FILE ONLY

Manatee County Solid Waste Management Facility
Lena Road Class I Landfill
3333 Lena Road, Bradenton, Florida 34211

CONSTRUCTION CERTIFICATION FOR THE PHASE II EXPANSION OF THE STAGE III LANDFILL LANDFILL GAS COLLECTION SYSTEM

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT
TAMPA

Submitted by:

Manatee County Government
Utilities Department
Solid Waste Division
3333 Lena Road
Bradenton, Florida 34211

Prepared by:

ATKINS

482 South Keller Road
Orlando, Florida 32810

February 7, 2012

ATKINS

Atkins North America, Inc.
482 South Keller Road
Orlando, Florida 32810-6101
Telephone: +1.407.647.7275
www.atkinsglobal.com/northamerica

February 7, 2012

Dept. of Environmental Protection
FEB 08 2012
Southwest District

Susan J. Pelz, P.E.
Solid Waste Manager
Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Re: Lena Road Landfill, Manatee County
GMS ID No.: 4041C02025
Stage III Landfill Gas Collection System Construction
Permit No.: 39884-016-SC/08
Construction Certification for Phase II Expansion

Dear Ms. Pelz:

On behalf of Manatee County, we are submitting the construction certification and supporting documentation for the above referenced project.

Comanco was the contractor for the project. The work consisted of constructing Phase II of the Lena Road Stage III Landfill Gas Collection System. This expansion of the exisitng landfill gas collection system consisted of installing12 landfill gas extraction wells in the landfill, the well heads, and collection pipes including the laterals and headers and connecting the header to the existing header pipe. The landfill gas flare was kept in operation during the work. All work was done within the slurry wall. There were no slurry wall penetrations. The new wells were balanced with the existing wells and collections system. The new wells will be operated according to the existing operation and maintenance plan for the system.

Sincerely,

Joseph L. Miller, P.E. #39177
Project Engineer

Cc: Bryan White, Manatee County Solid Waste w/1 copy

Attachments

Preconstruction Photographs on disk in front pocket of binder
Certification of Construction Completion on FDEP Form 62-701.900(2)
Section 1 – Meeting Minutes
Section 2 – Drilling Well Logs
Section 3 – Soil Testing Results
Section 4 – Daily Field Reports with Progress Drawings and Photographs
Section 5 – Record Drawings

Reset Form | Print Form

Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form # 62-701.900(2)
Form Title Certification of Construction Completion of a Solid Waste Management Facility
Effective Date May 29, 1994

Dept. of Environmental Protection
FEB 08 2012
Southwest District

Certification of Construction Completion of a Solid Waste Management Facility

DEP Construction Permit No: 39884-016-SC/08 County: Manatee

Name of Project: Lena Road Class I Landfill Stage III Gas Collection System

Name of Owner: Manatee County Government / Utilities Department

Name of Engineer: Joe Miller, PE #39177, Atkins, 482 South Keller Drive, Florida 32810

Type of Project: Phase II expansion of the Stage III Landfill gas collection system which consisted of 12 landfill gas extraction wells and extension of the lateral and header collection pipes

Cost: Estimate $ 219,500 Actual $ 183,858

Site Design Quantity: 1100 ton/day Site Acreage: 316 Acres

Deviations from Plans and Application Approved by DEP (attach additional pages as needed):

None

Address and Telephone No. of Site: Manatee County Lena Road Landfill
3333 Lena Road, Bradenton, FL 34211 - Telephone 941-748-5543

Name(s) of Site Supervisor: Bryan White - Cell phone #941-812-2455

Date Site inspection is requested: February 13, 2012

This is to certify that, with the exception of any deviation noted above, the construction of the project has been completed in substantial accordance with the plans authorized by Construction

Permit No.: 39884-019-SC/TX (39884-016-SC/08) Dated: February 4, 2012

Date: June 9, 2011

JOSEPH LAWRENCE MILLER No. 39177 STATE OF FLORIDA PROFESSIONAL ENGINEER

Joseph L. Miller

Signature of Professional Engineer

#39177

MANATEE COUNTY

FLORIDA

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT
TAMPA

Preconstruction Meeting Agenda

Meeting Minutes notes in red

Date: September 7, 2011

Project Name & Location: Lena Road Landfill - Gas Collection, Stage III, Phase II
Lena Road Landfill Conference Room
3333 Lena Road, Bradenton FL

Project Number: 6008203

Bid Number: RFQ #11-2164DC

1. Introduction

- [x] Each attendee state agency representing & sign attendance sheet.
  See attached sign in sheet.
- [x] Brief description of project and scope of work.
- [x] Owner: Manatee County

  Project Manager: Jeff Streitmatter, Sr. Project Engineer

  Project Engineer: Joe Miller, Atkins North America, Inc.

  Project Inspector: Ken LaBarr
- [x] Contractor & Address: See new address below:

  COMANCO Environmental Corporation

  ~~7911 Professional Place~~ 4301 Sterling Commerce Drive

  ~~Tampa, FL 33637~~ Plant City, FL. 33566

  Construction Manager & Telephone Number:

  Troy Watrel Cell phone #813-714-0980

  Construction Superintendent & Telephone Number:

  To be determined

Preconstruction Meeting Agenda

Emergency Numbers: (must have at least two contact numbers that are accessible 24/7, preferably cell phone numbers)

Day: #813-714-0980

Evening: #813-714-0980

2. Review of Work Joe Miller reviewed the project scope of work.

- [x] Notice to Proceed Issued : September 14, 2011 (Attached)
- [x] Completion Date : December 13, 2011
- [x] Liquidated Damages : $388.00
- [x] Contractor will be responsible for obtaining applicable permits which may include Building Department Permits. If applicable, Contractor will provide Project Manager with copy of Building Permits or Permit Exemption Form signed by the Building Department prior to starting work. Joe Miller stated that work inside the landfill did not require building permits.
- [x] Contractor will submit Construction Schedule within **10 working days** and explain, in detail, the proposed method of construction. A revised schedule was distributed at the meeting. Due to a problem with getting a landfill gas well driller, work will not start until November 1, 2011.
- [x] Contractor will submit a Schedule of Values for any lump sum items within **10 days** of Notice to Proceed. This is a unit price contract and because of the short duration and late start, no partial billings for lump sum items was anticipated.
- [x] Contractor will submit to the Project Manager for approval the following:
  A.) Preconstruction DVD and/or photographs.
  B.) Progress DVD and/or photographs.
  C.) Record DVD and/or photographs.
  Comanco will take photographs of the site prior to starting. No video was required.
- [x] Contractor will submit names of all subcontractors.
- [x] Shop drawing submittal schedule will be submitted within **30 days** of Notice to Proceed.
- [x] Shop drawings will be submitted directly to the Engineer with copy of transmittal letter sent to the Project Manager. Four copies of shop drawings are required: Two for Manatee County, one for Atkins and one for Comanco. (Comment: After considering the process, electronic submittal is acceptable. Atkins will review the shop drawings and distribute copies by e-mail, and print out two hard copies and mail them to Manatee County.)

- [x] Shop drawings will be consecutively numbered and stamped as checked by the contractor. Comanco needs to add numbers to the shop drawings.

- [x] All important issues/questions will be submitted in writing as a **Request** For **Information** (RFI) using consecutive numbering of each. Contractor form and faxing are acceptable. Send **RFI's** to the Engineer and the County Project Manager and Inspector(s) at the same time.

- [x] All correspondence including change proposals, schedule changes, and field notifications will be delivered to:

Project Manager : Jeff Streitmatter

1022 26th Ave East, Bradenton, FL 34208

All correspondence may be submitted by e-mail.

3. Project Identification & Signs

- [x] County will provide logo to be placed on sign.

- [x] Contractor will submit a graphic layout of the design, style of lettering, and content of the project sign to the Project Manager for approval.

No project sign is required. If Comanco wants to put up a sign, the sign location and quality must be approved by Manatee County.

4. Testing

- [x] County will employ and pay for the services of an independent testing laboratory to perform test(s) during construction.

- [x] Contractor will cooperate fully with the laboratory to facilitate the execution of its required services.

- [x] Contractor will coordinate schedule of testing with laboratory.

5. Safety and Protection

- [x] Contractor will be responsible for initiating, maintaining, and supervising all safety precautions in connection with the work.

- [x] Contractor will submit a Hurricane Preparedness Plan within 30 days of Notice to Proceed.

- [x] Drug Free work site.

6. Utilities: Contractor will notify all utility companies

This is not required as all work is inside the landfill and no utilities are located inside the landfill.

- [x] Verizon: Not applicable

- [x] FPL: Not applicable

- ☑ Cable TV: Not applicable
- ☑ Gas: Not applicable
- ☑ County/City: Not applicable
- ☑ Other(s): Not applicable

7. Temporary Utilities (if applicable)

- ☑ Power, telephone, and water to be scheduled (if required) and paid for by the Contractor.

Comanco said that they did not require any.

8. Application for Payment

- ☑ Submit three (3) original forms for application of payment. (blank form provided to contractor)
- ☑ For **Final Payment** the following documents will be completed:
  A.) Warranty of Title
  B.) Final Reconciliation Agreement
  C.) Final Release of Lien
- ☑ Pay Requests will be reviewed, signed, and approved by Contractor, Inspector, and Engineer **prior** to submittal to the Project Manager for processing.
- ☑ When Application for Payment includes items from an approved Discretionary Work Field Directive, a copy of that fully executed Directive will be attached to that Application and every subsequent Application.
- ☑ A **Retainage** of 2.5% of the total contract amount will be withheld from payments after 75% completion of the work. Upon substantial completion, this retainage will be reduced to 1% of the total contract amount plus such amount as the County may reasonably deem necessary to repair, replace, complete, or correct any damaged, defective, incorrect, or incomplete work. Upon final acceptance, the remaining retainage will be included in the final payment.
- ☑ Stored materials will be paid only if there is a **PAID** receipt.(materials must be on site and protected)

9. Changes and Modifications

- ☑ Change Orders and Proposals are to be submitted to the Project Manager and should include a complete breakdown and documentation of costs.

All change orders, including any funds from the $20,000 Discretionary Work item on the bid must be approved prior to any work.

☑ Work Directive Change (Discretionary Work) requires approval of the Contractor, Engineer, and Project Manager prior to work taking place.

10. Record Drawings

☑ Submitted and approved prior to substantial completion. The final documents including the record survey are required by December 13, 2011. The draft survey is due December 6, 2011.

11. Field Office (if applicable)

☑ Pay item will be pro-rated if not completely set up and functioning the first day of "on site activity".

Comanco will not have a field office.

12. Construction Plans and Specifications

☑ County will furnish three (3) sets of construction plans. Three sets of the drawings and specifications - signed and sealed - were given to Comanco. Three sets - Not signed and sealed - were given to Manatee County.

☑ County organizational chart will be provided. Jeff said he would provide this in an e-mail.

13. Monthly Construction Progress Meetings

☑ At a minimum, a Monthly Construction Progress Meeting must be established at this time and strictly adhered to. This meeting will be held on the following dates and times for the duration of the project:

DATE: October 5, 2011

TIME: 2 PM to 3 PM in Landfill conference room

14. Comments (other business)

15. Adjourn 3PM

NOTES

Geotechnical Testing: Driggers Engineering Services, Inc. Bob Iliff or Rob Jones, (941) 371-3949

See attached Meeting Sign in sheet.

See review copies of Shop Drawings 1, 2 and 3.

