	0.2 U	1	0.2	0.8	56-23-5	10/12/10 18:57	
Chlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-90-7	10/12/10 18:57	
Chloroethane	8260	ug/L	0.3 U	1	0.3	1.2	75-00-3	10/12/10 18:57	
Chloroform	8260	ug/L	0.1 U	1	0.1	0.5	67-66-3	10/12/10 18:57	
Chloromethane	8260	ug/L	0.1 U	1	0.1	0.5	74-87-3	10/12/10 18:57	
Dibromochloromethane	8260	ug/L	0.15 U	1	0.15	0.6	124-48-1	10/12/10 18:57	
Dibromomethane	8260	ug/L	0.1 U	1	0.1	0.5	74-95-3	10/12/10 18:57	
1,2-Dichlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-50-1	10/12/10 18:57	
1,3-Dichlorobenzene	8260	ug/L	0.3 U	1	0.3	1.2	541-73-1	10/12/10 18:57	
1,4-Dichlorobenzene	8260	ug/L	0.4 U	1	0.4	1.6	106-46-7	10/12/10 18:57	
Dichlorodifluoromethane	8260	ug/L	0.3 U	1	0.3	1.2	75-71-8	10/12/10 18:57	
1,1-Dichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	75-34-3	10/12/10 18:57	
1,2-Dichloroethane	8260	ug/L	0.2 U	1	0.2	0.8	107-06-2	10/12/10 18:57	
1,1-Dichloroethene	8260	ug/L	0.15 U	1	0.15	0.6	75-35-4	10/12/10 18:57	
cis-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-59-2	10/12/10 18:57	
trans-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-60-5	10/12/10 18:57	
1,2-Dichloropropane	8260	ug/L	0.1 U	1	0.1	0.5	78-87-5	10/12/10 18:57	
1,3-Dichloropropene	8260	ug/L	0.2 U	1	0.2	0.8	542-75-6	10/12/10 18:57	
Ethylbenzene	8260	ug/L	0.20 I	1	0.2	0.5	100-41-4	10/12/10 18:57	
2-Hexanone	8260	ug/L	0.2 U	1	0.2	5	591-78-6	10/12/10 18:57	
4-Methyl-2-pentanone	8260	ug/L	0.2 U	1	0.2	5	108-10-1	10/12/10 18:57	
Methylene Chloride	8260	ug/L	1.7 U	1	1.7	6.8	75-09-2	10/12/10 18:57	
MTBE	8260	ug/L	0.05 U	1	0.05	0.5	1634-04-4	10/12/10 18:57	
isopropylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	98-82-8	10/12/10 18:57	
Styrene	8260	ug/L	0.1 U	1	0.1	0.5	100-42-5	10/12/10 18:57	
1,1,2,2-Tetrachloroethane	8260	ug/L	0.2 U	1	0.2	0.8	79-34-5	10/12/10 18:57	
Tetrachloroethene	8260	ug/L	0.25 U	1	0.25	1	127-18-4	10/12/10 18:57	
Toluene	8260	ug/L	0.3 U	1	0.3	0.5	108-88-3	10/12/10 18:57	
1,1,1-Trichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	71-55-6	10/12/10 18:57	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110478**
Sample Designation **TMW-1**

Matrix: Groundwater
Date Collected: 10/11/10 10:08
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
1,1,2-Trichloroethane	8260	ug/L	0.7 U	1	0.7	2.8	79-00-5	10/12/10 18:57	
Trichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	79-01-6	10/12/10 18:57	
Trichlorofluoromethane	8260	ug/L	0.2 U	1	0.2	0.8	75-69-4	10/12/10 18:57	
1,2,4-Trimethylbenzene	8260	ug/L	0.84	1	0.2	0.8	95-63-6	10/12/10 18:57	
1,3,5-Trimethylbenzene	8260	ug/L	0.32 I	1	0.2	0.8	108-67-8	10/12/10 18:57	
Vinyl acetate	8260	ug/L	0.25 U	1	0.25	5	108-05-4	10/12/10 18:57	
Vinyl chloride	8260	ug/L	0.09 U	1	0.09	0.5	75-01-4	10/12/10 18:57	
Total Xylenes	8260	ug/L	0.4 U	1	0.4	1.6	1330-20-7	10/12/10 18:57	
Petroleum Range Organics(C8-C40)									
Date Extracted			10/15/10						10/15/10 14:00
Date Analyzed			10/18/10	1				10/18/10 23:22	
C-39 (40-140)	FLPRO	%	65	1		1		10/18/10 23:22	10/15/10 14:00
o-Terphenyl (40-140)	FLPRO	%	82	1		1	84-15-1	10/18/10 23:22	10/15/10 14:00
Petroleum Range Organics	FLPRO	ug/L	46 U	1	46	300		10/18/10 23:22	10/15/10 14:00
1,2-Dibromoethane by EPA Method 8011									
Date Extracted			10/14/10						10/14/10 12:00
Date Analyzed			10/15/10	1				10/15/10 01:01	
1,2-Dibromoethane	8011	ug/L	0.006 U	1	0.006	0.024	106-93-4	10/15/10 01:01	10/14/10 12:00
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3510		10/18/10						10/18/10 11:00
Date Analyzed	8270		10/21/2010	1				10/21/10 18:33	
Terphenyl-d14 (3-130)	8270	%	72	1			DEP-SURR-	10/21/10 18:33	10/18/10 11:00
Acenaphthene	8270	ug/L	0.028 U	1	0.028	0.11	83-32-9	10/21/10 18:33	10/18/10 11:00
Acenaphthylene	8270	ug/L	0.022 U	1	0.022	0.09	208-96-8	10/21/10 18:33	10/18/10 11:00
Anthracene	8270	ug/L	0.02 U	1	0.02	0.08	120-12-7	10/21/10 18:33	10/18/10 11:00
Benzo(a)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	56-55-3	10/21/10 18:33	10/18/10 11:00
Benzo(a)pyrene	8270	ug/L	0.009 U	1	0.009	0.036	50-32-8	10/21/10 18:33	10/18/10 11:00
Benzo(b)fluoranthene	8270	ug/L	0.007 U	1	0.007	0.028	205-99-2	10/21/10 18:33	10/18/10 11:00
Benzo(g,h,i)perylene	8270	ug/L	0.012 U	1	0.012	0.048	191-24-2	10/21/10 18:33	10/18/10 11:00
Benzo(k)fluoranthene	8270	ug/L	0.017 U	1	0.017	0.068	207-08-9	10/21/10 18:33	10/18/10 11:00
Chrysene	8270	ug/L	0.01 U	1	0.01	0.04	218-01-9	10/21/10 18:33	10/18/10 11:00
Dibenzo(a,h)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	53-70-3	10/21/10 18:33	10/18/10 11:00
Fluoranthene	8270	ug/L	0.02 U	1	0.02	0.08	206-44-0	10/21/10 18:33	10/18/10 11:00
Fluorene	8270	ug/L	0.03 U	1	0.03	0.12	86-73-7	10/21/10 18:33	10/18/10 11:00
Indeno(1,2,3-cd)pyrene	8270	ug/L	0.011 U	1	0.011	0.044	193-39-5	10/21/10 18:33	10/18/10 11:00
1-Methylnaphthalene	8270	ug/L	0.028 U	1	0.028	0.11	90-12-0	10/21/10 18:33	10/18/10 11:00
2-Methylnaphthalene	8270	ug/L	0.025 U	1	0.025	0.1	91-57-6	10/21/10 18:33	10/18/10 11:00
Naphthalene	8270	ug/L	0.031 U	1	0.031	0.12	91-20-3	10/21/10 18:33	10/18/10 11:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110478**
Sample Designation **TMW-1**

Matrix: Groundwater
Date Collected: 10/11/10 10:08
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Polynuclear Aromatic Hydrocarbons by Method 8270									
Phenanthrene	8270	ug/L	0.026 U	1	0.026	0.1	85-01-8	10/21/10 18:33	10/18/10 11:00
Pyrene	8270	ug/L	0.022 U	1	0.022	0.088	129-00-0	10/21/10 18:33	10/18/10 11:00
RCRA Metals ppb									
Date Digested	3005		10/15/10						10/15/10 08:30
Date Analyzed	6010		10/18/10	1				10/18/10 18:09	
Lead	6010	ug/L	4.4 U	1	4.4	18	7439-92-1	10/18/10 18:09	10/15/10 08:30

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110479**
Sample Designation **TMW-2**

Matrix: Groundwater
Date Collected: 10/11/10 11:05
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Organochlorine Pesticides by EPA Method 8081									
Date Extracted	3510c		10/15/10						10/15/10 11:45
Date Analyzed			10/21/2010	1				10/21/10 15:11	
2,4,5,6-Tetrachloro-m-xylene (10-139)	8081	%	65	1		1	DEP-SURR-	10/21/10 15:11	10/15/10 11:45
Aldrin	8081	ug/L	0.002 U	1	0.002	0.008	309-00-2	10/21/10 15:11	10/15/10 11:45
a-BHC	8081	ug/L	0.0023 U	1	0.0023	0.0092	319-84-6	10/21/10 15:11	10/15/10 11:45
b-BHC	8081	ug/L	0.003 U	1	0.003	0.012	319-85-7	10/21/10 15:11	10/15/10 11:45
d-BHC	8081	ug/L	0.0023 U	1	0.0023	0.0092	319-86-8	10/21/10 15:11	10/15/10 11:45
a-Chlordane	8081	ug/L	0.0019 U	1	0.0019	0.0076	5103-71-9	10/21/10 15:11	10/15/10 11:45
g-Chlordane	8081	ug/L	0.0021 U	1	0.0021	0.0084	5103-74-2	10/21/10 15:11	10/15/10 11:45
4,4'-DDD	8081	ug/L	0.0016 U	1	0.0016	0.0064	72-54-8	10/21/10 15:11	10/15/10 11:45
4,4'-DDE	8081	ug/L	0.0017 U	1	0.0017	0.0068	72-55-9	10/21/10 15:11	10/15/10 11:45
4,4'-DDT	8081	ug/L	0.002 U	1	0.002	0.008	50-29-3	10/21/10 15:11	10/15/10 11:45
Dieldrin	8081	ug/L	0.0014 U	1	0.0014	0.0056	60-57-1	10/21/10 15:11	10/15/10 11:45
Endosulfan I	8081	ug/L	0.0019 U	1	0.0019	0.0076	959-98-8	10/21/10 15:11	10/15/10 11:45
Endosulfan II	8081	ug/L	0.0018 U	1	0.0018	0.0072	33213-65-9	10/21/10 15:11	10/15/10 11:45
Endosulfan sulfate	8081	ug/L	0.0027 U	1	0.0027	0.011	1031-07-8	10/21/10 15:11	10/15/10 11:45
Endrin	8081	ug/L	0.0018 U	1	0.0018	0.0072	72-20-8	10/21/10 15:11	10/15/10 11:45
Endrin aldehyde	8081	ug/L	0.0019 U	1	0.0019	0.0076	7421-93-4	10/21/10 15:11	10/15/10 11:45
Endrin ketone	8081	ug/L	0.0016 U	1	0.0016	0.0064	53494-70-5	10/21/10 15:11	10/15/10 11:45
Heptachlor	8081	ug/L	0.0024 U	1	0.0024	0.0096	76-44-8	10/21/10 15:11	10/15/10 11:45
Heptachlor epoxide	8081	ug/L	0.0022 U	1	0.0022	0.0088	1024-57-3	10/21/10 15:11	10/15/10 11:45
Lindane	8081	ug/L	0.0024 U	1	0.0024	0.0096	58-89-9	10/21/10 15:11	10/15/10 11:45
Methoxychlor	8081	ug/L	0.0018 U	1	0.0018	0.0072	72-43-5	10/21/10 15:11	10/15/10 11:45
Mirex	8081	ug/L	0.015 U	1	0.015	0.06	2385-85-5	10/21/10 15:11	10/15/10 11:45
Toxaphene	8081	ug/L	0.044 U	1	0.044	0.2	8001-35-2	10/21/10 15:11	10/15/10 11:45
Volatile Organic Compounds By EPA Method 8260									
Date Analyzed			10/12/10	1				10/12/10 19:17	
4-Bromofluorobenzene (66-125)	8260	%	108	1			DEP-SURR-	10/12/10 19:17	
Dibromofluoromethane (61-137)	8260	%	92	1			186-85-37	10/12/10 19:17	
Toluene-d8 (69-128)	8260	%	112	1			DEP-SURR-	10/12/10 19:17	
Acetone	8260	ug/L	8.5	1	0.6	5	67-64-1	10/12/10 19:17	
Benzene	8260	ug/L	0.1 U	1	0.1	0.5	71-43-2	10/12/10 19:17	
Bromochloromethane	8260	ug/L	0.2 U	1	0.2	0.8	74-97-5	10/12/10 19:17	
Bromodichloromethane	8260	ug/L	0.1 U	1	0.1	0.5	75-27-4	10/12/10 19:17	
Bromoform	8260	ug/L	0.3 U	1	0.3	1.2	75-25-2	10/12/10 19:17	
Bromomethane	8260	ug/L	0.4 U	1	0.4	1.6	74-83-9	10/12/10 19:17	
2-Butanone	8260	ug/L	3.8 I	1	0.4	5	78-93-3	10/12/10 19:17	
Carbon disulfide	8260	ug/L	0.25 U	1	0.25	5	75-15-0	10/12/10 19:17	
Carbon tetrachloride	8260	ug/L	0.2 U	1	0.2	0.8	56-23-5	10/12/10 19:17	
Chlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-90-7	10/12/10 19:17	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110479**
Sample Designation **TMW-2**

Matrix: Groundwater
Date Collected: 10/11/10 11:05
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
Chloroethane	8260	ug/L	0.3 U	1	0.3	1.2	75-00-3	10/12/10 19:17	
Chloroform	8260	ug/L	0.1 U	1	0.1	0.5	67-66-3	10/12/10 19:17	
Chloromethane	8260	ug/L	0.1 U	1	0.1	0.5	74-87-3	10/12/10 19:17	
Dibromochloromethane	8260	ug/L	0.15 U	1	0.15	0.6	124-48-1	10/12/10 19:17	
Dibromomethane	8260	ug/L	0.1 U	1	0.1	0.5	74-95-3	10/12/10 19:17	
1,2-Dichlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-50-1	10/12/10 19:17	
1,3-Dichlorobenzene	8260	ug/L	0.3 U	1	0.3	1.2	541-73-1	10/12/10 19:17	
1,4-Dichlorobenzene	8260	ug/L	0.4 U	1	0.4	1.6	106-46-7	10/12/10 19:17	
Dichlorodifluoromethane	8260	ug/L	0.3 U	1	0.3	1.2	75-71-8	10/12/10 19:17	
1,1-Dichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	75-34-3	10/12/10 19:17	
1,2-Dichloroethane	8260	ug/L	0.2 U	1	0.2	0.8	107-06-2	10/12/10 19:17	
1,1-Dichloroethene	8260	ug/L	0.15 U	1	0.15	0.6	75-35-4	10/12/10 19:17	
cis-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-59-2	10/12/10 19:17	
trans-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-60-5	10/12/10 19:17	
1,2-Dichloropropane	8260	ug/L	0.1 U	1	0.1	0.5	78-87-5	10/12/10 19:17	
1,3-Dichloropropene	8260	ug/L	0.2 U	1	0.2	0.8	542-75-6	10/12/10 19:17	
Ethylbenzene	8260	ug/L	0.2 U	1	0.2	0.5	100-41-4	10/12/10 19:17	
2-Hexanone	8260	ug/L	0.2 U	1	0.2	5	591-78-6	10/12/10 19:17	
4-Methyl-2-pentanone	8260	ug/L	0.2 U	1	0.2	5	108-10-1	10/12/10 19:17	
Methylene Chloride	8260	ug/L	1.7 U	1	1.7	6.8	75-09-2	10/12/10 19:17	
MTBE	8260	ug/L	0.05 U	1	0.05	0.5	1634-04-4	10/12/10 19:17	
isopropylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	98-82-8	10/12/10 19:17	
Styrene	8260	ug/L	0.1 U	1	0.1	0.5	100-42-5	10/12/10 19:17	
1,1,2,2-Tetrachloroethane	8260	ug/L	0.2 U	1	0.2	0.8	79-34-5	10/12/10 19:17	
Tetrachloroethene	8260	ug/L	0.25 U	1	0.25	1	127-18-4	10/12/10 19:17	
Toluene	8260	ug/L	0.3 U	1	0.3	0.5	108-88-3	10/12/10 19:17	
1,1,1-Trichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	71-55-6	10/12/10 19:17	
1,1,2-Trichloroethane	8260	ug/L	0.7 U	1	0.7	2.8	79-00-5	10/12/10 19:17	
Trichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	79-01-6	10/12/10 19:17	
Trichlorofluoromethane	8260	ug/L	0.2 U	1	0.2	0.8	75-69-4	10/12/10 19:17	
1,2,4-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-63-6	10/12/10 19:17	
1,3,5-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-67-8	10/12/10 19:17	
Vinyl acetate	8260	ug/L	0.25 U	1	0.25	5	108-05-4	10/12/10 19:17	
Vinyl chloride	8260	ug/L	0.09 U	1	0.09	0.5	75-01-4	10/12/10 19:17	
Total Xylenes	8260	ug/L	0.4 U	1	0.4	1.6	1330-20-7	10/12/10 19:17	
Chlorinated Herbicides by EPA 8321									
Date Extracted	8321		10/15/10						10/15/10 12:00
Date Analyzed			10/19/2010	1				10/19/10 20:32	
2,4-Dichlorophenylacetic acid (D-131)	8321	%	77	1		1	DEP-SURR-	10/19/10 20:32	10/15/10 12:00
2,4-D	8321	ug/L	0.31 U	1	0.31	1.3	94-75-7	10/19/10 20:32	10/15/10 12:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110479**
Sample Designation **TMW-2**

Matrix: Groundwater
Date Collected: 10/11/10 11:05
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Chlorinated Herbicides by EPA 8321									
2,4-DB	8321	ug/L	1.1 U	1	1.1	4.4	94-82-6	10/19/10 20:32	10/15/10 12:00
Dicamba	8321	ug/L	0.35 U	1	0.35	1.4	1918-00-9	10/19/10 20:32	10/15/10 12:00
Dichlorprop	8321	ug/L	0.32 U	1	0.32	1.3	120-36-5	10/19/10 20:32	10/15/10 12:00
Dinoseb	8321	ug/L	0.18 U	1	0.18	0.72	88-85-7	10/19/10 20:32	10/15/10 12:00
MCPA	8321	ug/L	0.21 U	1	0.21	0.84	94-74-6	10/19/10 20:32	10/15/10 12:00
MCPP	8321	ug/L	0.15 U	1	0.15	0.6	93-65-2	10/19/10 20:32	10/15/10 12:00
Picloram	8321	ug/L	0.35 U	1	0.35	1.4	1918-02-1	10/19/10 20:32	10/15/10 12:00
2,4,5-T	8321	ug/L	0.23 U	1	0.23	0.92	93-76-5	10/19/10 20:32	10/15/10 12:00
Silvex	8321	ug/L	0.28 U	1	0.28	1.1	93-72-1	10/19/10 20:32	10/15/10 12:00
Petroleum Range Organics(C8-C40)									
Date Extracted			10/15/10						10/15/10 14:00
Date Analyzed			10/18/10	1				10/18/10 23:30	
C-39 (40-140)	FLPRO	%	65	1		1		10/18/10 23:30	10/15/10 14:00
o-Terphenyl (40-140)	FLPRO	%	79	1		1	84-15-1	10/18/10 23:30	10/15/10 14:00
Petroleum Range Organics	FLPRO	ug/L	46 U	1	46	300		10/18/10 23:30	10/15/10 14:00
1,2-Dibromoethane by EPA Method 8011									
Date Extracted			10/14/10						10/14/10 12:00
Date Analyzed			10/15/10	1				10/15/10 01:16	
1,2-Dibromoethane	8011	ug/L	0.006 U	1	0.006	0.024	106-93-4	10/15/10 01:16	10/14/10 12:00
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3510		10/18/10						10/18/10 11:00
Date Analyzed	8270		10/21/2010	1				10/21/10 19:08	
Terphenyl-d14 (3-130)	8270	%	73	1			DEP-SURR-	10/21/10 19:08	10/18/10 11:00
Acenaphthene	8270	ug/L	0.028 U	1	0.028	0.11	83-32-9	10/21/10 19:08	10/18/10 11:00
Acenaphthylene	8270	ug/L	0.022 U	1	0.022	0.09	208-96-8	10/21/10 19:08	10/18/10 11:00
Anthracene	8270	ug/L	0.02 U	1	0.02	0.08	120-12-7	10/21/10 19:08	10/18/10 11:00
Benzo(a)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	56-55-3	10/21/10 19:08	10/18/10 11:00
Benzo(a)pyrene	8270	ug/L	0.009 U	1	0.009	0.036	50-32-8	10/21/10 19:08	10/18/10 11:00
Benzo(b)fluoranthene	8270	ug/L	0.007 U	1	0.007	0.028	205-99-2	10/21/10 19:08	10/18/10 11:00
Benzo(g,h,i)perylene	8270	ug/L	0.012 U	1	0.012	0.048	191-24-2	10/21/10 19:08	10/18/10 11:00
Benzo(k)fluoranthene	8270	ug/L	0.017 U	1	0.017	0.068	207-08-9	10/21/10 19:08	10/18/10 11:00
Chrysene	8270	ug/L	0.01 U	1	0.01	0.04	218-01-9	10/21/10 19:08	10/18/10 11:00
Dibenzo(a,h)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	53-70-3	10/21/10 19:08	10/18/10 11:00
Fluoranthene	8270	ug/L	0.02 U	1	0.02	0.08	206-44-0	10/21/10 19:08	10/18/10 11:00
Fluorene	8270	ug/L	0.03 U	1	0.03	0.12	86-73-7	10/21/10 19:08	10/18/10 11:00
Indeno(1,2,3-cd)pyrene	8270	ug/L	0.011 U	1	0.011	0.044	193-39-5	10/21/10 19:08	10/18/10 11:00
1-Methylnaphthalene	8270	ug/L	0.028 U	1	0.028	0.11	90-12-0	10/21/10 19:08	10/18/10 11:00
2-Methylnaphthalene	8270	ug/L	0.025 U	1	0.025	0.1	91-57-6	10/21/10 19:08	10/18/10 11:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110479**
Sample Designation **TMW-2**

Matrix: Groundwater
Date Collected: 10/11/10 11:05
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Polynuclear Aromatic Hydrocarbons by Method 8270									
Naphthalene	8270	ug/L	0.031 U	1	0.031	0.12	91-20-3	10/21/10 19:08	10/18/10 11:00
Phenanthrene	8270	ug/L	0.026 U	1	0.026	0.1	85-01-8	10/21/10 19:08	10/18/10 11:00
Pyrene	8270	ug/L	0.022 U	1	0.022	0.088	129-00-0	10/21/10 19:08	10/18/10 11:00
RCRA Metals ppb									
Date Digested	3005		10/15/10						10/15/10 08:30
Date Analyzed	6010		10/18/10	1				10/18/10 18:11	
Lead	6010	ug/L	4.4 U	1	4.4	18	7439-92-1	10/18/10 18:11	10/15/10 08:30