S:\PWD_PJM_Share\Projects\Solid Waste\Lena Road Landfill - Gas Collection - Stage III-Phase II_60082 03\PM\Meetings\PRE-CON MEETING AGENDA - COMANCO.doc

MEETING SIGN-IN SHEET

Project Name: Lena Road Landfill - Gas Collection, Stage III, Phase II

Subject: Pre-Construction Meeting

Date, Time & Location: September 7, 2011, 2:00 PM, Landfill Conference Room

NAME	COMPANY	PHONE/FAX NUMBERS/E-MAIL
Troy Watral	Comanco Environmental Corp.	813 714-0980 twatral@comanco.com
THOMAS RAAB	COMANCO ENVIRONMENTAL	813-988-8829 / TRAAB@COMANCO.COM
Anthony Detweiler	Landfill	941 812-8796
Ken LaBarr	Manatee County Public Works	kenneth.labarr@mymanatee.org 941-748-4501 x7323 941-737-4413 cell
Bryan White	Manatee County Utilities Dept	(941) 792-8811 x 8008 office 812-2455 cell
RAY CASTRO	ATKINS	(407) 739-3605
ANTHONY BENITEZ	MANATEE COUNTY PUBLIC WORKS	(941) 708-7450 x 7333
Joe Miller	Atkins	407-806-4153 joseph.miller@atkinsglobal.co
Jeff STRAITMATTH	MCPW	941-708-7450 x 7335 Jeff.STRAITMATTH@mymanatee.org

Page 1 of 1

Report Selection Criteria: Job: 07114939 Customer: MAN002 Spec. Section: ALL

Submittal No.: ALL Subcontractor: ALL Status: ALL

COMANCO Environmental Corp.
Submittal Log By Job/Spec. Section

All Submittals as of 9/6/2011

Section	Title	Subcontractor	Submittal no.	Date Sent to sub	Required from sub	Received from sub	Days outstanding: Submitted to arch	Required from arch	Received from arch	Days out-standing	Status	Returned to sub
Job:	**07114939 MANATEE COUNTY LENA RD**											
Customer:	**MAN002 MANATEE COUNTY PURCHASING**			**Project:**	**MANATEE COUNTY LENA RD**							
Spec. Section: 01005 General Requirements												
1.3A	List of Proposed Manufacturers and Suppliers		01005-001								Not Completed	
Spec. Section: 01030 Special Project Procedures												
1.06A	Hurricane Preparedness Plan		01030-								Not Completed	
Spec. Section: 01050 Field Engineering and Surveying												
1.02	Surveyor/Mapper Information		01050-00								Not Completed	
1.06.2	Certificate from Surveyor Certifying work		01050-00								Not Completed	
1.05	As-builts (on Mylar 3-1/2" diskettes)		01050-00								Not Completed	
Spec. Section: 01310 Constr. Schedule & Proj. Restraints												
2.05A	Preliminary Schedule		01310-001								Not Completed	
2.05F,G	Monthly Progress Schedule & Status Report		01310-00								Not Completed	
Spec. Section: 01340 Shop Drawings, Proj. Data & Samples												
1.03C	Submittal Log		01340-001								Not Completed	
Spec. Section: 01700 Contract Closeout												
1.04.1	Project Record Documents (see 01720)		01700-00								Not Completed	
1.04.2	Operation & Maintenance Manuals (see 01730)		01700-00								Not Completed	
1.04.3	Warranties & Bonds		01700-00								Not Completed	
1.04.4	Evidence of Payment and Release of Liens		01700-00								Not Completed	
1.04.5	Certification Lettr from FDOT & Manatee Cty DOT		01700-00								Not Completed	
1.04.6	Certficate of Insurance for Products & Completed Operations		01700-00								Not Completed	
1.04.7	Manatee County Project Management Form PMD-8		01700-00								Not Completed	
Spec. Section: 02221 Trenching, Bedding & Backfill Pipe												
2.01A.1	#4 Granite 50 LB Sample		02221-00								Not Completed	
2.01A.1	#57 Granite 50 LB Sample		02221-00								Not Completed	
2.01A.1	Bentonite 50 LB Sample		02221-00								Not Completed	
Spec. Section: 02610 Landfill Gas Well & Wellhead												
1.03A	Manufacturer Certificates of Compliance		02610-00								Not Completed	
1.03A	Product Data & Manufacturer Brochure		02610-00								Not Completed	

#1

☐ REVIEWED, NO COMMENTS
☒ REVIEWED, COMMENTS AS NOTED
☐ REJECTED; REVISE AND RESUBMIT
☐ NOT REVIEWED

REVIEW OF THIS SHOP DRAWING IS LIMITED TO GENERAL DESIGN CONCEPTS AND GENERAL COMPLIANCE WITH THE INFORMATION IN THE PROJECT PLANS AND SPECIFICATIONS ONLY, AND IS NOT INTENDED TO BE A VERIFICATION OF TOTAL MATERIAL REQUIRED OR THAT ALL ITEMS REQUIRED ARE SHOWN. REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF DETAILS OF DESIGN, DIMENSIONS, JOB CONDITIONS, CONSTRUCTION MEANS AND METHODS, COORDINATION WITH OTHER TRADES, OR ANY OTHER REQUIREMENTS OF THE PLANS, SPECIFICATIONS OR CONTRACT. ANY NOTATIONS ON THIS SHOP DRAWING MADE BY POST, BUCKLEY, SCHUH & JERNIGAN, INC. SHALL NOT BE CONSTRUED TO AUTHORIZE ADDITIONAL WORK OR COST.

REVIEW OF DESIGN CALCULATIONS AND DRAWINGS PREPARED BY SPECIALTY ENGINEERS IS LIMITED TO DESIGN INTENT AND DOES NOT CONSTITUTE A DETAILED CHECK OF CALCULATIONS, NOR DOES IT RELIEVE THE SPECIALTY ENGINEERS FROM THE RESPONSIBILITY OF THE DETAILING OF THE SPECIALTY COMPONENT OR SYSTEM.

POST BUCKLEY, SCHUH & JERNIGAN, INC.

DATE: 9/19/11

Submit flex hose for review!

COMANCO Environmental Corp.
Submittal Log By Job/Spec. Section

All Submittals as of 9/6/2011

Section	Title	Subcontractor	Submittal no.	Date Sent to sub	Required from sub	Received from sub	Days outstanding	Submitted to arch	Required from arch	Received from arch	Days out-standing	Status	Returned to sub
1.03C	Gas Well Logs		02610-00									Not Completed	
Spec. Section: 15051 HDPE Pipe and Fittings													
1.03A	Pipe Certifications											Not Completed	
3.03A	Vacuum Test Procedure - IF APPLICABLE		15051-00									Not Completed	

COMANCO®

ENVIRONMENTAL CORPORATION

September 7, 2011

Mrs. Deborah Carey-Reed
Manatee County Purchasing
1112 Manatee Ave. West
Bradenton, FL 34205

RE: MANATEE COUNTY LENA RD STAGE III LFGS

Mrs. Carey-Reed,

This letter is to inform you that the following company will be used by COMANCO for the surveying and record drawings for the above mentioned project:

Mr. Bradley Stockham
Marco Surveying and Mapping
960 North Collier Blvd. Suite 203
Marco Island, FL 34145
P. 239-389-0026
F. 239-389-0093
www.marcosurveys.com

#2

Please let me know if you have any questions.

Sincerely,

COMANCO Environmental Corporation

Thomas P. Raab
Project Engineer

☑ REVIEWED, NO COMMENTS
☑ REVIEWED, COMMENTS AS NOTED
☐ REJECTED: REVISE AND RESUBMIT
☐ NOT REVIEWED

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POST, BUCKLEY, SCHUH & JERNIGAN, INC.

BY: J. D. Miller DATE: 9/19/11

11/93

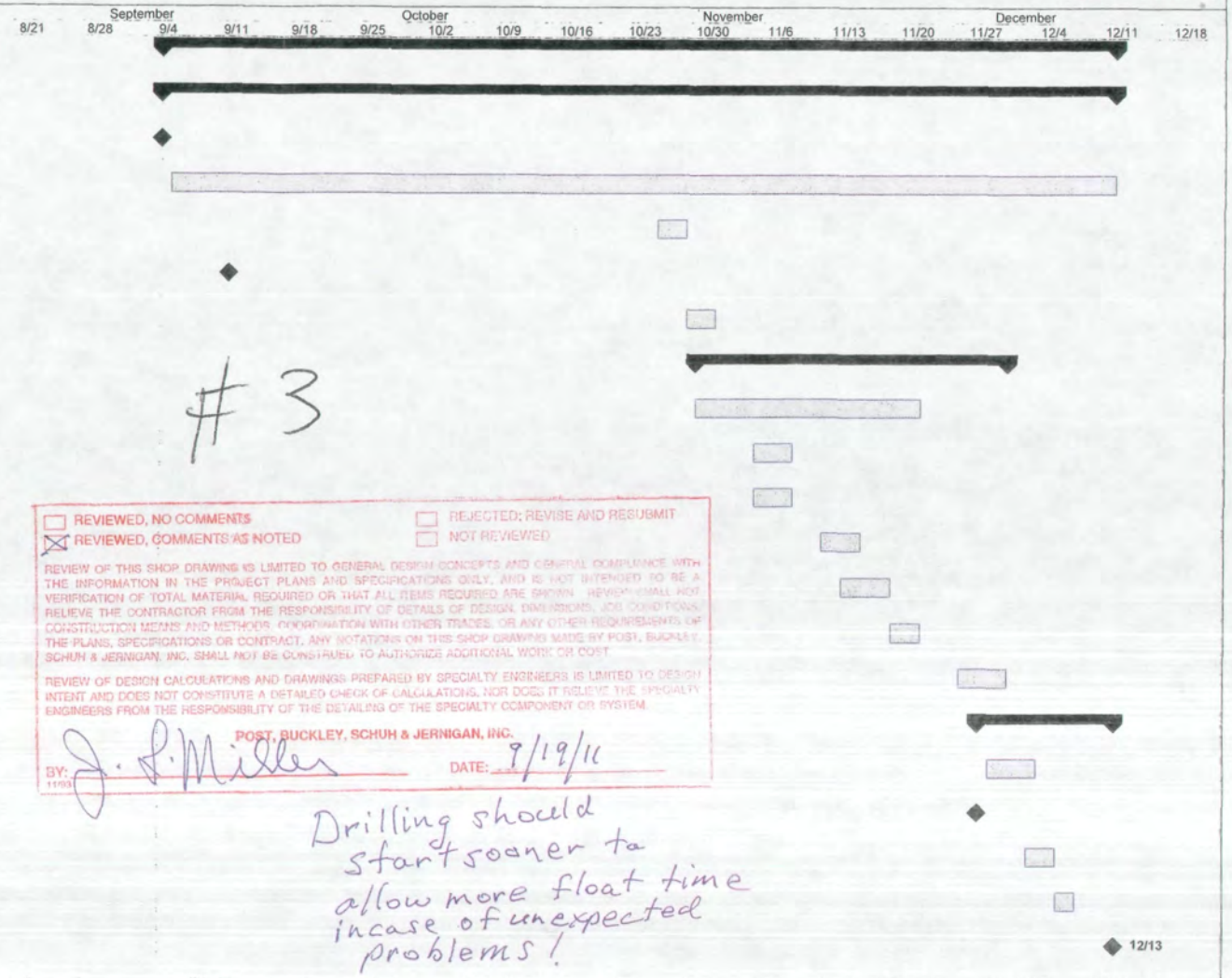
4301 Sterling Commerce Drive • Plant City, Florida 33637 • (813) 988-8829 • FAX (813) 988-8779

www.COMANCO.com

Manatee County Lena Road LGCS
07114939
Preliminary Schedule 8/24/11

COMANCO
SAFETY · QUALITY · SERVICE

ID	Task Name	Duration	Start	Finish
1	**MANATEE COUNTY LENA RD. LGCS**	**90 days**	**Wed 9/7/11**	**Tue 12/13/11**
2	**Mobilization**	**90 days**	**Wed 9/7/11**	**Tue 12/13/11**
3	Pre-Construction Meeting	1 day	Wed 9/7/11	Wed 9/7/11
4	Submittal Review Process	89 days	Thu 9/8/11	Tue 12/13/11
5	Mobilization	3 days	Fri 10/28/11	Sun 10/30/11
6	Notice to Proceed	1 day	Wed 9/14/11	Wed 9/14/11
7	Material Deliveries	3 days	Mon 10/31/11	Wed 11/2/11
8	**Construction**	**30 days**	**Tue 11/1/11**	**Fri 12/2/11**
9	Miscellaneous Work and Cleanup	23 days	Tue 11/1/11	Wed 11/23/11
10	Drill for Landfill Gas Collection Wells	4 days	Mon 11/7/11	Thu 11/10/11
11	Install Landfill Gas Collection Wells	4 days	Mon 11/7/11	Thu 11/10/11
12	Install 8" HDPE Pipe	4 days	Mon 11/14/11	Thu 11/17/11
13	Install 18" HDPE Pipe	5 days	Wed 11/16/11	Sun 11/20/11
14	Lateral Connections	3 days	Mon 11/21/11	Wed 11/23/11
15	Sodding	5 days	Mon 11/28/11	Fri 12/2/11
16	**Project Closeout**	**10 days**	**Wed 11/30/11**	**Tue 12/13/11**
17	Survey and As-built Drawings	3 days	Thu 12/1/11	Mon 12/5/11
18	Substantial Completion	1 day	Wed 11/30/11	Wed 11/30/11
19	Final Clean-up	3 days	Mon 12/5/11	Wed 12/7/11
20	Demobilization	2 days	Thu 12/8/11	Fri 12/9/11
21	Project Complete	0 days	Tue 12/13/11	Tue 12/13/11



#3

☐ REVIEWED, NO COMMENTS
☒ REVIEWED, COMMENTS AS NOTED
☐ REJECTED: REVISE AND RESUBMIT
☐ NOT REVIEWED

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POST, BUCKLEY, SCHUH & JERNIGAN, INC.

BY: J. L. Miller 11/93 DATE: 9/19/11

Drilling should start sooner to allow more float time incase of unexpected problems!

Project: Revised Schedule - TW 9-6-2
Date: Wed 9/7/11

Task | Split | Progress | Milestone | Summary | Project Summary | External Tasks | External Milestone | Deadline

See Also attached comments

Miller, Joseph L

From: jeff.streitmatter@mymanatee.org
Sent: Tuesday, September 13, 2011 7:59 AM
To: Troy Watral
Cc: Mark Topp; Thomas Raab; Miller, Joseph L; bryan.white@mymanatee.org; anthony.detweiler@mymanatee.org
Subject: RE: Invitation: Lena Road Landfill Gas Collection - Pre-Con meeting (Sep 7 02:00 PM EDT in Lena Road Landfill Conference Room)

Troy

This is to provide comments on the preliminary schedule submitted at the pre-construction meeting. The schedule you submitted at the pre-construction meeting is significantly different than the preliminary schedule submitted to Purchasing at the time of award of the project. Based on discussion at the pre-construction meeting, we understand that you have pushed the schedule out to avoid the rainy season and due to the lack of availability of well drillers qualified to do this type of work. We are concerned that the revised schedule pushes all of the work towards the end of the contract duration leaving very little or no float time to accommodate potential delays. Keep in mind that all work including testing, record drawings, restoration, punch list, etc. is required to be completed by the contractual end date. We strongly suggest that you re-evaluate your schedule to ensure that all work can be completed in the required time frame and avoid the potential for liquidated damages being assessed.

Thanks
Jeff

Jeff Streitmatter III, P.E.
Project Manager
Manatee County Public Works
Project Management Division
1022 26th Avenue East
Bradenton, FL 34208
Ph 941-708-7450 Ext. 7335
Cell 941-737-4523

From: "Troy Watral" <twatral@comanco.com>
To: "Jeff Streitmatter/MCG" <jeff.streitmatter@mymanatee.org>, "Thomas Raab" <traab@comanco.com>
Cc: "Mark Topp" <mtopp@comanco.com>
Date: 09/02/2011 07:51 AM
Subject: RE: Invitation: Lena Road Landfill Gas Collection - Pre-Con meeting (Sep 7 02:00 PM EDT in Lena Road Landfill Conference Room)

MANATEE COUNTY

FLORIDA

Progress Meeting 1 Minutes

Date and Time: October 5, 2011 - 2 PM

Project Name & Location: Lena Road Landfill - Gas Collection, Stage III, Phase II
Lena Road Landfill Conference Room
3333 Lena Road, Bradenton FL

Project Number: 6008203

Bid Number: RFQ #11-2164DC

Meeting Location: Telephone Conference

Attendees:

Project Manager: Jeff Streitmatter, Sr. Project Engineer Manatee

Project Engineer: Joe Miller, Atkins North America, Inc.

Project Inspector: Ken LaBarr, Project Inspector for Manatee

Construction Manager: Troy Watre - Comanco

Construction Engineer: Thomas Rabb - Comanco

1. The preconstruction meeting minutes were reviewed. There were no additions, deletions or corrections to the meeting minutes.
2. The revised project schedule was reviewed. Comanco plans to start work on October 17, 2011. Troy said that Comanco was on schedule and saw no reason to not meet the schedule. The driller was anticipated to be on site no later than November 1, 2011.
3. Troy stated that the project superintendent would be Bill Newman (Telephone 813-434-5435), and that he and Bill would be on-site on Friday October 7, 2011 to review the site conditions and plan the start of the work. He said that he would check in with Bryan and Anthony at the landfill.
4. The shop drawings were reviewed. Five have been reviewed and approved. The gravel submittal approval was waiting on the gradation tests. Joe Miller said he had two more shop drawings to review: the Hurricane Preparedness Plan and the

well head. One more shop drawing was anticipated for the well head hose. Comanco did not have to submit samples for the backfill soil. Joe Miller requested that they submit the location and information on the borrow source. Driggers, If needed, would go to the borrow site for a sample.

5. Jeff requested that if Comanco wanted to work on Saturday, that they submit a request by e-mail and list the Saturdays they planned to work. Joe Miller had no objections and confirmed there would be no increase in Atkins costs if Comanco worked on Saturdays.
6. The pay request was reviewed. Jeff requested that two copies be submitted to him. Since there is no work to photograph, no photographs were required. Comanco confirmed that they would take photographs of the work areas before the work began, and would submit these photographs. The photographs could be submitted by e-mail as attachments. No hard copies were required.

Meeting Adjourn **2:30 PM**

Next Monthly Construction Progress Meetings

DATE: October 18
TIME: 2 PM to 3 PM
Location: Landfill conference room

Minutes prepared by Joe Miller

MANATEE COUNTY

FLORIDA

Progress Meeting 2 Minutes

Date and Time: October 18, 2011 - 2 PM

Project Name & Location: Lena Road Landfill - Gas Collection, Stage III, Phase II
Lena Road Landfill Conference Room
3333 Lena Road, Bradenton FL

Project Number: 6008203

Bid Number: RFQ #11-2164DC

Meeting Location: Lena Road landfill Conference Room

Attendees:

Project Manager: Jeff Streitmatter, Sr. Project Engineer Manatee

Project Engineer: Joe Miller, Atkins North America, Inc.

Project Inspector: Ken LaBarr, Project Inspector for Manatee

Construction Manager: Troy Watre - Comanco

Construction Superintendent: Bill Newman - Comanco

Landfill Superintendent: Bryan White, Manatee County

Landfill Operation Supervisor: Anthony Detweiler, Manatee County

Resident Engineer: Ray Castro, P.E., Atkins

1. Progress Meeting 1 minutes were reviewed. There were no additions, deletions or corrections to the meeting minutes.
2. The project schedule was reviewed. Comanco started work on site on October 17, 2011. Troy said that Comanco was on schedule and saw no reason to not meet the schedule. The driller was anticipated to be on site no later than November 1, 2011.
3. The shop drawings were reviewed. All shop drawings have been submitted, reviewed and approved.

4. Troy presented a drawing with the surveyor layout for the work. Wells 301, 305 and 323 need slight relocations due to conflicts in the field. After the meeting, the well locations and adjustments were reviewed in the field.
5. Troy said that Comanco planned to work five days a week and did not anticipate working any Saturdays. Troy said that he would submit a request by e-mail and list the Saturdays they planned to work if weather or other problems delayed the progress requiring Saturday work to meet the schedule.
6. The final pay request was reviewed. Joe Miller gave Ken Barr the signed copies for County payment.
7. Preconstruction Photographs. Comanco gave Joe Miller the photographs on a DVD. Joe Miller will review the photographs and forward two copies to Manatee County.
8. Pipe testing. Air testing of the lateral and header pipes was reviewed. The pipes could be tested in sections before the pipes were connected to the active system.

Meeting Adjourn 2:30 PM

Next Monthly Construction Progress Meetings

DATE: November 15, 2011 Tuesday
TIME: 2 PM to 3 PM
Location: Landfill conference room

Minutes prepared by Joe Miller

RECOVERY DRILLING SERVICES

Site Name	MANATEE COUNTY LANDFILL
Location	TAMPA FLORIDA
Total Wells Drilled	12
Total Days Day Rate	
Contractor	
Driller	TODD

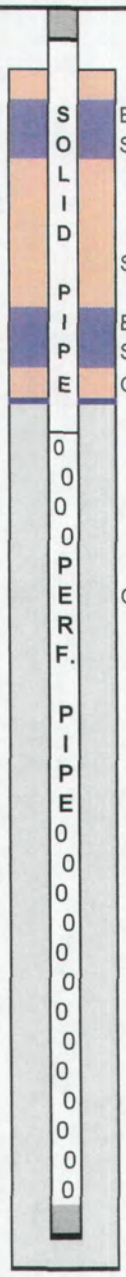
Date Drilled	Well Numbers	Well Depth	Comments
11/13/2011	GW-300	24	
11/12/2011	GW-301	24	
11/11/2011	GW-302	24	
11/12/2011	GW-323	23	
11/12/2011	GW-324	23	
11/12/2011	GW-325	23	
11/12/2011	GW-326	23	
11/11/2011	GW-360	56	
11/11/2011	GW-361	56	
11/10/2011	GW-362	56	
11/10/2011	GW-367	55	
11/11/2011	GW-368	55	
Total Footage		442	

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-300
Location :	TAMPA FL	Coordinates:	511407-1140052
Start Date:	11/13/2011	Surface Elevation:	59
Completed:	11/13/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	24'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-24'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-24'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

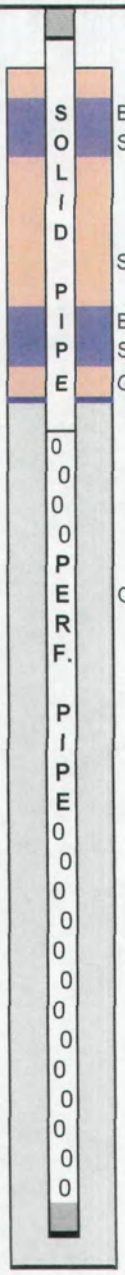
DEPTH	TEMPERATURE
10'	108
20'	111

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-301
Location :	TAMPA FL	Coordinates:	511208-1140053
Start Date:	11/12/2011	Surface Elevation:	59
Completed:	11/12/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	24'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-24'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-24'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

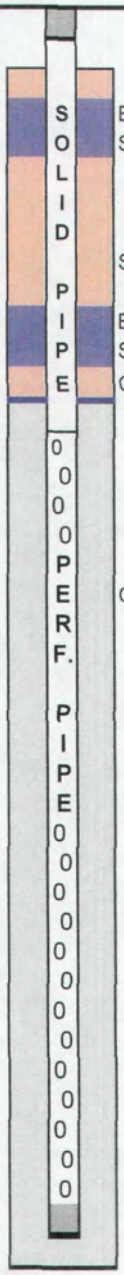
DEPTH	TEMPERATURE
10'	83
20'	80

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-302
Location :	TAMPA FL	Coordinates:	511008-1140054
Start Date:	11/11/2011	Surface Elevation:	59
Completed:	11/11/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	24'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-24'	HH PAPER PLASTIC SOME SOIL 45% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-24'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