Laboratory ID Number - E84809

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Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110480**
Sample Designation **TMW-3**

Matrix: Groundwater
Date Collected: 10/11/10 12:45
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Organochlorine Pesticides by EPA Method 8081									
Date Extracted	3510c		10/15/10						10/15/10 11:45
Date Analyzed			10/22/10	1				10/22/10 20:20	
2,4,5,6-Tetrachloro-m-xylene (10-139)	8081	%	50	1		1	DEP-SURR-	10/22/10 20:20	10/15/10 11:45
Aldrin	8081	ug/L	0.002 U	1	0.002	0.008	309-00-2	10/22/10 20:20	10/15/10 11:45
a-BHC	8081	ug/L	0.0023 U	1	0.0023	0.0092	319-84-6	10/22/10 20:20	10/15/10 11:45
b-BHC	8081	ug/L	0.003 U	1	0.003	0.012	319-85-7	10/22/10 20:20	10/15/10 11:45
d-BHC	8081	ug/L	0.0023 U	1	0.0023	0.0092	319-86-8	10/22/10 20:20	10/15/10 11:45
a-Chlordane	8081	ug/L	0.0019 U	1	0.0019	0.0076	5103-71-9	10/22/10 20:20	10/15/10 11:45
g-Chlordane	8081	ug/L	0.0021 U	1	0.0021	0.0084	5103-74-2	10/22/10 20:20	10/15/10 11:45
4,4'-DDD	8081	ug/L	0.0016 U	1	0.0016	0.0064	72-54-8	10/22/10 20:20	10/15/10 11:45
4,4'-DDE	8081	ug/L	0.0017 U	1	0.0017	0.0068	72-55-9	10/22/10 20:20	10/15/10 11:45
4,4'-DDT	8081	ug/L	0.002 U	1	0.002	0.008	50-29-3	10/22/10 20:20	10/15/10 11:45
Dieldrin	8081	ug/L	0.0014 U	1	0.0014	0.0056	60-57-1	10/22/10 20:20	10/15/10 11:45
Endosulfan I	8081	ug/L	0.0019 U	1	0.0019	0.0076	959-98-8	10/22/10 20:20	10/15/10 11:45
Endosulfan II	8081	ug/L	0.0018 U	1	0.0018	0.0072	33213-65-9	10/22/10 20:20	10/15/10 11:45
Endosulfan sulfate	8081	ug/L	0.0027 U	1	0.0027	0.011	1031-07-8	10/22/10 20:20	10/15/10 11:45
Endrin	8081	ug/L	0.0018 U	1	0.0018	0.0072	72-20-8	10/22/10 20:20	10/15/10 11:45
Endrin aldehyde	8081	ug/L	0.0019 U	1	0.0019	0.0076	7421-93-4	10/22/10 20:20	10/15/10 11:45
Endrin ketone	8081	ug/L	0.0016 U	1	0.0016	0.0064	53494-70-5	10/22/10 20:20	10/15/10 11:45
Heptachlor	8081	ug/L	0.0024 U	1	0.0024	0.0096	76-44-8	10/22/10 20:20	10/15/10 11:45
Heptachlor epoxide	8081	ug/L	0.0022 U	1	0.0022	0.0088	1024-57-3	10/22/10 20:20	10/15/10 11:45
Lindane	8081	ug/L	0.0024 U	1	0.0024	0.0096	58-89-9	10/22/10 20:20	10/15/10 11:45
Methoxychlor	8081	ug/L	0.0018 U	1	0.0018	0.0072	72-43-5	10/22/10 20:20	10/15/10 11:45
Mirex	8081	ug/L	0.015 U	1	0.015	0.06	2385-85-5	10/22/10 20:20	10/15/10 11:45
Toxaphene	8081	ug/L	0.044 U	1	0.044	0.2	8001-35-2	10/22/10 20:20	10/15/10 11:45
Volatile Organic Compounds By EPA Method 8260									
Date Analyzed			10/12/10	1				10/12/10 19:38	
4-Bromofluorobenzene (66-125)	8260	%	111	1			DEP-SURR-	10/12/10 19:38	
Dibromofluoromethane (61-137)	8260	%	96	1			186-85-37	10/12/10 19:38	
Toluene-d8 (69-128)	8260	%	111	1			DEP-SURR-	10/12/10 19:38	
Acetone	8260	ug/L	2.2 I	1	0.6	5	67-64-1	10/12/10 19:38	
Benzene	8260	ug/L	0.1 U	1	0.1	0.5	71-43-2	10/12/10 19:38	
Bromochloromethane	8260	ug/L	0.2 U	1	0.2	0.8	74-97-5	10/12/10 19:38	
Bromodichloromethane	8260	ug/L	0.1 U	1	0.1	0.5	75-27-4	10/12/10 19:38	
Bromoform	8260	ug/L	0.3 U	1	0.3	1.2	75-25-2	10/12/10 19:38	
Bromomethane	8260	ug/L	0.4 U	1	0.4	1.6	74-83-9	10/12/10 19:38	
2-Butanone	8260	ug/L	4.1 I	1	0.4	5	78-93-3	10/12/10 19:38	
Carbon disulfide	8260	ug/L	0.25 U	1	0.25	5	75-15-0	10/12/10 19:38	
Carbon tetrachloride	8260	ug/L	0.2 U	1	0.2	0.8	56-23-5	10/12/10 19:38	
Chlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-90-7	10/12/10 19:38	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110480**
Sample Designation **TMW-3**

Matrix: Groundwater
Date Collected: 10/11/10 12:45
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Volatile Organic Compounds By EPA Method 8260									
Chloroethane	8260	ug/L	0.3 U	1	0.3	1.2	75-00-3	10/12/10 19:38	
Chloroform	8260	ug/L	0.1 U	1	0.1	0.5	67-66-3	10/12/10 19:38	
Chloromethane	8260	ug/L	0.1 U	1	0.1	0.5	74-87-3	10/12/10 19:38	
Dibromochloromethane	8260	ug/L	0.15 U	1	0.15	0.6	124-48-1	10/12/10 19:38	
Dibromomethane	8260	ug/L	0.1 U	1	0.1	0.5	74-95-3	10/12/10 19:38	
1,2-Dichlorobenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-50-1	10/12/10 19:38	
1,3-Dichlorobenzene	8260	ug/L	0.3 U	1	0.3	1.2	541-73-1	10/12/10 19:38	
1,4-Dichlorobenzene	8260	ug/L	0.4 U	1	0.4	1.6	106-46-7	10/12/10 19:38	
Dichlorodifluoromethane	8260	ug/L	0.3 U	1	0.3	1.2	75-71-8	10/12/10 19:38	
1,1-Dichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	75-34-3	10/12/10 19:38	
1,2-Dichloroethane	8260	ug/L	0.2 U	1	0.2	0.8	107-06-2	10/12/10 19:38	
1,1-Dichloroethene	8260	ug/L	0.15 U	1	0.15	0.6	75-35-4	10/12/10 19:38	
cis-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-59-2	10/12/10 19:38	
trans-1,2-Dichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	156-60-5	10/12/10 19:38	
1,2-Dichloropropane	8260	ug/L	0.1 U	1	0.1	0.5	78-87-5	10/12/10 19:38	
1,3-Dichloropropene	8260	ug/L	0.2 U	1	0.2	0.8	542-75-6	10/12/10 19:38	
Ethylbenzene	8260	ug/L	0.2 U	1	0.2	0.5	100-41-4	10/12/10 19:38	
2-Hexanone	8260	ug/L	0.2 U	1	0.2	5	591-78-6	10/12/10 19:38	
4-Methyl-2-pentanone	8260	ug/L	0.2 U	1	0.2	5	108-10-1	10/12/10 19:38	
Methylene Chloride	8260	ug/L	1.7 U	1	1.7	6.8	75-09-2	10/12/10 19:38	
MTBE	8260	ug/L	0.05 U	1	0.05	0.5	1634-04-4	10/12/10 19:38	
isopropylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	98-82-8	10/12/10 19:38	
Styrene	8260	ug/L	0.1 U	1	0.1	0.5	100-42-5	10/12/10 19:38	
1,1,2,2-Tetrachloroethane	8260	ug/L	0.2 U	1	0.2	0.8	79-34-5	10/12/10 19:38	
Tetrachloroethene	8260	ug/L	0.25 U	1	0.25	1	127-18-4	10/12/10 19:38	
Toluene	8260	ug/L	0.3 U	1	0.3	0.5	108-88-3	10/12/10 19:38	
1,1,1-Trichloroethane	8260	ug/L	0.1 U	1	0.1	0.5	71-55-6	10/12/10 19:38	
1,1,2-Trichloroethane	8260	ug/L	0.7 U	1	0.7	2.8	79-00-5	10/12/10 19:38	
Trichloroethene	8260	ug/L	0.2 U	1	0.2	0.8	79-01-6	10/12/10 19:38	
Trichlorofluoromethane	8260	ug/L	0.2 U	1	0.2	0.8	75-69-4	10/12/10 19:38	
1,2,4-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	95-63-6	10/12/10 19:38	
1,3,5-Trimethylbenzene	8260	ug/L	0.2 U	1	0.2	0.8	108-67-8	10/12/10 19:38	
Vinyl acetate	8260	ug/L	0.25 U	1	0.25	5	108-05-4	10/12/10 19:38	
Vinyl chloride	8260	ug/L	0.09 U	1	0.09	0.5	75-01-4	10/12/10 19:38	
Total Xylenes	8260	ug/L	0.4 U	1	0.4	1.6	1330-20-7	10/12/10 19:38	
Chlorinated Herbicides by EPA 8321									
Date Extracted	8321		10/15/10						10/15/10 12:00
Date Analyzed			10/19/2010	1				10/19/10 21:12	
2,4-Dichlorophenylacetic acid (D-131)	8321	%	81	1		1	DEP-SURR-	10/19/10 21:12	10/15/10 12:00
2,4-D	8321	ug/L	0.31 U	1	0.31	1.3	94-75-7	10/19/10 21:12	10/15/10 12:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110480**
Sample Designation **TMW-3**

Matrix: Groundwater
Date Collected: 10/11/10 12:45
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Chlorinated Herbicides by EPA 8321									
2,4-DB	8321	ug/L	1.1 U	1	1.1	4.4	94-82-6	10/19/10 21:12	10/15/10 12:00
Dicamba	8321	ug/L	0.35 U	1	0.35	1.4	1918-00-9	10/19/10 21:12	10/15/10 12:00
Dichlorprop	8321	ug/L	0.32 U	1	0.32	1.3	120-36-5	10/19/10 21:12	10/15/10 12:00
Dinoseb	8321	ug/L	0.18 U	1	0.18	0.72	88-85-7	10/19/10 21:12	10/15/10 12:00
MCPA	8321	ug/L	0.21 U	1	0.21	0.84	94-74-6	10/19/10 21:12	10/15/10 12:00
MCPP	8321	ug/L	0.15 U	1	0.15	0.6	93-65-2	10/19/10 21:12	10/15/10 12:00
Picloram	8321	ug/L	0.35 U	1	0.35	1.4	1918-02-1	10/19/10 21:12	10/15/10 12:00
2,4,5-T	8321	ug/L	0.23 U	1	0.23	0.92	93-76-5	10/19/10 21:12	10/15/10 12:00
Silvex	8321	ug/L	0.28 U	1	0.28	1.1	93-72-1	10/19/10 21:12	10/15/10 12:00
Petroleum Range Organics(C8-C40)									
Date Extracted			10/15/10						10/15/10 14:00
Date Analyzed			10/18/10	1				10/18/10 23:39	
C-39 (40-140)	FLPRO	%	69	1		1		10/18/10 23:39	10/15/10 14:00
o-Terphenyl (40-140)	FLPRO	%	83	1		1	84-15-1	10/18/10 23:39	10/15/10 14:00
Petroleum Range Organics	FLPRO	ug/L	46 U	1	46	300		10/18/10 23:39	10/15/10 14:00
1,2-Dibromoethane by EPA Method 8011									
Date Extracted			10/14/10						10/14/10 12:00
Date Analyzed			10/15/10	1				10/15/10 01:31	
1,2-Dibromoethane	8011	ug/L	0.006 U	1	0.006	0.024	106-93-4	10/15/10 01:31	10/14/10 12:00
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3510		10/18/10						10/18/10 11:00
Date Analyzed	8270		10/21/2010	1				10/21/10 19:25	
Terphenyl-d14 (3-130)	8270	%	75	1			DEP-SURR-	10/21/10 19:25	10/18/10 11:00
Acenaphthene	8270	ug/L	0.028 U	1	0.028	0.11	83-32-9	10/21/10 19:25	10/18/10 11:00
Acenaphthylene	8270	ug/L	0.022 U	1	0.022	0.09	208-96-8	10/21/10 19:25	10/18/10 11:00
Anthracene	8270	ug/L	0.02 U	1	0.02	0.08	120-12-7	10/21/10 19:25	10/18/10 11:00
Benzo(a)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	56-55-3	10/21/10 19:25	10/18/10 11:00
Benzo(a)pyrene	8270	ug/L	0.009 U	1	0.009	0.036	50-32-8	10/21/10 19:25	10/18/10 11:00
Benzo(b)fluoranthene	8270	ug/L	0.007 U	1	0.007	0.028	205-99-2	10/21/10 19:25	10/18/10 11:00
Benzo(g,h,i)perylene	8270	ug/L	0.012 U	1	0.012	0.048	191-24-2	10/21/10 19:25	10/18/10 11:00
Benzo(k)fluoranthene	8270	ug/L	0.017 U	1	0.017	0.068	207-08-9	10/21/10 19:25	10/18/10 11:00
Chrysene	8270	ug/L	0.01 U	1	0.01	0.04	218-01-9	10/21/10 19:25	10/18/10 11:00
Dibenzo(a,h)anthracene	8270	ug/L	0.011 U	1	0.011	0.044	53-70-3	10/21/10 19:25	10/18/10 11:00
Fluoranthene	8270	ug/L	0.02 U	1	0.02	0.08	206-44-0	10/21/10 19:25	10/18/10 11:00
Fluorene	8270	ug/L	0.03 U	1	0.03	0.12	86-73-7	10/21/10 19:25	10/18/10 11:00
Indeno(1,2,3-cd)pyrene	8270	ug/L	0.011 U	1	0.011	0.044	193-39-5	10/21/10 19:25	10/18/10 11:00
1-Methylnaphthalene	8270	ug/L	0.028 U	1	0.028	0.11	90-12-0	10/21/10 19:25	10/18/10 11:00
2-Methylnaphthalene	8270	ug/L	0.025 U	1	0.025	0.1	91-57-6	10/21/10 19:25	10/18/10 11:00

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110480**
Sample Designation **TMW-3**

Matrix: Groundwater
Date Collected: 10/11/10 12:45
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Polynuclear Aromatic Hydrocarbons by Method 8270									
Naphthalene	8270	ug/L	0.031 U	1	0.031	0.12	91-20-3	10/21/10 19:25	10/18/10 11:00
Phenanthrene	8270	ug/L	0.026 U	1	0.026	0.1	85-01-8	10/21/10 19:25	10/18/10 11:00
Pyrene	8270	ug/L	0.022 U	1	0.022	0.088	129-00-0	10/21/10 19:25	10/18/10 11:00
RCRA Metals ppb									
Date Digested	3005		10/15/10						10/15/10 08:30
Date Analyzed	6010		10/18/10	1				10/18/10 20:10	
Lead	6010	ug/L	4.4 U	1	4.4	18	7439-92-1	10/18/10 20:10	10/15/10 08:30

Laboratory ID Number - E84809

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Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110481**
Sample Designation **SS-3 .50'-2'**

Matrix: Soil
Date Collected: 10/11/10 11:38
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results		Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Florida Petroleum Range Organics(C8-C40)										
Date Extracted			10/14/10							10/14/10 16:45
Date Analyzed			10/18/10		1				10/18/10 18:17	
C-39 (40-140)	FLPRO	%	54		1		1		10/18/10 18:17	10/14/10 16:45
o-Terphenyl (40-140)	FLPRO	%	70		1		1	84-15-1	10/18/10 18:17	10/14/10 16:45
Petroleum Range Organics	FLPRO	mg/kg	4.9	U	1	4.9	20		10/18/10 18:17	10/14/10 16:45
Percent Moisture										
% Moisture	160.3M	%	3				0.1		10/14/10	
Polynuclear Aromatic Hydrocarbons by Method 8270										
Date Extracted	3550		10/14/10							10/14/10 16:45
Date Analyzed	8270		10/15/2010		1				10/15/10 20:24	
Terphenyl-d14 (5-139)	8270	%	67		1			DEP-SURR-	10/15/10 20:24	10/14/10 16:45
Acenaphthene	8270	mg/kg	0.0022	U	1	0.0022	0.0087	83-32-9	10/15/10 20:24	10/14/10 16:45
Acenaphthylene	8270	mg/kg	0.0023	U	1	0.0023	0.0091	208-96-8	10/15/10 20:24	10/14/10 16:45
Anthracene	8270	mg/kg	0.0018	U	1	0.0018	0.007	120-12-7	10/15/10 20:24	10/14/10 16:45
Benzo(a)anthracene	8270	mg/kg	0.0015	U	1	0.0015	0.0062	56-55-3	10/15/10 20:24	10/14/10 16:45
Benzo(a)pyrene	8270	mg/kg	0.0021	U	1	0.0021	0.0082	50-32-8	10/15/10 20:24	10/14/10 16:45
Benzo(b)fluoranthene	8270	mg/kg	0.0028	U	1	0.0028	0.011	205-99-2	10/15/10 20:24	10/14/10 16:45
Benzo(g,h,i)perylene	8270	mg/kg	0.0071	U	1	0.0071	0.028	191-24-2	10/15/10 20:24	10/14/10 16:45
Benzo(k)fluoranthene	8270	mg/kg	0.002	U	1	0.002	0.0078	207-08-9	10/15/10 20:24	10/14/10 16:45
Chrysene	8270	mg/kg	0.0012	U	1	0.0012	0.0049	218-01-9	10/15/10 20:24	10/14/10 16:45
Dibenzo(a,h)anthracene	8270	mg/kg	0.0075	U	1	0.0075	0.03	53-70-3	10/15/10 20:24	10/14/10 16:45
Fluoranthene	8270	mg/kg	0.0024	U	1	0.0024	0.0095	206-44-0	10/15/10 20:24	10/14/10 16:45
Fluorene	8270	mg/kg	0.0019	U	1	0.0019	0.0074	86-73-7	10/15/10 20:24	10/14/10 16:45
Indeno(1,2,3-cd)pyrene	8270	mg/kg	0.0074	U	1	0.0074	0.03	193-39-5	10/15/10 20:24	10/14/10 16:45
1-Methylnaphthalene	8270	mg/kg	0.0034	U	1	0.0034	0.014	90-12-0	10/15/10 20:24	10/14/10 16:45
2-Methylnaphthalene	8270	mg/kg	0.0029	U	1	0.0029	0.012	91-57-6	10/15/10 20:24	10/14/10 16:45
Naphthalene	8270	mg/kg	0.0057	U	1	0.0057	0.023	91-20-3	10/15/10 20:24	10/14/10 16:45
Phenanthrene	8270	mg/kg	0.0029	U	1	0.0029	0.012	85-01-8	10/15/10 20:24	10/14/10 16:45
Pyrene	8270	mg/kg	0.0071	U	1	0.0071	0.029	129-00-0	10/15/10 20:24	10/14/10 16:45
Volatile Organic Compounds (BTEX/MTBE)										
Date Analyzed			10/12/10		1				10/12/10 19:49	
Toluene-d8 (49-134)	8260	%	100		1			DEP-SURR-	10/12/10 19:49	
Benzene	8260	mg/kg	0.00055	U	1	0.00055	0.004	71-43-2	10/12/10 19:49	
Ethylbenzene	8260	mg/kg	0.00062	U	1	0.00062	0.004	100-41-4	10/12/10 19:49	
MTBE	8260	mg/kg	0.0016	U	1	0.0016	0.0062	1634-04-4	10/12/10 19:49	
Toluene	8260	mg/kg	0.0024	U	1	0.0024	0.0071	108-88-3	10/12/10 19:49	
Total Xylenes	8260	mg/kg	0.0024	U	1	0.0024	0.0091	1330-20-7	10/12/10 19:49	
Total VOA	8260	mg/kg	0.00055	U	1	0.00055	0.004		10/12/10 19:49	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110482**
Sample Designation **SS-4 .50'-2'**