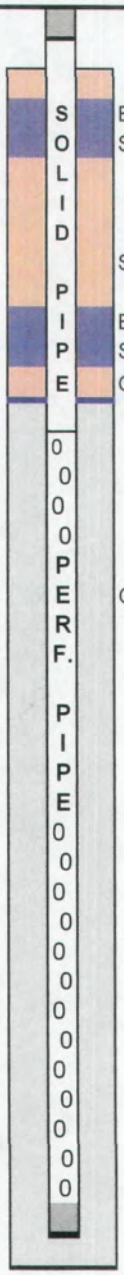
DEPTH	TEMPERATURE
10'	99
20'	100

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-323
Location :	TAMPA FL	Coordinates:	510847-1141188
Start Date:	11/12/2011	Surface Elevation:	57
Completed:	11/12/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	23'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-23'	HH PAPER PLASTIC SOME SOIL 45% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-23'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

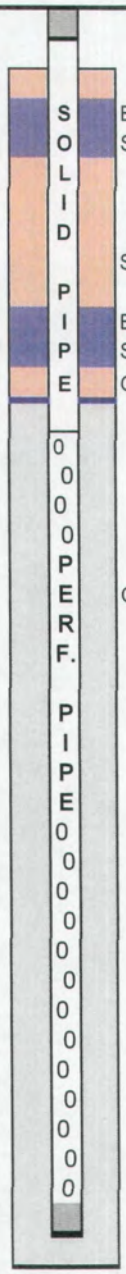
DEPTH	TEMPERATURE
10'	91
20'	95

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-324
Location :	TAMPA FL	Coordinates:	511052-1141225
Start Date:	11/12/2011	Surface Elevation:	57
Completed:	11/12/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	23'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-23'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-23'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

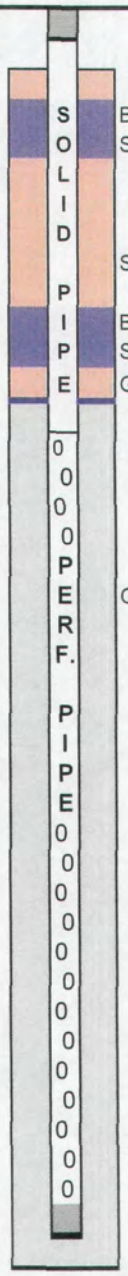
DEPTH	TEMPERATURE
10'	99
20'	109

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-325
Location :	TAMPA FL	Coordinates:	511252-1141223
Start Date:	11/12/2011	Surface Elevation:	57
Completed:	11/12/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	23'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-23'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-23'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

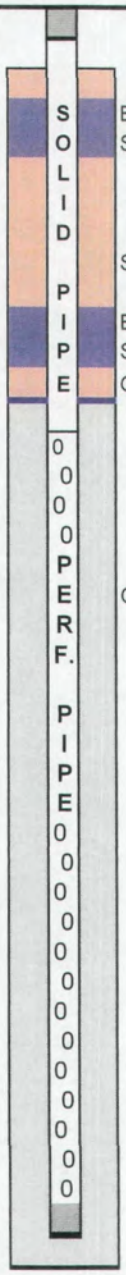
DEPTH	TEMPERATURE
10'	90
20'	94

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-326
Location :	TAMPA FL	Coordinates:	511452-1141221
Start Date:	11/12/2011	Surface Elevation:	57
Completed:	11/12/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	23'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-23'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-23'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

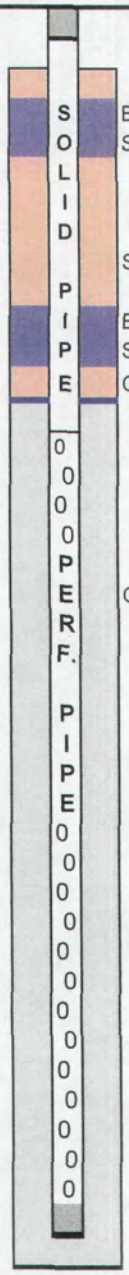
DEPTH	TEMPERATURE
10'	89
20'	97

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-360
Location :	TAMPA FL	Coordinates:	510584-1140298
Start Date:	11/11/2011	Surface Elevation:	98
Completed:	11/11/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	56'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-40'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY
40'-56'	HH PAPER PLASTIC SOME WOOD 50% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	36'
PER. PIPE	19'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-32'
BENTONITE #2	32'-34'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	34'-56'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

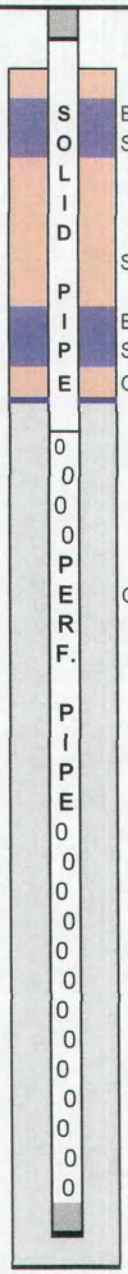
DEPTH	TEMPERATURE
10'	100
20'	99
30'	116
40'	114
50'	112

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-361
Location :	TAMPA FL	Coordinates:	510384-1140297
Start Date:	11/11/2011	Surface Elevation:	98
Completed:	11/11/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	56'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-40'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY
40'-56'	HH PAPER PLASTIC SOME WOOD 50% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	36'
PER. PIPE	19'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-32'
BENTONITE #2	32'-34'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	34'-56'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

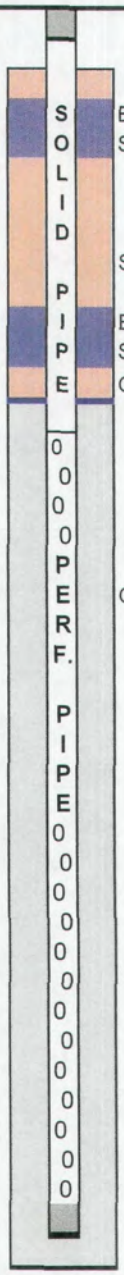
DEPTH	TEMPERATURE
10'	99
20'	101
30'	103
40'	113
50'	117

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-362
Location :	TAMPA FL	Coordinates:	510188-1140297
Start Date:	11/10/2011	Surface Elevation:	98
Completed:	11/10/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	56'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-40'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY
40'-56'	HH PAPER PLASTIC SOME WOOD 50% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	16'
PER. PIPE	8'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-12'
BENTONITE #2	12'-14'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	14'-23'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

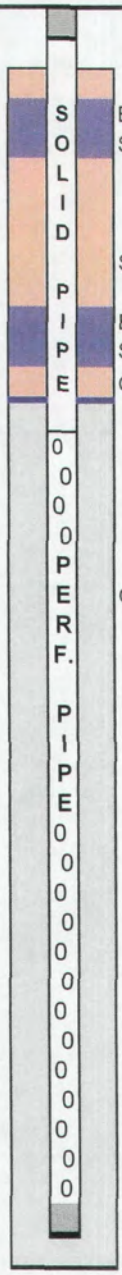
DEPTH	TEMPERATURE
10'	98
20'	100
30'	106
40'	122
50'	118

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-367
Location :	TAMPA FL	Coordinates:	509682-1140958
Start Date:	11/10/2011	Surface Elevation:	97
Completed:	11/10/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	55'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-40'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY
40'-55'	HH PAPER PLASTIC SOME WOOD 50% DECOMP	DRY



BENTONITE SEAL

SOIL BACKFILL

BENTONITE SEAL

GEOTEXTILE RING

GRAVEL PACK

COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	36'
PER. PIPE	19'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-32'
BENTONITE #2	32'-34'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	34'-55'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

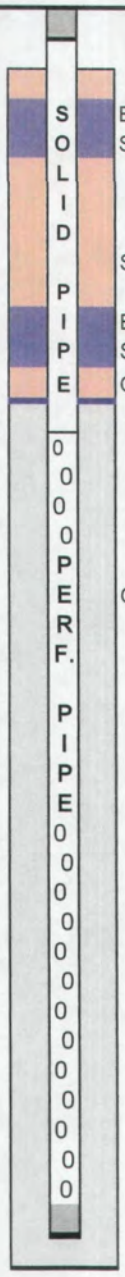
DEPTH	TEMPERATURE
10'	103
20'	113
30'	121
40'	123
50'	129

Recovery Drilling Services

P.O. BOX 53 DUDLEY MA. 01571 508-943-1182

Site Name:	MANATEE COUNTY LANDFILL	Well Number:	GW-368
Location :	TAMPA FL	Coordinates:	509880-1140991
Start Date:	11/11/2011	Surface Elevation:	97
Completed:	11/11/2011	Top of Casing Elevation:	
Contractor:	RECOVERY DRILLING	Boring Diameter:	36"
Rig:	2	Pipe Material Diameter	6"-HDPE
Inspector:		Total Depth Drilled:	55'
Driller:	TODD	Completion:	COMANCO

depth	descriptions	moisture content
0'-4'	SOIL GRASS	
4'-40'	HH PAPER PLASTIC SOME SOIL 35% DECOMP	DRY
40'-55'	HH PAPER PLASTIC SOME WOOD 50% DECOMP	DRY



COMPLETION LOG	
RISER STICK UP	4'
SOLID BELOW	36'
PER. PIPE	19'
BACKFILL	0'-5'
BENTONITE #1	5'-6'
BACKFILL	6'-32'
BENTONITE #2	32'-34'
BACKFILL	NONE
GEOTEXTILE	NONE
GRAVEL PACK	34'-55'

MATERIALS LIST	
TOP CAP	6"-PVC
SOLID PIPE	6"-HDPE
PER. PIPE	6"-HDPE
BOTTOM CAP	6"-HDPE
BENTONITE	PELLETS
BACKFILL	SAND FILL
STONE	1"-2"
GEOTEXTILE	NONE

DEPTH	TEMPERATURE
10'	97
20'	99
30'	100
40'	108
50'	107

MANATEE COUNTY - LENA ROAD

STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM – 11/10/11 - PRE-WELL DRILLING MEETING

LANDFILL GAS WELL LOCATIONS AND DEPTH TABLE

GAS WELL #	EASTING	NORTHING	TOP EL.	BORING	BOTTOM EL.	PERF. LGTH	INITIALS				
300	511,407.49	1,140,052.08	59	24	35	8	BM JS	RGC	CB	AD	TR
301	511,208.22	1,140,053.34	59	24	35	8	BM JS	RGC	CB	AD	TR
302	511,008.23	1,140,054.56	59	24	35	8	BM JS	RGC	CB	AD	TR
323	510,847.32	1,141,188.22	57	23	34	8	BM JS	RGC	CB	AD	TR
324	511,052.51	1,141,225.30	57	23	34	8	BM JS	RGC	CB	AD	TR
325	511,252.55	1,141,223.42	57	23	34	8	BM JS	RGC	CB	AD	TR
326	511,452.61	1,141,221.54	57	23	34	8	BM JS	RGC	CB	AD	TR
360	510,584.95	1,140,298.17	98	56	42	19	BM JS	RGC	CB	AD	TR
361	510,384.67	1,140,297.04	98	56	42	19	BM JS	RGC	CB	AD	TR
362	510,188.68	1,140,297.07	98	56	42	19	BM JS	RGC	CB	AD	TR
367	509,682.25	1,140,958.61	97	55	42	19	BM JS	RGC	CB	AD	TR
368	509,880.42	1,140,991.21	97	55	42	19	BM JS	RGC	CB	AD	TR

MANATEE COUNTY - LENA ROAD -
LANDFILL GAS COLLECTION SYSTEM - 11/10/11 - PRE-WELL DRILLING MEETING

WELL PRE-DRILL MEETING SIGNATURES	REPRESENTED COMPANIES
	COMANCO ENVIRONMENTAL CORP.
	COMANCO ENVIRONMENTAL CORP.
	RECOVERY DRILLING SERVICES
	RECOVERY DRILLING SERVICES
	ATKINS/PBSJ - INSPECTOR
	ATKINS/PBSJ - INSPECTOR
	MANATEE COUNTY REPRESENTATIVE
	MANATEE COUNTY REPRESENTATIVE

DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

FIELD DENSITY TESTING
and SAMPLE PROCTOR

PROJECT:	Lena Rd. Landfill Gas Collection, Stg. III, Phase II
CLIENT:	Manatee County Government
DATE PERFORMED:	11/21/11
DATE REPORTED:	11/30/11
FILE NUMBER:	SAL112802
REPORT NUMBER:	03
PAGE NUMBER:	1 of 4

As requested, in-place field density testing was performed on this date at the above-referenced project site. Below is a general summary of observations and results of the area tested. Attached are individual test results of each location.

General Area Tested: [X] Utilities [ ] Bldg Area [X] Roadway [ ] Other _____
Samples Obtained for Laboratory Testing: Yes
Location of Test: See attached sheets
Number of Tests Performed: 15 Passing _____ Failing
Specifications: 95%/98% (AASHTO T-180)
Generalized Area Passing: See attached sheets Elevations: See attached sheets
Generalized Area Failing: _____ Elevations: _____
Compactive Efforts Observed: [ ] Yes [X] No
Equipment Used: _____
Recompaction observed: [ ] Yes [X] No
Retest this Trip: [ ] Yes [X] No
Person advised of test results: Bill w/Comcanco
Problems Observed: _____

D. Summers/NK
Dale Simmers, Technician

Nicholas T. Korecki
Nicholas T. Korecki, P.E.
Senior Geotechnical Engineer
FL Registration No. 45529

NICHOLAS T. KORECKI
LICENSE
No. 45529
12/1/11
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Tech/NTK/ksk
Copies: (3 originals) Manatee County Government
(1) Email: joseph.miller@atkinsglobal.com

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COMPACTION TEST RESULTS

CLIENT: Manatee County Government PROJECT: Lena Rd. Landfill Gas Collection, Stg. III, Ph. II PAGE 2 OF 4
AREA REPRESENTED: Laterals (Utilities) FILE NO: SAL112802
TESTING APPARATUS: SAND CONE X NUCLEAR DEVICE OTHER REPORT NUMBER: 03
TEST METHOD: ASTM D1556 XX ASTM D6938 DATE OF TEST: 11/21/11
METHOD PERFORMING MOISTURE - DENSITY RELATIONSHIP:

MODIFIED PROCTOR (ASTM D-1557)		AASHTO T-180	X
STANDARD PROCTOR (ASTM D-698)		AASHTO T-99	

TEST NO.	LOCATION	ELEVATION	MATERIAL DESCRIPTION	MOISTURE CONTENT%	DRY DENSITY (PCF)	LAB MAX DENSITY (PCF)	% OF LAB MAXIMUM DENSITY
95% T-180							
1	6' West of #326	+1'	Grey to Brown Slightly Silty Fine Sand w/ Roots & Rock	11.3	110.9	116.2	95.4
2	6' West of #326	Final Grade	"	8.6	111.2	116.2	95.7
3	6' West of #325	+1'	"	12.0	110.5	116.2	95.1
4	6' West of #325	Final Grade	"	7.9	111.9	116.2	96.3
5	6' West of #324	+1'	"	12.6	110.6	116.2	95.2
6	6' West of #324	Final Grade	"	7.5	112.4	116.2	96.7
7	6' West of #323	+1'	"	12.2	111.7	116.2	96.1
8	6' West of #323	Final Grade	"	8.9	112.7	116.2	97.0
9	10' West of #326	+1'	"	12.4	111.3	116.2	95.8
10	15' West of #326	Final Grade	"	8.0	112.5	116.2	96.8
98% T-180							
11	40' East of #324	+1'	Grey to Brown Slightly Silty Fine Sand w/ Roots & Rock	11.2	114.2	116.2	98.3
12	42' East of #324	+2'	"	8.6	113.9	116.2	98.0
13	45' East of #324 Shell Dr. Area	Base	Grey Silty Sand w/Shell & Rock	7.4	126.4	128.3	98.5

TEST NO.	LOCATION	ELEVATION	MATERIAL DESCRIPTION	MOISTURE CONTENT%	DRY DENSITY (PCF)	LAB MAX DENSITY (PCF)	% OF LAB MAXIMUM DENSITY
14	47' East of #324 Shell Dr. Area	Base	Grey Silty Sand w/Shell & Rock	6.6	126.2	128.3	98.4
15	50' East of #324 Shell Dr. Area	Base	"	4.9	126.0	128.3	98.2

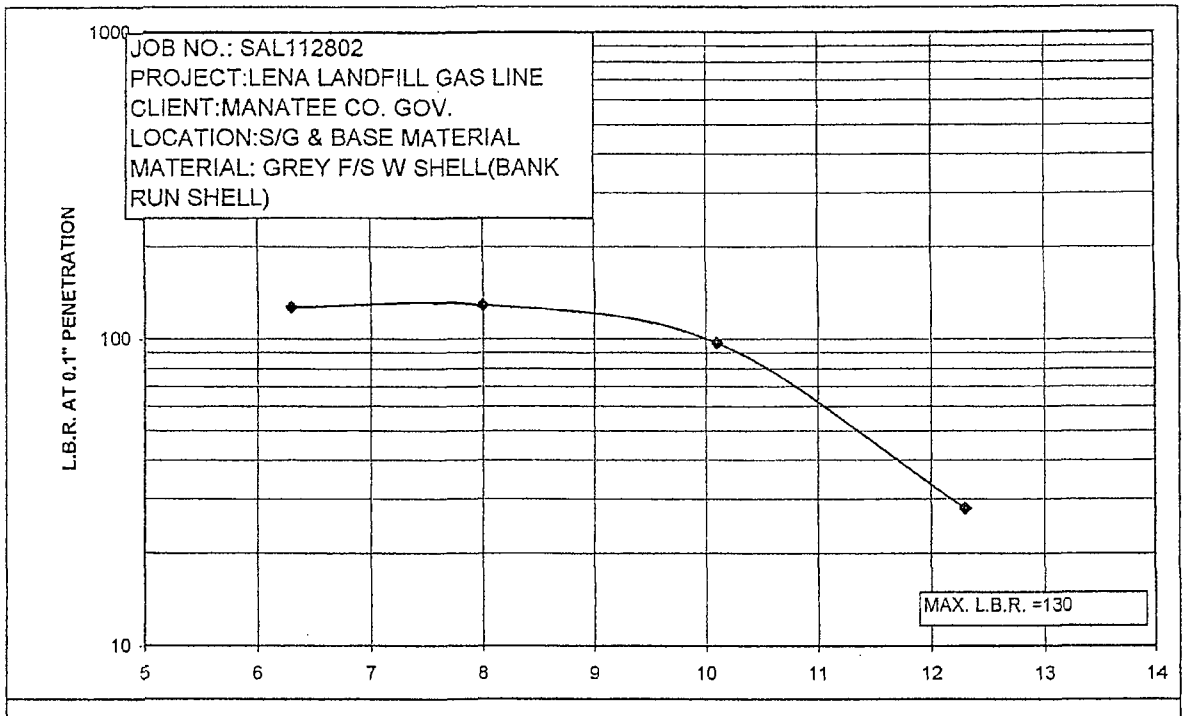
PERCENT OF LABORATORY MAXIMUM DENSITY REQUIRED % COMPACTION: 95% Modified Proctor (AASHTO T-180)	FIELD TEST PERFORMED BY: DS

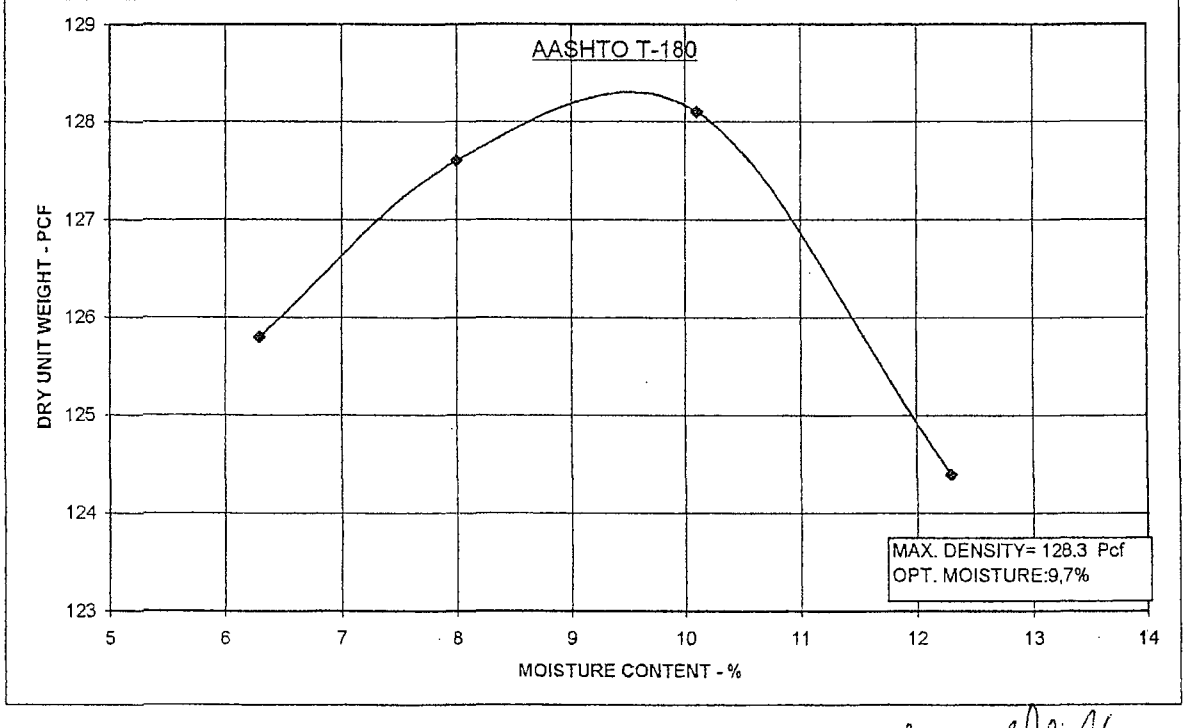
Test No(s): All Meet required specifications of compaction.
Test No(s): _____ Failed to meet required specifications of compaction.

BY: Robert L Shaff
CONSTRUCTION SERVICES MANAGER

DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

LIMEROCK BEARING RATIO





By: _____
Construction Services Manager

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DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

FIELD DENSITY TESTING
and SAMPLE PROCTOR

PROJECT:	Lena Rd. Landfill Gas Collection, Stg. III, Phase II
CLIENT:	Manatee County Government
DATE PERFORMED:	11/09/11
DATE REPORTED:	11/11/11
FILE NUMBER:	SAL112802
REPORT NUMBER:	02
PAGE NUMBER:	1 of 5

As requested, in-place field density testing was performed on this date at the above-referenced project site. Below is a general summary of observations and results of the area tested. Attached are individual test results of each location.