Matrix: Soil
Date Collected: 10/11/10 11:56
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Florida Petroleum Range Organics(C8-C40)									
Date Extracted			10/14/10						10/14/10 16:45
Date Analyzed			10/19/2010	1				10/19/10 14:24	
C-39 (40-140)	FLPRO	%	57	1		1		10/19/10 14:24	10/14/10 16:45
o-Terphenyl (40-140)	FLPRO	%	63	1		1	84-15-1	10/19/10 14:24	10/14/10 16:45
Petroleum Range Organics	FLPRO	mg/kg	6.6 I	1	4.9	20		10/19/10 14:24	10/14/10 16:45
Percent Moisture									
% Moisture	160.3M	%	3			0.1		10/14/10	
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3550		10/14/10						10/14/10 16:45
Date Analyzed	8270		10/15/2010	1				10/15/10 20:39	
Terphenyl-d14 (5-139)	8270	%	70	1			DEP-SURR-	10/15/10 20:39	10/14/10 16:45
Acenaphthene	8270	mg/kg	0.0022 U	1	0.0022	0.0087	83-32-9	10/15/10 20:39	10/14/10 16:45
Acenaphthylene	8270	mg/kg	0.0023 U	1	0.0023	0.0091	208-96-8	10/15/10 20:39	10/14/10 16:45
Anthracene	8270	mg/kg	0.0018 U	1	0.0018	0.007	120-12-7	10/15/10 20:39	10/14/10 16:45
Benzo(a)anthracene	8270	mg/kg	0.0015 U	1	0.0015	0.0062	56-55-3	10/15/10 20:39	10/14/10 16:45
Benzo(a)pyrene	8270	mg/kg	0.0021 U	1	0.0021	0.0082	50-32-8	10/15/10 20:39	10/14/10 16:45
Benzo(b)fluoranthene	8270	mg/kg	0.0028 U	1	0.0028	0.011	205-99-2	10/15/10 20:39	10/14/10 16:45
Benzo(g,h,i)perylene	8270	mg/kg	0.0071 U	1	0.0071	0.028	191-24-2	10/15/10 20:39	10/14/10 16:45
Benzo(k)fluoranthene	8270	mg/kg	0.002 U	1	0.002	0.0078	207-08-9	10/15/10 20:39	10/14/10 16:45
Chrysene	8270	mg/kg	0.0012 U	1	0.0012	0.0049	218-01-9	10/15/10 20:39	10/14/10 16:45
Dibenzo(a,h)anthracene	8270	mg/kg	0.0075 U	1	0.0075	0.03	53-70-3	10/15/10 20:39	10/14/10 16:45
Fluoranthene	8270	mg/kg	0.0024 U	1	0.0024	0.0095	206-44-0	10/15/10 20:39	10/14/10 16:45
Fluorene	8270	mg/kg	0.0019 U	1	0.0019	0.0074	86-73-7	10/15/10 20:39	10/14/10 16:45
Indeno(1,2,3-cd)pyrene	8270	mg/kg	0.0074 U	1	0.0074	0.03	193-39-5	10/15/10 20:39	10/14/10 16:45
1-Methylnaphthalene	8270	mg/kg	0.0034 U	1	0.0034	0.014	90-12-0	10/15/10 20:39	10/14/10 16:45
2-Methylnaphthalene	8270	mg/kg	0.0029 U	1	0.0029	0.012	91-57-6	10/15/10 20:39	10/14/10 16:45
Naphthalene	8270	mg/kg	0.0057 U	1	0.0057	0.023	91-20-3	10/15/10 20:39	10/14/10 16:45
Phenanthrene	8270	mg/kg	0.0029 U	1	0.0029	0.012	85-01-8	10/15/10 20:39	10/14/10 16:45
Pyrene	8270	mg/kg	0.0071 U	1	0.0071	0.029	129-00-0	10/15/10 20:39	10/14/10 16:45
Volatile Organic Compounds (BTEX/MTBE)									
Date Analyzed			10/12/10	1				10/12/10 20:14	
Toluene-d8 (49-134)	8260	%	101	1			DEP-SURR-	10/12/10 20:14	
Benzene	8260	mg/kg	0.00056 U	1	0.00056	0.004	71-43-2	10/12/10 20:14	
Ethylbenzene	8260	mg/kg	0.00064 U	1	0.00064	0.004	100-41-4	10/12/10 20:14	
MTBE	8260	mg/kg	0.0016 U	1	0.0016	0.0064	1634-04-4	10/12/10 20:14	
Toluene	8260	mg/kg	0.0024 U	1	0.0024	0.0072	108-88-3	10/12/10 20:14	
Total Xylenes	8260	mg/kg	0.0024 U	1	0.0024	0.0093	1330-20-7	10/12/10 20:14	
Total VOA	8260	mg/kg	0.00056 U	1	0.00056	0.004		10/12/10 20:14	

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110483**
Sample Designation **SS-5 .50'-2'**

Matrix: Soil
Date Collected: 10/11/10 13:20
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Organochlorine Pesticides by EPA Method 8081									
Date Extracted	3545a		10/12/10						10/12/10 17:15
Date Analyzed			10/21/2010	1				10/21/10 08:57	
2,4,5,6-tetrachloro-m-xylene (16-141)	8081	%	70	1		1.1	DEP-SURR-	10/21/10 08:57	10/12/10 17:15
Aldrin	8081	mg/kg	0.0024 U	1	0.0024	0.0096	309-00-2	10/21/10 08:57	10/12/10 17:15
a-BHC	8081	mg/kg	0.0032 U	1	0.0032	0.013	319-84-6	10/21/10 08:57	10/12/10 17:15
b-BHC	8081	mg/kg	0.002 U	1	0.002	0.0078	319-85-7	10/21/10 08:57	10/12/10 17:15
d-BHC	8081	mg/kg	0.0024 U	1	0.0024	0.0096	319-86-8	10/21/10 08:57	10/12/10 17:15
a-Chlordane	8081	mg/kg	0.0025 U	1	0.0025	0.01	5103-71-9	10/21/10 08:57	10/12/10 17:15
g-Chlordane	8081	mg/kg	0.0018 U	1	0.0018	0.0074	5103-74-2	10/21/10 08:57	10/12/10 17:15
4,4'-DDD	8081	mg/kg	0.002 U	1	0.002	0.0078	72-54-8	10/21/10 08:57	10/12/10 17:15
4,4'-DDE	8081	mg/kg	0.0018 U	1	0.0018	0.0074	72-55-9	10/21/10 08:57	10/12/10 17:15
4,4'-DDT	8081	mg/kg	0.0007 U	1	0.0007	0.0028	50-29-3	10/21/10 08:57	10/12/10 17:15
Dieldrin	8081	mg/kg	0.0017 U	1	0.0017	0.007	60-57-1	10/21/10 08:57	10/12/10 17:15
Endosulfan I	8081	mg/kg	0.0017 U	1	0.0017	0.007	959-98-8	10/21/10 08:57	10/12/10 17:15
Endosulfan II	8081	mg/kg	0.0017 U	1	0.0017	0.007	33213-65-9	10/21/10 08:57	10/12/10 17:15
Endosulfan sulfate	8081	mg/kg	0.0013 U	1	0.0013	0.0052	1031-07-8	10/21/10 08:57	10/12/10 17:15
Endrin	8081	mg/kg	0.0018 U	1	0.0018	0.0074	72-20-8	10/21/10 08:57	10/12/10 17:15
Endrin aldehyde	8081	mg/kg	0.0017 U	1	0.0017	0.007	7421-93-4	10/21/10 08:57	10/12/10 17:15
Endrin ketone	8081	mg/kg	0.0014 U	1	0.0014	0.0057	53494-70-5	10/21/10 08:57	10/12/10 17:15
Heptachlor	8081	mg/kg	0.0021 U	1	0.0021	0.0083	76-44-8	10/21/10 08:57	10/12/10 17:15
Heptachlor epoxide	8081	mg/kg	0.0018 U	1	0.0018	0.0074	1024-57-3	10/21/10 08:57	10/12/10 17:15
Lindane	8081	mg/kg	0.00065 U	1	0.00065	0.0027	58-89-9	10/21/10 08:57	10/12/10 17:15
Methoxychlor	8081	mg/kg	0.0021 U	1	0.0021	0.0083	72-43-5	10/21/10 08:57	10/12/10 17:15
Mirex	8081	mg/kg	0.007 U	1	0.007	0.028	2385-85-5	10/21/10 08:57	10/12/10 17:15
Toxaphene	8081	mg/kg	0.08 U	1	0.08	0.33	8001-35-2	10/21/10 08:57	10/12/10 17:15
Chlorinated Herbicides by EPA 8321									
Date Extracted	8321		10/14/10						10/14/10 11:30
Date Analyzed			10/19/10	1				10/19/10 00:52	
2,4-Dichlorophenylacetic acid (5-111)	8321	%	78	1		1	DEP-SURR-	10/19/10 00:52	10/14/10 11:30
2,4-D	8321	ug/kg	35 U	1	35	140	94-75-7	10/19/10 00:52	10/14/10 11:30
2,4-DB	8321	ug/kg	9.6 U	1	9.6	38	94-82-6	10/19/10 00:52	10/14/10 11:30
Dicamba	8321	ug/kg	22 U	1	22	87	1918-00-9	10/19/10 00:52	10/14/10 11:30
Dichlorprop	8321	ug/kg	7.7 U	1	7.7	30	120-36-5	10/19/10 00:52	10/14/10 11:30
Dinoseb	8321	ug/kg	2.5 U	1	2.5	10	88-85-7	10/19/10 00:52	10/14/10 11:30
MCPA	8321	ug/kg	3.2 U	1	3.2	13	94-74-6	10/19/10 00:52	10/14/10 11:30
MCPP	8321	ug/kg	9.7 U	1	9.7	39	93-65-2	10/19/10 00:52	10/14/10 11:30
Picloram	8321	ug/kg	24 U	1	24	96	1918-02-1	10/19/10 00:52	10/14/10 11:30
2,4,5-T	8321	ug/kg	7.7 U	1	7.7	30	93-76-5	10/19/10 00:52	10/14/10 11:30
2,4,5-TP	8321	ug/kg	7.8 U	1	7.8	32	93-72-1	10/19/10 00:52	10/14/10 11:30

Laboratory ID Number - E84809

Report of Laboratory Analysis

SunLabs Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

SunLabs Sample Number **110483**
Sample Designation **SS-5 .50'-2'**

Matrix: Soil
Date Collected: 10/11/10 13:20
Date Received: 10/12/10 11:15

Parameters	Method	Units	Results	Dil Factor	MDL	RL	CAS Number	Date/Time Analyzed	Date/Time Prep
Florida Petroleum Range Organics(C8-C40)									
Date Extracted			10/14/10						10/14/10 16:45
Date Analyzed			10/18/10	1				10/18/10 19:42	
C-39 (40-140)	FLPRO	%	50	1		1.1		10/18/10 19:42	10/14/10 16:45
o-Terphenyl (40-140)	FLPRO	%	74	1		1.1	84-15-1	10/18/10 19:42	10/14/10 16:45
Petroleum Range Organics	FLPRO	mg/kg	6.1 I	1	5.2	21		10/18/10 19:42	10/14/10 16:45
Percent Moisture									
% Moisture	160.3M	%	8			0.11		10/14/10	
Polynuclear Aromatic Hydrocarbons by Method 8270									
Date Extracted	3550		10/14/10						10/14/10 16:45
Date Analyzed	8270		10/15/2010	1				10/15/10 20:56	
Terphenyl-d14 (5-139)	8270	%	71	1			DEP-SURR-	10/15/10 20:56	10/14/10 16:45
Acenaphthene	8270	mg/kg	0.0023 U	1	0.0023	0.0091	83-32-9	10/15/10 20:56	10/14/10 16:45
Acenaphthylene	8270	mg/kg	0.0024 U	1	0.0024	0.0096	208-96-8	10/15/10 20:56	10/14/10 16:45
Anthracene	8270	mg/kg	0.0018 U	1	0.0018	0.0074	120-12-7	10/15/10 20:56	10/14/10 16:45
Benzo(a)anthracene	8270	mg/kg	0.0016 U	1	0.0016	0.0065	56-55-3	10/15/10 20:56	10/14/10 16:45
Benzo(a)pyrene	8270	mg/kg	0.0022 U	1	0.0022	0.0087	50-32-8	10/15/10 20:56	10/14/10 16:45
Benzo(b)fluoranthene	8270	mg/kg	0.0029 U	1	0.0029	0.012	205-99-2	10/15/10 20:56	10/14/10 16:45
Benzo(g,h,i)perylene	8270	mg/kg	0.0075 U	1	0.0075	0.03	191-24-2	10/15/10 20:56	10/14/10 16:45
Benzo(k)fluoranthene	8270	mg/kg	0.0021 U	1	0.0021	0.0083	207-08-9	10/15/10 20:56	10/14/10 16:45
Chrysene	8270	mg/kg	0.0013 U	1	0.0013	0.0052	218-01-9	10/15/10 20:56	10/14/10 16:45
Dibenzo(a,h)anthracene	8270	mg/kg	0.0079 U	1	0.0079	0.032	53-70-3	10/15/10 20:56	10/14/10 16:45
Fluoranthene	8270	mg/kg	0.0025 U	1	0.0025	0.01	206-44-0	10/15/10 20:56	10/14/10 16:45
Fluorene	8270	mg/kg	0.002 U	1	0.002	0.0078	86-73-7	10/15/10 20:56	10/14/10 16:45
Indeno(1,2,3-cd)pyrene	8270	mg/kg	0.0078 U	1	0.0078	0.031	193-39-5	10/15/10 20:56	10/14/10 16:45
1-Methylnaphthalene	8270	mg/kg	0.0036 U	1	0.0036	0.014	90-12-0	10/15/10 20:56	10/14/10 16:45
2-Methylnaphthalene	8270	mg/kg	0.003 U	1	0.003	0.012	91-57-6	10/15/10 20:56	10/14/10 16:45
Naphthalene	8270	mg/kg	0.006 U	1	0.006	0.024	91-20-3	10/15/10 20:56	10/14/10 16:45
Phenanthrene	8270	mg/kg	0.003 U	1	0.003	0.012	85-01-8	10/15/10 20:56	10/14/10 16:45
Pyrene	8270	mg/kg	0.0075 U	1	0.0075	0.03	129-00-0	10/15/10 20:56	10/14/10 16:45
Volatile Organic Compounds (BTEX/MTBE)									
Date Analyzed			10/12/10	1				10/12/10 20:38	
Toluene-d8 (49-134)	8260	%	99	1			DEP-SURR-	10/12/10 20:38	
Benzene	8260	mg/kg	0.00076 U	1	0.00076	0.0054	71-43-2	10/12/10 20:38	
Ethylbenzene	8260	mg/kg	0.00087 U	1	0.00087	0.0054	100-41-4	10/12/10 20:38	
MTBE	8260	mg/kg	0.0022 U	1	0.0022	0.0087	1634-04-4	10/12/10 20:38	
Toluene	8260	mg/kg	0.0033 U	1	0.0033	0.0098	108-88-3	10/12/10 20:38	
Total Xylenes	8260	mg/kg	0.0033 U	1	0.0033	0.013	1330-20-7	10/12/10 20:38	
Total VOA	8260	mg/kg	0.00076 U	1	0.00076	0.0054		10/12/10 20:38	