General Area Tested: [X] Utilities [ ] Bldg Area [ ] Roadway [ ] Other _____
Samples Obtained for Laboratory Testing: Yes
Location of Test: See attached sheets
Number of Tests Performed: 19 Passing _____ Failing
Specifications: 95% (AASHTO T-180)
Generalized Area Passing: See attached sheets Elevations: See attached sheets
Generalized Area Failing: _____ Elevations: _____
Compactive Efforts Observed: [ ] Yes [X] No
Equipment Used: _____
Recompaction observed: [ ] Yes [X] No
Retest this Trip: [ ] Yes [X] No
Person advised of test results: Pedro w/Comcanco
Problems Observed: _____

D. Simmers/NK
Dale Simmers, Technician

Nicholas T. Korecki
Nicholas T. Korecki, P.E.
Senior Geotechnical Engineer
FL Registration No. 45529

NICHOLAS T. KORECKI
LICENSE
No. 45529
11.14.11
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Tech/NTK/ksk
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COMPACTION TEST RESULTS

CLIENT: Manatee County Government PROJECT: Lena Rd. Landfill Gas Collection, Stg. III, Ph. II
AREA REPRESENTED: Laterals (Utilities) FILE NO: SAL112802
TESTING APPARATUS: ____SAND CONE X NUCLEAR DEVICE ____OTHER REPORT NUMBER: 02
TEST METHOD: ____ASTM D1556 XX ASTM D6938 DATE OF TEST: 11/09/11
METHOD PERFORMING MOISTURE - DENSITY RELATIONSHIP:

MODIFIED PROCTOR (ASTM D-1557)		AASHTO T-180	X
STANDARD PROCTOR (ASTM D-698)		AASHTO T-99	

TEST NO.	LOCATION	ELEVATION	MATERIAL DESCRIPTION	MOISTURE CONTENT%	DRY DENSITY (PCF)	LAB MAX DENSITY (PCF)	% OF LAB MAXIMUM DENSITY
1	6' West of #360	+1'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	13.1	114.6	116.2	98.6
2	6' West of #360	Final Grade	Light Brown Slightly Silty Fine Sand	6.3	107.8	109.4	98.5
3	6' West of #300	+1'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	14.5	115.1	116.2	99.1
4	6' West of #300	Final Grade	"	7.1	114.8	116.2	98.8
5	6' West of #301	+1'	"	13.8	114.6	116.2	98.6
6	6' West of #301	Final Grade	"	7.5	114.3	116.2	98.4
7	6' West of #302	+1'	"	12.2	115.7	116.2	99.6
8	6' West of #302	Final Grade	"	8.8	116.6	116.2	100.3
9	6' West of #368	+1'	"	13.1	114.3	116.2	98.4
10	6' West of #368	Final Grade	Light Brown Slightly Silty Fine Sand	9.0	107.8	109.4	98.5
11	6' West of #367	+1'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	12.4	115.9	116.2	99.7
12	6' West of #367	Final Grade	Light Brown Slightly Silty Fine Sand	7.2	107.8	109.4	98.5
13	6' West of #362	+1'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	14.0	115.3	116.2	99.2
14	6' West of #362	Final Grade	Light Brown Slightly Silty Fine Sand	7.5	107.6	109.4	98.4
15	6' West of #361	+1'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	13.5	114.4	116.2	98.5
16	6' West of #361	Final Grade	Light Brown Slightly Silty Fine Sand	6.5	109.4	109.4	100.0
17	25' West of #300	-2'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	13.1	115.7	116.2	99.6

TEST NO.	LOCATION	ELEVATION	MATERIAL DESCRIPTION	MOISTURE CONTENT%	DRY DENSITY (PCF)	LAB MAX DENSITY (PCF)	% OF LAB MAXIMUM DENSITY
18	40' West of #300	-1'	Grey to Brown Slightly Silty Fine Sand w/Trace Roots & Rock	9.6	116.8	116.2	100.5
19	70' West of #300	Final Grade	"	7.4	116.0	116.2	99.8

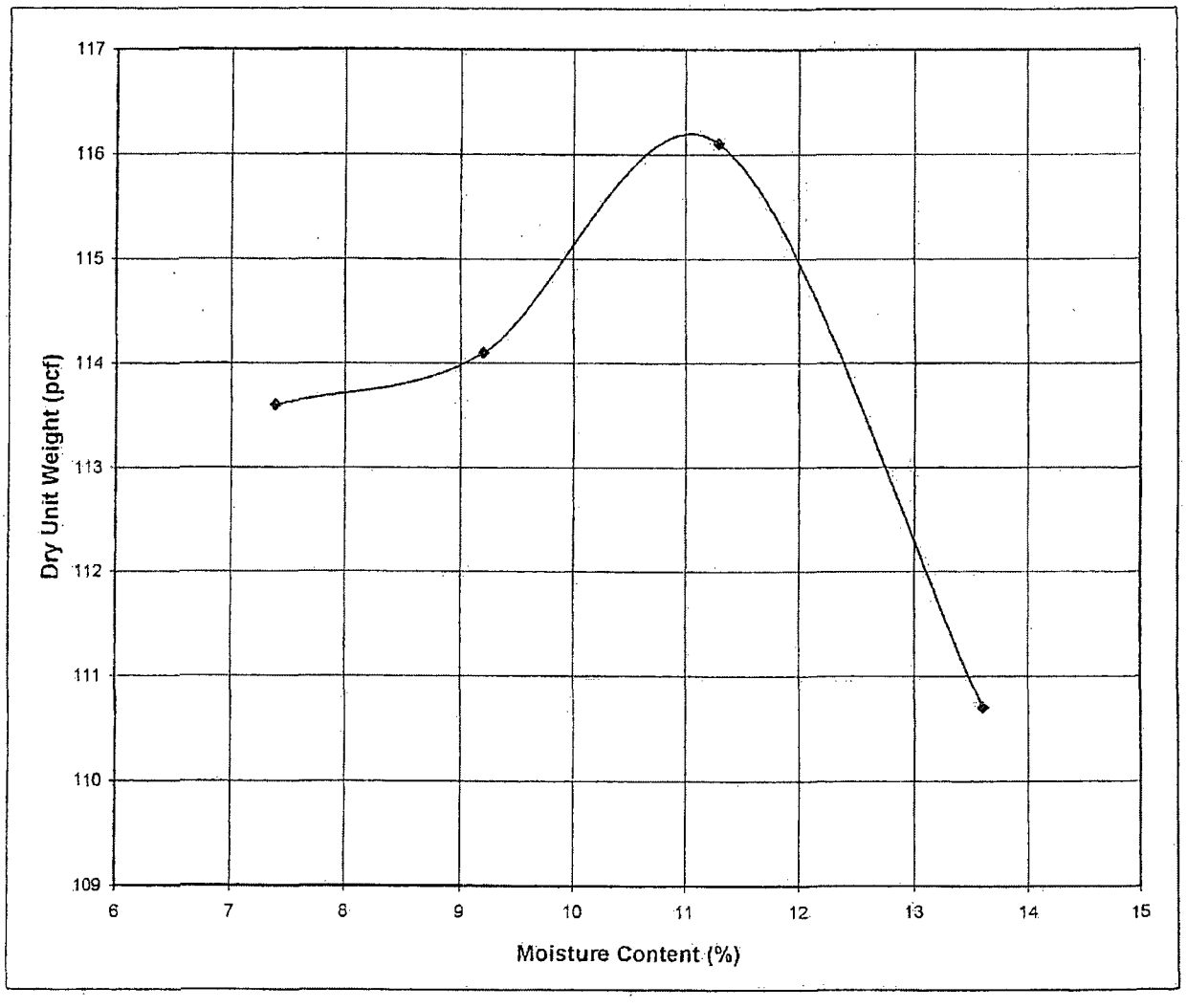
PERCENT OF LABORATORY MAXIMUM DENSITY REQUIRED % COMPACTION: 95% Modified Proctor (AASHTO T-180)	FIELD TEST PERFORMED BY: DS

Test No(s): All Meet required specifications of compaction.
Test No(s): _____ Failed to meet required specifications of compaction.

BY: _____
CONSTRUCTION SERVICES MANAGER

SOIL COMPACTION CURVE SHEET

File No: SAL112802 Report No. 02 Date: 11/10/2011
Client : MANATEE COUNTY GOVERNMENT
Project: LENA RD. LANDFILL GAS COLLECTION STAGE 3 PHASE 2
Location: GAS WELL #'S 367,360,302
Material: GREY TO BROWN SLIGHTLY SILTY F/S WITH ROOTS AND ROCK
Method of Compaction: ASTM D1557/AASHTO T-180 Tested By: B.I.I41077258021



Maximum Dry Density: 116.2 pcf Optimum Moisture Content: 11.1 %

By: Robert L Sliff
TIN# I41077258021

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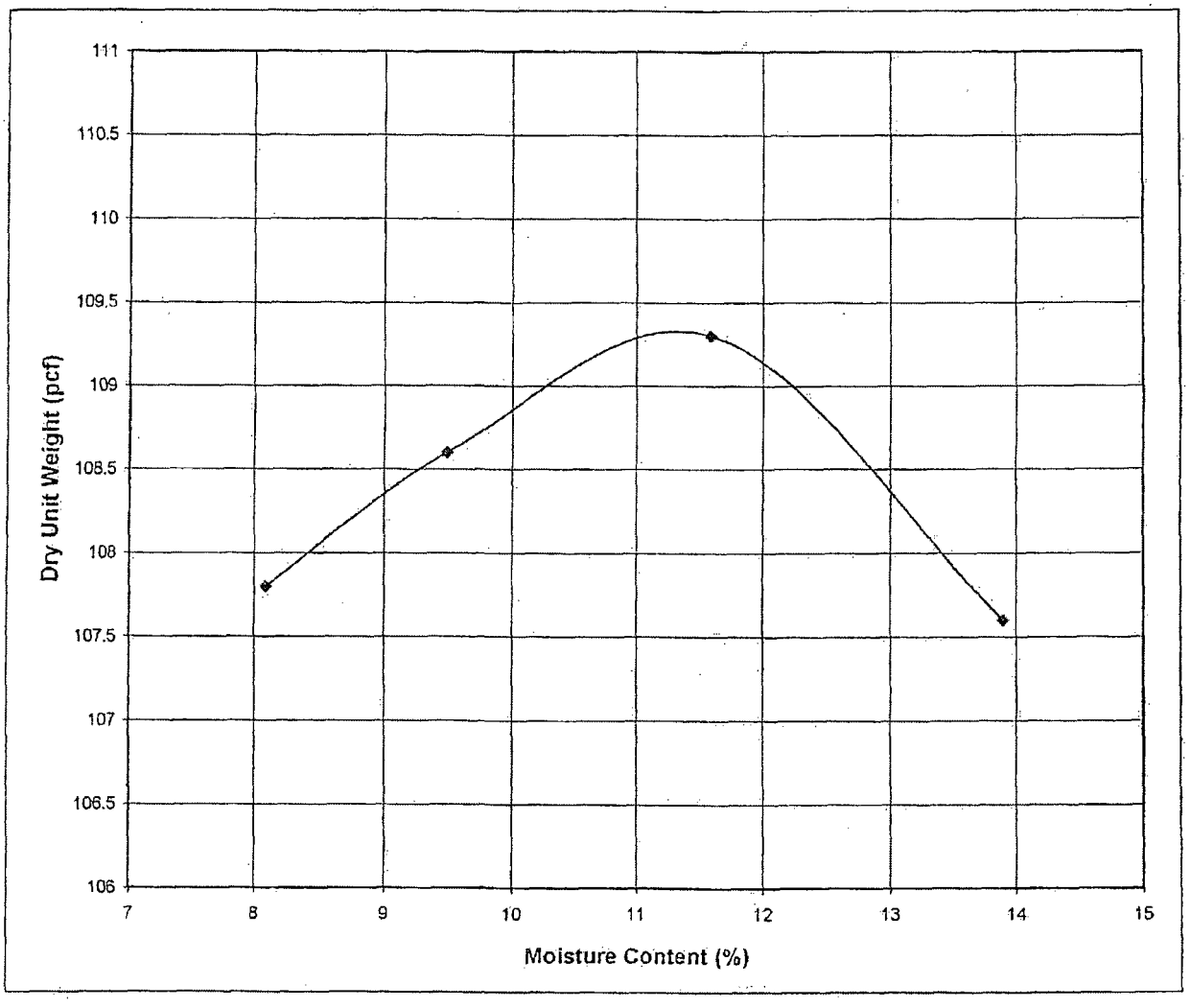
SOIL COMPACTION CURVE SHEET