Laboratory ID Number - E84809

October 25, 2010

Footnotes	
I	*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.*
p	*SunLabs is not currently NELAC certified for this analyte.*
Q	*Sample held beyond the accepted holding time.*
RL	*RL(reporting limit) = PQL(practical quantitation limit).*
RPD	*Relative Percent Difference*
U	*Compound was analyzed for but not detected.*
V	*Indicates that the analyte was detected in both the sample and the associated method blank.*

Quality Control Data

Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

Batch No: D6226

Test: Metals by EPA Method 6010

TestCode: 6010-L-ug/l

Associated Samples: 110331, 110332, 110333

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110331*	*110331*					
Arsenic	4.8 U ug/L	1000	110	112	2	20	80-120	1000	110	113	3	20	75-125		
Lead	4.4 U ug/L	1000	109	107	2	20	80-120	1000	104	108	4	20	75-125		
Phosphorous	15 U ug/L	10.0	106	102	4	20	80-120	10.0	98	102	4	20	75-125		
Sodium	38 I ug/L	10.0	101	101	0	20	80-120	10.0	86	94	9	20	75-125		

Batch No: D6248

Test: Volatile Organic Compounds By EPA Method 8260

TestCode: 8260-w

Associated Samples: 110331, 110332, 110478, 110479, 110480

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110479*					*110480*	
Date Analyzed	10/12/10 U														
4-Bromofluorobenzene (66-125)	109 %														
Dibromofluoromethane (61-137)	93 %														
Toluene-d8 (69-128)	107 %														
Acetone	0.60 U ug/L	50	113	113	0	14	78-125	50	131				67-136	0	
Benzene	0.10 U ug/L	50	109	117	7	20	73-120	50	109				62-121	0	
Bromochloromethane	0.20 U ug/L	50	109	118	8	10	74-125	50	111				79-122	0	
Bromodichloromethane	0.10 U ug/L	50	102	113	10	20	72-118	50	105				69-129	0	
Bromoform	0.30 U ug/L	50	99	101	2	13	53-131	50	93				35-149	0	
Bromomethane	0.40 U ug/L	50	110	119	8	20	80-125	50	121				70-132	0	
2-Butanone	0.40 U ug/L	50	114	116	2	20	59-126	50	117				64-135	6	
Carbon disulfide	0.25 U ug/L	50	91	96	5	9	74-127	50	98				65-132	0	
Carbon tetrachloride	0.20 U ug/L	50	101	109	8	15	81-124	50	103				75-127	0	
Chlorobenzene	0.20 U ug/L	50	108	117	8	8	79-123	50	121 *				67-116	0	
Chloroethane	0.30 U ug/L	50	109	119	9	20	78-127	50	123				74-133	0	
Chloroform	0.10 U ug/L	50	107	115	7	20	68-124	50	114				75-126	0	
Chloromethane	0.10 U ug/L	50	116	123	6	20	75-128	50	112				77-117	0	
Dibromochloromethane	0.15 U ug/L	50	104	111	7	20	72-119	50	108				61-132	0	
Dibromomethane	0.10 U ug/L	50	113	119	5	14	71-126	50	116				72-129	0	
1,2-Dichlorobenzene	0.20 U ug/L	50	110	113	3	20	75-120	50	110				75-117	0	
1,3-Dichlorobenzene	0.30 U ug/L	50	110	121	10	10	78-121	50	117				74-121	0	
1,4-Dichlorobenzene	0.40 U ug/L	50	113	119	5	12	59-129	50	112				75-115	0	
Dichlorodifluoromethane	0.30 U ug/L	50	112	112	0	17	55-137	50	118				73-119	0	
1,1-Dichloroethane	0.10 U ug/L	50	119	127 *	7	12	72-125	50	126				71-130	0	
1,2-Dichloroethane	0.20 U ug/L	50	116	120	3	8	72-125	50	121				74-131	0	
1,1-Dichloroethene	0.15 U ug/L	50	108	116	7	13	85-121	50	114				63-124	0	
cis-1,2-Dichloroethene	0.20 U ug/L	50	116	125	7	20	64-128	50	120				65-132	0	
trans-1,2-Dichloroethene	0.20 U ug/L	50	113	120	6	20	74-123	50	118				71-132	0	
1,2-Dichloropropane	0.10 U ug/L	50	120	125	4	20	71-126	50	128 *				75-123	0	
1,3-Dichloropropene	0.20 U ug/L	50	110	119	8	20	69-122	50	111				21-156	0	
Ethylbenzene	0.20 U ug/L	50	97	96	1	17	59-133	50	114				50-138	0	
2-Hexanone	0.20 U ug/L	50	131	128	2	10	46-145	50	150 *				73-131	0	
4-Methyl-2-pentanone	0.20 U ug/L	50	126	126	0	7	48-141	50	146 *				69-135	0	
MTBE	0.05 U ug/L	50	106	117	10	20	71-120	50	109				68-135	0	
isopropylbenzene	0.20 U ug/L	50	108	110	2	20	78-128	50	117				59-139	0	
Styrene	0.10 U ug/L	50	119	115	3	20	79-135	50	123				45-142	0	
1,1,2,2-Tetrachloroethane	0.20 U ug/L	50	122	121	1	20	59-132	50	118				74-123	0	
Tetrachloroethene	0.25 U ug/L	50	110	117	6	11	78-120	50	115				0-183	0	
Toluene	0.30 U ug/L	50	116	122	5	19	66-129	50	121				62-122	0	
1,1,1-Trichloroethane	0.10 U ug/L	50	113	119	5	20	79-121	50	119 *				84-118	0	

Quality Control Data

Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

Batch No: D6248

Test: Volatile Organic Compounds By EPA Method 8260

Associated Samples: 110331, 110332, 110478, 110479, 110480

TestCode: 8260-w

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number										*110479*					*110480*	
1,1,2-Trichloroethane	0.70 U	ug/L	50	114	120	5	9	59-133	50	124				49-143	0	
Trichloroethene	0.20 U	ug/L	50	117	122	4	20	70-127	50	123				19-158	0	
Trichlorofluoromethane	0.20 U	ug/L	50	102	107	5	20	79-127	50	109				66-122	0	
1,2,4-Trimethylbenzene	0.20 U	ug/L	50	112	117	4	8	73-128	50	116				55-139	0	
1,3,5-Trimethylbenzene	0.20 U	ug/L	50	111	115	4	18	80-124	50	114				59-125	0	
Vinyl acetate	0.25 U	ug/L	50	119	122	2	20	64-130	50	121				39-144	0	
Vinyl chloride	0.09 U	ug/L	50	110	124	12	20	73-129	50	123				72-131	0	
Total Xylenes	0.40 U	ug/L	50	116	121	4	20	68-129	50	116				65-129	0	

Batch No: D6256

Test: Organochlorine Pesticides by EPA Method 8081

Associated Samples: 110335, 110483

TestCode: 8081-s1

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number										*110293*	*110293*					
Date Analyzed	)/18/2010 U															
2,4,5,6-tetrachloro-m-xylene (16-141)	61	%														
Aldrin	0.0022 U	mg/kg	100	62	59	5	13	35-130	100	75	67	11	17	37-148		
a-BHC	0.0029 U	mg/kg	100	55	53	4	20	27-136	100	71	62	14	20	30-156		
b-BHC	0.0018 U	mg/kg	100	59	56	5	17	24-131	100	76	69	10	33	34-142		
d-BHC	0.0022 U	mg/kg	100	50	47	6	19	24-110	100	66	55	18	22	28-122		
a-Chlordane	0.0023 U	mg/kg	100	55	53	4	16	37-115	100	65	57	13	20	40-143		
g-Chlordane	0.0017 U	mg/kg	100	61	58	5	19	42-118	100	71	62	14	15	52-125		
4,4'-DDD	0.0018 U	mg/kg	100	63	60	5	20	50-113	100	75	66	13	34	47-141		
4,4'-DDE	0.0017 U	mg/kg	100	60	58	3	19	45-105	100	71	62	14	20	39-133		
4,4'-DDT	0.00064 U	mg/kg	100	64	63	2	17	33-116	100	79	69	14	18	29-139		
Dieldrin	0.0016 U	mg/kg	100	60	58	3	19	33-116	100	67	62	8	20	0-176		
Endosulfan I	0.0016 U	mg/kg	100	55	55	0	16	34-125	100	70	61	14	24	46-140		
Endosulfan II	0.0016 U	mg/kg	100	54	53	2	19	48-89	100	70	62	12	20	38-125		
Endosulfan sulfate	0.0012 U	mg/kg	100	53	51	4	19	43-105	100	64	58	10	19	35-131		
Endrin	0.0017 U	mg/kg	100	63	60	5	21	39-120	100	76	69	10	14	48-137		
Endrin aldehyde	0.0016 U	mg/kg	100	43	42	2	19	25-80	100	66	63	5	19	31-111		
Endrin ketone	0.0013 U	mg/kg	100	71	68	4	19	30-119	100	81	76	6	16	26-143		
Heptachlor	0.0019 U	mg/kg	100	53	50	6	17	35-117	100	66	57	15	15	31-139		
Heptachlor epoxide	0.0017 U	mg/kg	100	63	60	5	17	42-115	100	71	65	9	12	44-126		
Lindane	0.0006 U	mg/kg	100	56	54	4	16	39-112	100	69	60	14	18	39-126		
Methoxychlor	0.0019 U	mg/kg	100	67	65	3	16	31-130	100	81	75	8	25	25-149		
Mirex	0.0064 U	mg/kg														
Toxaphene	0.074 U	mg/kg														

Batch No: D6265

Test: Volatile Organic Compounds (BTEX/MTBE)

Associated Samples: 110334, 110335, 110336, 110481, 110482, 110483

TestCode: BTEX-s

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number																
Toluene-d8 (49-134)	99	%														
Benzene	0.0007 U	mg/kg	100	99	100	1	53	54-145								
Ethylbenzene	0.0008 U	mg/kg	100	97	93	4	34	65-125								
MTBE	0.002 U	mg/kg	100	98	101	3	22	45-146								

Quality Control Data

Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

Batch No: D6265

Test: Volatile Organic Compounds (BTEX/MTBE)

Associated Samples: 110334, 110335, 110336, 110481, 110482, 110483

TestCode: BTEX-s

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number																
Toluene	0.003 U	mg/kg	100	100	97	3	21	28-172								
Total Xylenes	0.003 U	mg/kg	100	103	100	3	32	66-142								
Total VOA	0.0007 U	mg/kg														

Batch No: D6270

Test: 1,2-Dibromoethane by EPA Method 8011

Associated Samples: 110331, 110332, 110333, 110478, 110479, 110480

TestCode: 8011-w

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number										*110480*	*110480*					
Date Extracted	10/14/10															
Date Analyzed	10/14/10															
1,2-Dibromoethane	0.006 U	ug/L	0.25	95	98	3	20	60-140	0.25	96	94	2	59	35-152		

Batch No: D6272

Test: Polynuclear Aromatic Hydrocarbons by Method 8270

Associated Samples: 110331, 110332, 110333

TestCode: 8270PAH-w

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number										*110317*	*110317*					
Terphenyl-d14 (3-130)	79	%														
Acenaphthene	0.028 U	ug/L	1000	77	75	3	20	48-87	1000	83	80	4	49	14-113		
Acenaphthylene	0.022 U	ug/L	1000	68	73	7	16	31-109	1000	77	79	3	35	10-112		
Anthracene	0.020 U	ug/L	1000	80	82	2	14	53-90	1000	79	79	0	42	20-118		
Benzo(a)anthracene	0.011 U	ug/L	1000	85	88	3	20	53-111	1000	79	80	1	66	12-131		
Benzo(a)pyrene	0.009 U	ug/L	1000	64	65	2	14	27-104	1000	59	52	13	46	6-101		
Benzo(b)fluoranthene	0.007 U	ug/L	1000	61	61	0	43	7-143	1000	59	59	0	34	3-113		
Benzo(g,h,i)perylene	0.012 U	ug/L	1000	61	66	8	20	32-112	1000	49	54	10	37	2-114		
Benzo(k)fluoranthene	0.017 U	ug/L	1000	60	65	8	30	24-124	1000	63	56	12	29	15-107		
Chrysene	0.010 U	ug/L	1000	79	76	4	20	63-99	1000	76	73	4	28	27-121		
Dibenzo(a,h)anthracene	0.011 U	ug/L	1000	61	63	3	11	21-111	1000	56	51	9	43	8-106		
Fluoranthene	0.020 U	ug/L	1000	65	69	6	20	46-110	1000	67	72	7	42	18-132		
Fluorene	0.030 U	ug/L	1000	72	73	1	20	46-99	1000	77	76	1	52	15-115		
Indeno(1,2,3-cd)pyrene	0.011 U	ug/L	1000	67	72	7	20	43-110	1000	56	57	2	47	4-116		
1-Methylnaphthalene	0.028 U	ug/L	1000	56	55	2	20	21-115	1000	63	63	0	37	0-128		
2-Methylnaphthalene	0.025 U	ug/L	1000	56	55	2	20	26-106	1000	67	68	1	33	0-124		
Naphthalene	0.031 U	ug/L	1000	70	70	0	16	40-85	1000	74	74	0	46	0-154		
Phenanthrene	0.026 U	ug/L	1000	72	76	5	20	51-95	1000	75	77	3	40	20-118		
Pyrene	0.022 U	ug/L	1000	66	62	6	10	46-107	1000	63	63	0	34	18-128		

Batch No: D6278

Test: Chlorinated Herbicides by EPA 8321

Associated Samples: 110335, 110483

TestCode: 8321-s-CAS

Compound	Blank		LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number										*110335*	*110335*					
2,4-Dichlorophenylacetic acid (5-111)	85	%														
2,4-D	32 U	ug/kg	5.00	82	84	2	14	62-100	5.00	89	81	9	64	27-118		
2,4-DB	8.8 U	ug/kg	5.00	83	85	2	13	55-103	5.00	86	87	1	45	27-122		

Quality Control Data

Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

Batch No: D6278

Test: Chlorinated Herbicides by EPA 8321

TestCode: 8321-s-CAS

Associated Samples: 110335, 110483

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110335*	*110335*					
Dicamba	20 U ug/kg	5.00	112	112	0	10	73-114	5.00	103	90	13	35	32-117		
Dichlorprop	7.1 U ug/kg	5.00	85	88	3	10	70-94	5.00	91	85	7	46	44-106		
Dinoseb	2.3 U ug/kg	5.00	72	76	5	10	60-86	5.00	73	71	3	34	25-89		
MCPA	2.9 U ug/kg	5.00	83	86	4	10	66-98	5.00	88	80	10	48	36-105		
MCPP	8.9 U ug/kg	5.00	83	86	4	14	66-94	5.00	85	79	7	49	19-127		
Picloram	22 U ug/kg	5.00	85	87	2	39	24-113	5.00	96	95	1	36	9-109		
2,4,5-T	7.1 U ug/kg	5.00	83	86	4	11	67-98	5.00	85	76	11	48	34-106		
2,4,5-TP	7.2 U ug/kg	5.00	86	84	2	6	58-94	5.00	86	78	10	31	19-109		

Batch No: D6279

Test: Florida Petroleum Range Organics(C8-C40)

TestCode: FlPro-s

Associated Samples: 110334, 110335, 110336, 110481, 110482, 110483

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110481*	*110481*					
Date Extracted	10/14/10 U														
Date Analyzed	10/18/10 U														
C-39 (40-140)	46 %														
o-Terphenyl (40-140)	69 %														
Petroleum Range Organics	4.8 U mg/kg	850	68	72	6	25	63-143	850	67	63	6	25	60-140		

Batch No: D6280

Test: Polynuclear Aromatic Hydrocarbons by Method 8270

TestCode: 8270PAH-s

Associated Samples: 110334, 110335, 110336, 110481, 110482, 110483

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110481*	*10481*					
Date Analyzed	10/15/10														
Terphenyl-d14 (5-139)	68 %														
Acenaphthene	0.0021 U mg/kg	1000	67	63	6	15	41-85	1000	66	67	2	20	44-98		
Acenaphthylene	0.0022 U mg/kg	1000	74	71	4	14	38-96	1000	62	63	2	20	55-100		
Anthracene	0.0017 U mg/kg	1000	79	76	4	15	49-90	1000	71	72	1	20	51-103		
Benzo(a)anthracene	0.0015 U mg/kg	1000	81	83	2	20	35-115	1000	79	82	4	20	50-105		
Benzo(a)pyrene	0.002 U mg/kg	1000	68	71	4	12	21-105	1000	66	72	9	30	5-110		
Benzo(b)fluoranthene	0.0027 U mg/kg	1000	61	62	2	20	30-112	1000	60	66	10	30	5-129		
Benzo(g,h,i)perylene	0.0069 U mg/kg	1000	67	71	6	12	20-116	1000	66	63	5	41	30-105		
Benzo(k)fluoranthene	0.0019 U mg/kg	1000	73	73	0	13	34-104	1000	68	71	4	54	25-108		
Chrysene	0.0012 U mg/kg	1000	86	85	1	21	52-99	1000	82	82	0	20	53-100		
Dibenzo(a,h)anthracene	0.0073 U mg/kg	1000	77	74	4	6	35-106	1000	70	70	0	30	42-115		
Fluoranthene	0.0023 U mg/kg	1000	75	77	3	17	42-106	1000	76	74	3	35	21-149		
Fluorene	0.0018 U mg/kg	1000	66	66	0	17	42-93	1000	65	69	6	35	50-106		
Indeno(1,2,3-cd)pyrene	0.0072 U mg/kg	1000	77	75	3	13	30-113	1000	66	66	0	35	41-120		
1-Methylnaphthalene	0.0033 U mg/kg	1000	56	57	2	18	41-89	1000	54	53	2	20	42-103		
2-Methylnaphthalene	0.0028 U mg/kg	1000	55	51	8	14	42-84	1000	46	45	2	20	43-97		
Naphthalene	0.0055 U mg/kg	1000	64	61	5	13	45-80	1000	62	60	3	20	46-88		
Phenanthrene	0.0028 U mg/kg	1000	68	70	3	15	47-87	1000	71	70	1	20	48-104		
Pyrene	0.0069 U mg/kg	1000	75	71	5	13	42-105	1000	71	72	1	30	25-141		

Quality Control Data

Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

Batch No: D6282

Test: Metals by EPA Method 6010

Associated Samples: 110478, 110479, 110480

TestCode: 6010-L-ug/l

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110572*	*110572*					
Arsenic	4.8 U ug/L	1000	97	100	3	20	80-120	1000	94	98	4	20	75-125		
Cadmium	0.6 U ug/L	1000	98	99	1	20	80-120	1000	94	97	3	20	75-125		
Chromium	3.5 U ug/L	1000	96	95	1	20	80-120	1000	92	95	3	20	75-125		
Cobalt	1.2 U ug/L	1000	97	100	3	20	80-120	1000	94	100	6	20	75-125		
Copper	1.9 U ug/L	1000	97	100	3	20	80-120	1000	95	96	1	20	75-125		
Iron	2.3 U ug/L	1000	97	102	5	20	80-120	1000	102	106	4	20	75-125		
Lead	4.4 U ug/L	1000	96	100	4	20	80-120	1000	95	97	2	20	75-125		
Manganese	0.6 U ug/L	1000	97	101	4	20	80-120	1000	99	101	2	20	75-125		
Molybdenum	2.9 U ug/L	1000	95	100	5	20	80-120	1000	90	96	6	20	75-125		
Nickel	2.5 U ug/L	1000	98	101	3	20	80-120	1000	95	100	5	20	75-125		
Sodium	11 U ug/L	10.0	100	100	0	20	80-120	10.0	100	99	1	20	75-125		

Batch No: D6299

Test: Petroleum Range Organics(C8-C40)

Associated Samples: 110331, 110332, 110333, 110478, 110479, 110480

TestCode: FlPro-w

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110478*	*110478*					
Date Extracted	10/15/10 U														
Date Analyzed	10/18/10 U														
C-39 (40-140)	80 %														
o-Terphenyl (40-140)	85 %														
Petroleum Range Organics	46 U ug/L	850	69	72	4	20	55-118	850	70	72	3	25	60-140		

Batch No: D6300

Test: Organochlorine Pesticides by EPA Method 8081

Associated Samples: 110479, 110480

TestCode: 8081-w

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110480*	*110480*					
2,4,5,6-Tetrachloro-m-xylene (10-139)	53 %														
Aldrin	0.002 U ug/L	100	46				30-100	100	49	45	9	27	0-134		
a-BHC	0.0023 U ug/L	100	43				21-103	100	53	47	12	21	0-154		
b-BHC	0.0030 U ug/L	100	50				32-117	100	50	56	11	168	0-152		
d-BHC	0.0023 U ug/L	100	41				0-151	100	40	42	5	57	0-134		
a-Chlordane	0.0019 U ug/L	100	59				37-108	100	57	56	2	18	9-118		
g-Chlordane	0.0021 U ug/L	100	69				33-129	100	71	67	6	33	3-131		
4,4'-DDD	0.0016 U ug/L	100	69				47-121	100	58	57	2	19	12-143		
4,4'-DDE	0.0017 U ug/L	100	69				31-118	100	61	57	7	19	26-103		
4,4'-DDT	0 002 U ug/L	100	82				33-133	100	65	62	5	30	0-165		
Dieldrin	0.0014 U ug/L	100	70				42-113	100	69	73	6	21	14-132		
Endosulfan I	0.0019 U ug/L	100	55				40-106	100	53	54	2	23	7-131		
Endosulfan II	0.0018 U ug/L	100	77				35-127	100	68	63	8	22	14-121		
Endosulfan sulfate	0.0027 U ug/L	100	69				17-132	100	58	58	0	38	0-171		
Endrin	0.0018 U ug/L	100	63				37-122	100	62	61	2	25	14-143		
Endrin aldehyde	0.0019 U ug/L	100	88				37-134	100	61	58	5	28	0-158		
Endrin ketone	0.0016 U ug/L	100	84				31-132	100	66	64	3	39	0-148		
Heptachlor	0.0024 U ug/L	100	55				28-103	100	56	48	15	21	0-151		
Heptachlor epoxide	0.0022 U ug/L	100	57				36-107	100	63	59	7	23	0-133		
Lindane	0.0024 U ug/L	100	51				23-111	100	55	50	10	21	25-96		

Quality Control Data

Project Number	Cardno TBE, Inc.
101011.02	Project Description: Manatee

October 25, 2010

Batch No: D6300

Test: Organochlorine Pesticides by EPA Method 8081

Associated Samples: 110479, 110480

TestCode: 8081-w

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110480*	*110480*					
Methoxychlor	0.0018 U ug/L	100	91				41-142	100	71	72	1	47	0-175		
Mirex	0.015 U ug/L	100	81				27-136	100	53	48	10	26	0-141		
Toxaphene	0.044 U ug/L														

Batch No: D6314

Test: Polynuclear Aromatic Hydrocarbons by Method 8270

Associated Samples: 110478, 110479, 110480

TestCode: 8270PAH-w

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110478*	*110478*					
Terphenyl-d14 (3-130)	130 %														
Acenaphthene	0.028 U ug/L	100	70	69	1	20	48-87	100	68	70	3	49	14-113		
Acenaphthylene	0.022 U ug/L	100	73	68	7	16	31-109	100	64	68	6	35	10-112		
Anthracene	0.020 U ug/L	100	86	88	2	14	53-90	100	90	90	0	42	20-118		
Benzo(a)anthracene	0.011 U ug/L	100	79	81	2	20	53-111	100	59	59	0	66	12-131		
Benzo(a)pyrene	0.009 U ug/L	100	71	71	0	14	27-104	100	72	81	12	46	6-101		
Benzo(b)fluoranthene	0.007 U ug/L	100	64	60	6	43	7-143	100	66	72	9	34	3-113		
Benzo(g,h,i)perylene	0.012 U ug/L	100	69	69	0	20	32-112	100	60	63	5	37	2-114		
Benzo(k)fluoranthene	0.017 U ug/L	100	71	74	4	30	24-124	100	70	83	17	29	15-107		
Chrysene	0.010 U ug/L	100	95	92	3	20	63-99	100	97	95	2	28	27-121		
Dibenzo(a,h)anthracene	0.011 U ug/L	100	49	50	2	11	21-111	100	65	65	0	43	8-106		
Fluoranthene	0.020 U ug/L	100	69	66	4	20	46-110	100	67	72	7	42	18-132		
Fluorene	0.030 U ug/L	100	68	63	8	20	46-99	100	64	68	6	52	15-115		
Indeno(1,2,3-cd)pyrene	0.011 U ug/L	100	64	61	5	20	43-110	100	62	63	2	47	4-116		
1-Methylnaphthalene	0.028 U ug/L	100	71	71	0	20	21-115	100	55	55	0	37	0-128		
2-Methylnaphthalene	0.025 U ug/L	100	56	54	4	20	26-106	100	47	50	6	33	0-124		
Naphthalene	0.031 U ug/L	100	68	66	3	16	40-85	100	59	65	10	46	0-154		
Phenanthrene	0.026 U ug/L	100	68	68	0	20	51-95	100	65	69	6	40	20-118		
Pyrene	0.022 U ug/L	100	62	59	5	10	46-107	100	64	69	8	34	18-128		

Batch No: D6322

Test: Chlorinated Herbicides by EPA 8321

Associated Samples: 110479, 110480

TestCode: 8321-w

Compound	Blank	LCS Spike	LCS %Rec	LCSD %Rec	RPD %	---QC Limits--- RPD	LCS	MS Spike	MS %Rec	MSD %Rec	RPD %	---QC Limits--- RPD	MS	Dup RPD	Qualifiers
Parent Sample Number									*110480*	*110480*					
2,4-Dichlorophenylacetic acid (D-131)	75 %														
2,4-D	0.31 U ug/L	5.0	82				39-114	5.0	84	86	2	21	54-102		
2,4-DB	1.1 U ug/L	5.0	81				58-99	5.0	83	86	4	18	40-118		
Dicamba	0.35 U ug/L	5.0	91				43-125	5.0	95	88	8	19	13-191		
Dichlorprop	0.32 U ug/L	5.0	83				47-108	5.0	85	88	3	29	58-107		
Dinoseb	0.18 U ug/L	5.0	82				51-97	5.0	67	71	6	13	52-92		
MCPA	0.21 U ug/L	5.0	76				39-106	5.0	79	81	2	23	47-101		
MCPP	0.15 U ug/L	5.0	76				48-103	5.0	77	80	4	17	40-106		
Picloram	0.35 U ug/L	5.0	60				9-86	5.0	35	33	6	60	0-66		
2,4,5-T	0.23 U ug/L	5.0	79				40-110	5.0	84	86	2	15	63-97		
Silvex	0.28 U ug/L	5.0	86				37-117	5.0	91	95	4	15	55-105		

* indicates value is outside control limits for %Recovery or greater than acceptance criteria for RPD

Footnotes	
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

SunLabs, Inc. Chain of Custody

№ 25566

Client Name: CardnoTBE
Contact: Rick Hawkins
Address: 380 Park Place Blvd, Suite 300, Clearwater FL 33759
Phone / Fax: 727-531-3505 / 727-1777
E-Mail: Rick.Hawkins@CardnoTBE.com

SunLabs Project # 101011.02

Project Name: Marine Tec
Project #:
PO #:
Alt Bill To:

SunLabs Sample #	Sample Description	Sampled Date	Sampled Time	# of Bottles	KAG	Perf/Herb
110331	MW-4R	10-8-10	16:20	9	X	
110332	MW-7	|	15:00	9	X	
110333	MW-23	|	15:43	9	X	
110334	SS-1	|	16:03	5	X	
110335	SS-2	|	14:45	9	X	X
110336	SS-6	↓	11:15	5	X	

Bottle Type / Preservative / Matrix / Analysis / Method Requested

Due Date Requested*: Standard

- [ ] FDEP PreApproval site
- [x] Cash rates

Remarks / Comments:

Length of Record Retention if other than 5 years:* ______

Sampler Signature / Date: [signature] / 10-8-10

Printed Name / Affiliation: Dave Kross / Cardno TBE

SUNLABS, INC. RESERVES THE RIGHT TO BILL FOR DISPOSAL OF UNUSED/ UNRETURNED SAMPLES AND TO RETURN UNUSED SAMPLES.

Relinquished By:	Relinquished To:	Date:	Time:
[signature]	[signature]	10/8/10	17:20
[signature]	[signature]	10-8-10	17:40

Bottle Type Codes:
GV = Glass Vial; GVS = Low Level Volatile Kit; GA = Glass Amber; T = Tedlar Bag; P = Plastic; O = Other (Specify); S = Soil Jar

Preservative Codes:
H = Hydrochloric Acid + Ice; S = Sulfuric Acid + Ice; I = Ice only; VS = MeOH, OFW, + Ice; N = Nitric Acid + Ice; T = Sodium thiosulfate + ice; B = Sodium bisulfite + Ice; O = Other (Specify) ______

Matrix Codes:
SO = Soil; A = Air; SOL = Solid; DW = Drinking Water; SW = Surface Water; GW = Ground Water; W = Water (Blanks); SE = Sediment; O = Other (Specify)

Internal Use Only

Temp upon receipt: 3.2 °C

Received on Ice? (Y) / N / NA

Internal Use Only

Sample Condition Upon Receipt:

Custody Seals present?	Y / (N) / NA
Custody Seals intact?	Y / N / (NA)
Shipping Bills attached?	Y / N / (NA)
Sample containers intact?	(Y) / N / NA
Samples within holding times?	(Y) / N / NA
Sufficient volume for all analyses?	(Y) / N / NA
Are vials head-space free?	(Y) / N / NA
Proper containers and preservatives?	(Y) / N / NA

SunLabs, Inc.
5460 Beaumont Center Blvd., Suite 520, Tampa, Florida 33634
Phone: 813-881-9401 / Fax: 813-354-4661
e-mail: info@SunLabsInc.com www.SunLabsInc.com

* See General Terms and Conditions on Reverse

SunLabs, Inc. Chain of Custody

№ 25656

Client Name: [illegible]
Contact: [illegible]
Address: [illegible]
Phone / Fax: [illegible]
E-Mail : [illegible]

SunLabs Project # 101011.02

Project Name:
Project #:
PO #:
Alt Bill To:

SunLabs Sample #	Sample Description	Sampled Date	Sampled Time	# of Bottles	KAG	HCl/HCF
110478	Tank-1	10-11-10	10:28	9	X	
110479	Tank-2		11:05	11	X	X
110480	Tank-3		12:15	15	X	X
110481	SS-3 .5'-2'		11:38	5	X	
110482	SS-4 .5'-2'		11:56	5	X	
110483	SS-5 .5'-2'		13:20	6	X	X

Bottle Type / Preservative / Matrix / Analysis / Method Requested

Due Date Requested*: Standard

- [ ] FDEP PreApproval site
- [x] Cash rates

Remarks / Comments: KAG

Length of Record Retention if other than 5 years:* ______

Sampler Signature / Date: [signature] 10-11-10

Printed Name / Affiliation: [illegible]

SUNLABS, INC. RESERVES THE RIGHT TO BILL FOR DISPOSAL OF UNUSED/ UNRETURNED SAMPLES AND TO RETURN UNUSED SAMPLES.

Relinquished By:	Relinquished To:	Date:	Time:
[signature]	[signature]	10-12-10	1700
[signature]	[signature]	10-12-10	[illegible]

Bottle Type Codes:
GV = Glass Vial — GVS = Low Level Volatile Kit
GA = Glass Amber — T = Tedlar Bag
P = Plastic — O = Other (Specify)
S = Soil Jar

Preservative Codes:
H = Hydrochloric Acid + Ice — S = Sulfuric Acid + Ice
I = Ice only — VS = MeOH, OFW, + Ice
N = Nitric Acid + Ice — T = Sodium thiosulfate + ice
B = Sodium bisulfite + Ice — O = Other (Specify) ______

Matrix Codes:
A = Air — SO = Soil
DW = Drinking Water — SOL = Solid
GW = Ground Water — SW = Surface Water
SE = Sediment — W = Water (Blanks)
O = Other (Specify)

Internal Use Only

Temp upon receipt: 2.1 °C

Received on Ice? (Y) / N / NA

Internal Use Only

Sample Condition Upon Receipt:

Custody Seals present?	Y / (N) / NA
Custody Seals intact?	Y / N / (NA)
Shipping Bills attached?	Y / (N) / NA
Sample containers intact?	(Y) / N / NA
Samples within holding times?	(Y) / N / NA
Sufficient volume for all analyses?	(Y) / N / NA
Are vials head-space free?	(Y) / N / NA
Proper containers and preservatives?	(Y) / N / NA

SunLabs, Inc.
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e-mail: info@SunLabsInc.com www.SunLabsInc.com

Rev 12/09

* See General Terms and Conditions on Reverse