File No: SAL112802 **Report No.** 02 **Date:** 11/10/2011
Client : MANATEE COUNTY GOVERNMENT
Project: LENA RD. LANDFILL GAS COLLECTION STAGE 3 PHASE 2
Location: STOCKPILE OF IMPORT FILL
Material: LT. BROWN TO BROWN SLIGHTLY SILTY FINE SAND
Method of Compaction: ASTM D1557/AASHTO T-180 **Tested By:** B.I.I41077258021



Maximum Dry Density: 109.4 pcf **Optimum Moisture Content:** 11.3 %

By: _____
TIN# I41077258021

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COMANCO

SUBMITTAL TRANSMITTAL

Submittal Description: **Trenching, Bedding & Backfill Pipe**

Submittal No: **02221-002**

Spec Section: **02221**

ENGINEER: Joe Miller	Routing	Sent	Received
OWNER: MANATEE COUNTY PURCHASING	Contractor/CM		
PROJECT: 07114939 MANATEE COUNTY LENA RD	CM/Engineer	9/22/2011	
	Engineer/CM		
CONTRACTOR: COMANCO Environmental Corp.	CM/Contractor		

We are sending you

[X] Attached

[X] Submittals for review and comment

[ ] Under separate cover via _____

[ ] Product data for information only

Remarks: _____

Item	Copies	Date	Section No.	Description	Review Action	Reviewer Initials	Review comments attached
1	1	9/22/2011	2.01A.1	#57 Crushed Granite Sample			

Contractor

Certify either A or B:

[X] A. We have verified that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work, specified (no exceptions).

[ ] B. We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

No.	Deviation

Certified by: [signature] 9/21/11

Thomas Raab, Proj Eng

SUBMITTAL REVIEW BY ENGINEER

[X] No exceptions taken

[ ] Make corrections noted and resubmit

[ ] Make corrections noted. Do not resubmit

[ ] Rejected. Resubmit in accordance with contract documents.

BY: Joe Miller

DATE: 10/14/11

Engineer Comments: _____

DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

SAMPLE AGGREGATE

PROJECT:	Lena Rd. Landfill Gas Collection, Stg 111, Phase 11
CLIENT:	Manatee County Government
DATE PERFORMED:	09/30/11
DATE REPORTED:	10/04/11
FILE NUMBER:	SAL112802
REPORT NUMBER:	01
PAGE NUMBER:	1 of 2

As requested by the project engineer, Mr. Joe Miller with Atkins, samples of the granite aggregates were obtained from the general contractor on this date.

Samples of #4 granite rock and #57 granite rock sampled and bagged by the contractor were returned to our laboratory and an unwashed sieve analysis was performed on each sample. Results of the test are attached.

Robert L. Iliff
Sarasota Construction Services Manager

Nicholas T. Korecki, P.E.
Senior Geotechnical Engineer
FL Registration No. 45529

NICHOLAS T. KORECKI
LICENSE
No. 45529
10-5-11
STATE OF FLORIDA
PROFESSIONAL ENGINEER

RLI/NTK/ksk
Copies submitted: (3) Manatee County Government/PWD/Proj. Management Division

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PROJECT: Lena Rd. Landfill Gas Collection, Stg 111, Phase 11
CLIENT: Manatee County Government

GRADATION RESULTS % PASSING			
Sieve Size	Sample Number: #4 Stone *Original Sample Weight = 50.8 lbs*	Sieve Size	Sample Number: #57 Stone *Original Sample Weight = 56.30 lbs*
2"	100	1.5"	99.7
1.5"	99.6	1"	97.4
1"	50.7	.5"	38.1
¾"	24.3	#4	5
⅜"	8.1	#8	3

COMANCO

SUBMITTAL TRANSMITTAL

Submittal Description: **Trenching, Bedding & Backfill Pipe**

Submittal No: **02221-001**

Spec Section: **02221**

ENGINEER: Joe Miller	Routing	Sent	Received
OWNER: MANATEE COUNTY PURCHASING	Contractor/CM		
PROJECT: 07114939 MANATEE COUNTY LENA RD	CM/Engineer	9/22/2011	
	Engineer/CM		
CONTRACTOR: COMANCO Environmental Corp.	CM/Contractor		

We are sending you

[X] Attached

[X] Submittals for review and comment

[ ] Under separate cover via _____

[ ] Product data for information only

Remarks: _____

Item	Copies	Date	Section No.	Description	Review Action	Reviewer Initials	Review comments attached
1	1	9/22/2011	2.01A.1	#4 Crushed Granite Sample			

Contractor

Certify either A or B:

[X] A. We have verified that the material or equipment contained in this submittal meets all the requirements, including coordination with all related work, specified (no exceptions).

[ ] B. We have verified that the material or equipment contained in this submittal meets all the requirements specified except for the attached deviations.

No.	Deviation

Certified by: [signature] 9/21/11

Thomas Raab, Proj Eng

SUBMITTAL REVIEW BY ENGINEER

[X] No exceptions taken

[ ] Make corrections noted and resubmit

[ ] Make corrections noted. Do not resubmit

[ ] Rejected. Resubmit in accordance with contract documents

BY: Joe Miller

DATE: 10/14/11

Engineer Comments: _____

DRIGGERS ENGINEERING SERVICES INCORPORATED
Geotechnical Engineering & Construction Materials Testing

SAMPLE AGGREGATE

PROJECT:	Lena Rd. Landfill Gas Collection, Stg 111, Phase 11
CLIENT:	Manatee County Government
DATE PERFORMED:	09/30/11
DATE REPORTED:	10/04/11
FILE NUMBER:	SAL112802
REPORT NUMBER:	01
PAGE NUMBER:	1 of 2

As requested by the project engineer, Mr. Joe Miller with Atkins, samples of the granite aggregates were obtained from the general contractor on this date.

Samples of #4 granite rock and #57 granite rock sampled and bagged by the contractor were returned to our laboratory and an unwashed sieve analysis was performed on each sample. Results of the test are attached.

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Sarasota Construction Services Manager

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PROJECT: Lena Rd. Landfill Gas Collection, Stg 111, Phase 11
CLIENT: Manatee County Government

GRADATION RESULTS % PASSING			
Sieve Size	Sample Number: #4 Stone *Original Sample Weight = 50.8 lbs*	Sieve Size	Sample Number: #57 Stone *Original Sample Weight = 56.30 lbs*
2"	100	1.5"	99.7
1.5"	99.6	1"	97.4
1"	50.7	.5"	38.1
¾"	24.3	#4	5
⅜"	8.1	#8	3

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	10/17/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S **M** T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On site at 8:30. Comanco was already on site.

One truck load of HDPE pipe was delivered today by 8:30 a.m.

Comanco held their safety meeting in the morning

Comanco set up their staging area at the top of Stage III landfill on the west portion.

Comanco begn welding the 8" HDPE pipe. 6-8" HDPE pipes were welded for a total length of 240' of welded pipe.

Shut down at 5:15 a.m.

DELIVERY:

One truck load of 8" and 6" HDPE pipes. There were (4)-6" HDPE perforated pipes and (13)-6" HDPE solid wall pipe for a total of (17)-6" pipe

There was also (40)-8" solid wall HDPE pipes and a box of fittings (flanges and tees)

EQUIPMENT:

DOZERS:		LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:		DUMP TRUCK:		FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	1
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	10/18/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M **T** W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On site at 7:30.

Comanco welded 16 HDPE pipes for approximately 640 feet.

Progress meeting was held at 2:00 p.m. at the Administration building

Started raining at approximately 3:00 p.m.

Comanco shut down at approximately 3:30 p.m.

Shut down at 5:15 a.m.

Comanco Personnel: 1-Superintendent; 5- technician

DELIVERY:

No deliveries today

EQUIPMENT:

DOZERS:		LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:		DUMP TRUCK:		FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	1
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	10/19/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T **W** TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	dry **moderate** humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On site at 8:00 a.m.

Comanco welded 14 HDPE pipes for approximately 560 feet.

Four end flanges were welded to the 18" HDPE pipes

Started raining at approximately 3:00 p.m.

Comanco shut down at approximately 3:30 p.m.

Shut down at 5:15 a.m.

Comanco Personnel: 6-technician.

DELIVERY:

Excavator was delivered today. Also a dozer was delivered today

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:		FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	10/20/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W **TH** F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On site at 8:00 a.m.

Comanco welding 18" HDPE header pipe.

Shut down 4:30 p.m.

Comanco Personnel: 6-technician.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:		FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	10/21/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W TH **F** S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

No Work today.

Comanco Personnel: 6-technician.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:		FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	10/24/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S **M** T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

Comanco welded 18" HDPE header pipes.

Comanco welded flange at ends of 18" HDPE header pipe.

Fitting delivered today.

Comanco Personnel: 6-technician.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:		FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

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ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	10/25/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M **T** W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:45 a.m.

Stockpilling clean fill on top of Stage III area.

Comanco welding flanges to 8" HDPE lateral pipes.

Welding tees and risers to lateral pipes. 8" x 4" reducer welded to end of risers.

Exploratory excavation on GW-340 and GW-338 tie-in connection.

Welded risers and reducers to laterals connecting GW-340 to GW-367 and GW-338 to GW-368.

Shut down at 5:00 p.m.

Comanco Personnel: 7-technician and Superintendent.

DELIVERY:

1- Crawler carrier dump truck

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	1	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

Welding 8" HDPE Lateral Pipes.

Welding 8" HDPE Flanges.

6" HDPE Well Pipes.

Air Testing 8" Lateral Pipe and Riser Connecting Wells GW-340 toGW-360.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	10/26/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T **W** TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:00 a.m.

Comanco started excavating lateral pipe trench from existing GW-340 to proposed GW-367.

10:18 a.m. Air tested lateral and riser connection GW-367 to GW-340. Air tested for one hour and test passed.

Welding tees and risers to lateral pipes. 8" x 4" reducer welded to end of risers.

11:10 a.m. Welding end cap to GW-368 riser and installed pressure gauge to air test the pipe. Air tested for one hours and test passed.

11:38 a.m. Air tested lateral and riser between GW-338 to GW-368.

Approximately 85% of the lateral pipe trench between GW-338 to GW-368 was completed today.

Comanco had delivered another crawler carrier today.

Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

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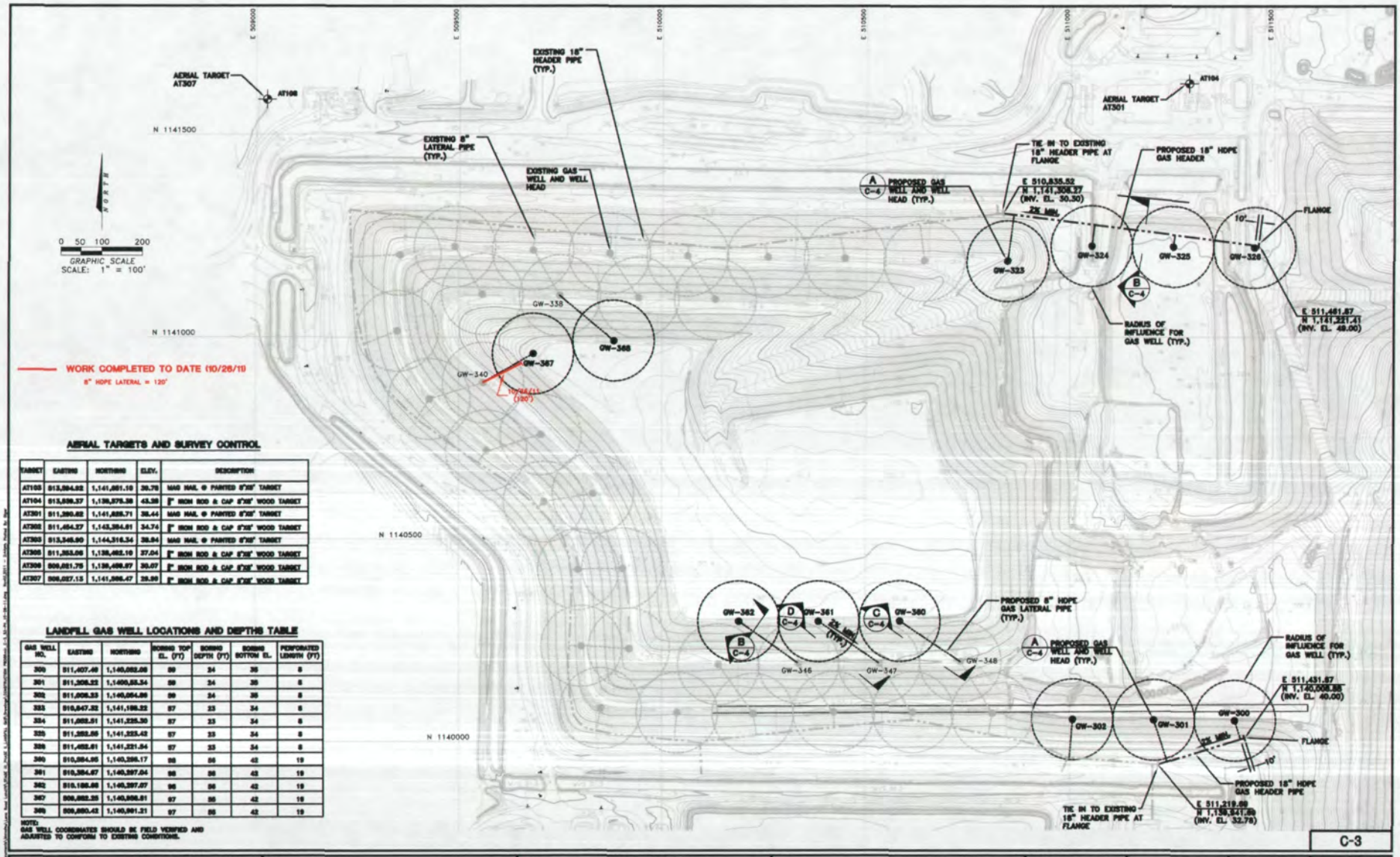

AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT106	513,594.92	1,141,601.10	39.76	MAG NAIL @ PAINTED 6"X6" TARGET
AT104	513,599.37	1,139,979.39	43.39	[illegible]" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,280.62	1,141,629.71	38.44	MAG NAIL @ PAINTED 6"X6" TARGET
AT302	511,464.27	1,143,354.61	34.74	[illegible]" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,346.90	1,144,316.34	38.94	MAG NAIL @ PAINTED 6"X6" TARGET
AT305	511,353.06	1,138,462.10	37.04	[illegible]" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	509,021.75	1,139,498.07	30.07	[illegible]" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	509,027.15	1,141,986.47	28.90	[illegible]" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.40	1,140,002.08	59	24	35	8
301	511,305.22	1,140,055.34	59	24	35	8
302	511,005.33	1,140,054.80	59	24	35	8
323	510,847.32	1,141,198.22	57	23	34	8
324	511,052.51	1,141,225.30	57	23	34	8
325	511,252.80	1,141,225.42	57	23	34	8
326	511,452.61	1,141,221.54	57	23	34	8
340	510,304.05	1,140,295.17	56	56	42	19
361	510,304.67	1,140,397.04	56	56	42	19
362	510,106.60	1,140,397.07	56	56	42	19
367	509,902.35	1,140,506.61	57	56	42	19
368	509,900.42	1,140,901.31	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

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Tampa, FL 33607
FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

Excavating Lateral Pipe Trench from GW-340 to GW-367.

Placing Rock Bedding in Lateral Pipe Trench from GW-340 to GW-367.

Installing 8" HDPE Lateral Pipe from GW-340 to GW-367.

8" HDPE Lateral Pipe Tie-In Connection between GW-340 to GW-367.

ATKINS
North America

SHEET 1 OF 1

10/27/11

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	~~11/3/11~~
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W **TH** F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:10 a.m.

8:15 a.m. Comanco setting the south 18" HDPE Header pipe in place to mark stub-outs.

8:55 a.m. Comanco started excavation of the south 18" HDPE Header pipe trench from existing tie-in and proceeding east.

10:30 a.m. Started placing pipe gravel bedding in the Header pipe trench.

2:57 p.m. Completed Header pipe trench excavation.

3:30 p.m. Started excavating lateral pipe trench that connects GW-301 to Header pipe.

4:15 p.m. Welded an 8" HDPE saddle to the 18" HDPE Header pipe to connect lateral from GW-302.

Shut down @ 5:30 p.m.

Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III PHASE II GAS COLLECTION SYSTEM EXPANSIC	DATE:	10/28/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W TH **F** S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:30 a.m.

7:30 a.m. Comanco resumed excavation of lateral pipe trench between GW-338 to GW-368 top section.

Welding 8" HDPE riser to lateral pipe.

10:00 a.m. Completed installation of 8" HDPE lateral pipe between GW-338 to GW-368. Started backfilling and compacting trench.

9:30 Ken on site today to discuss about draft pay application #2.

10:10 a.m. Welding riser to lateral between GW-346 to GW-346.

12:30 p.m. Shut down due to rain.

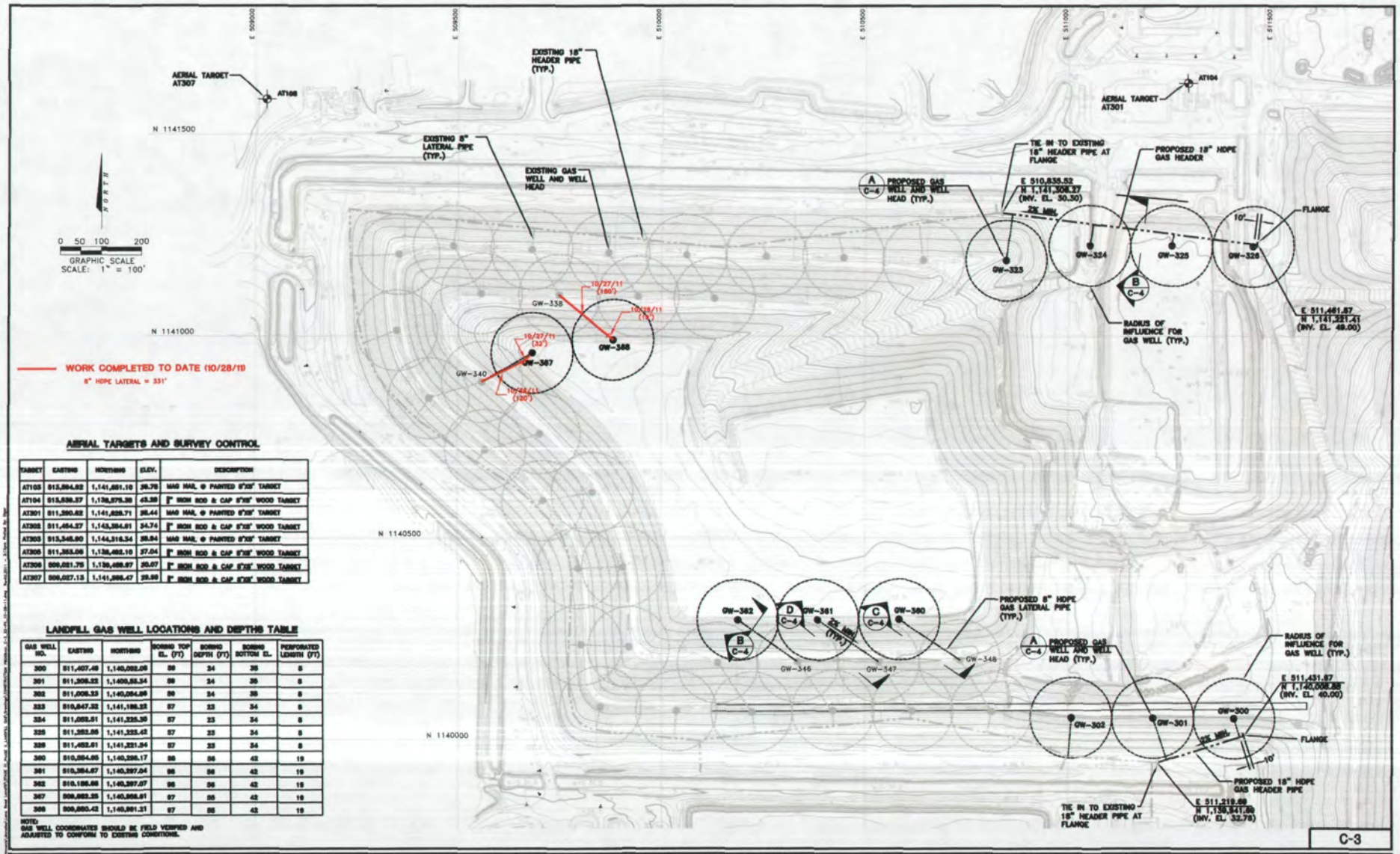
Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT105	513,594.92	1,141,691.10	36.78	MAG NAIL, @ PAINTED 8"X8" TARGET
AT104	513,530.37	1,139,575.30	43.38	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT301	511,280.42	1,141,625.71	36.44	MAG NAIL, @ PAINTED 8"X8" TARGET
AT302	511,454.27	1,143,394.61	34.74	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT303	513,345.80	1,144,516.34	38.94	MAG NAIL, @ PAINTED 8"X8" TARGET
AT305	511,353.06	1,138,462.10	37.04	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT306	509,021.79	1,139,469.97	30.07	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT307	509,027.13	1,141,866.47	29.98	5" IRON ROD & CAP 8"X8" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.40	1,140,002.06	59	24	35	5
301	511,306.22	1,140,05.54	59	24	35	5
302	511,006.33	1,140,054.99	59	24	35	5
323	510,847.32	1,141,188.22	57	23	34	5
324	511,053.51	1,141,325.30	57	23	34	5
325	511,252.55	1,141,325.42	57	23	34	5
326	511,452.61	1,141,321.54	57	23	34	5
360	510,304.05	1,140,395.17	56	56	42	19
361	510,304.67	1,140,397.04	56	56	42	19
362	510,105.68	1,140,397.07	56	56	42	19
367	509,862.35	1,140,868.61	57	55	42	19
368	509,660.42	1,140,901.31	57	55	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
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CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JUL 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017967
DRAWN ROC
DESIGN ROC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

ATKINS
North America

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	10/31/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S **M** T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:22 a.m.

Light rain until 9:10 a.m.

Air tested lateral pipe and raiser between GW-362 and GW-346

9:20 a.m. Started blading lateral pipe trench between GW-346 to GW-362 with a dozer.

9:25 a.m. Started excavating lateral pipe trench from GW-346 to GW-362.

Hauling gravel from stockpile area to top of Stage III.

2:30 p.m. Installed 8" HDPE lateral pipe in trench from GW-346 to GW-362.

1:50 p.m. Air tested 8" lateral pipe and raiser form GW-347 to GW-361. Air tested for one hour and passed.

4:30 p.m. Completed installation of 8" HDPE lateral between GW-346 and GW-362.

Shut down at 5:22 p.m.

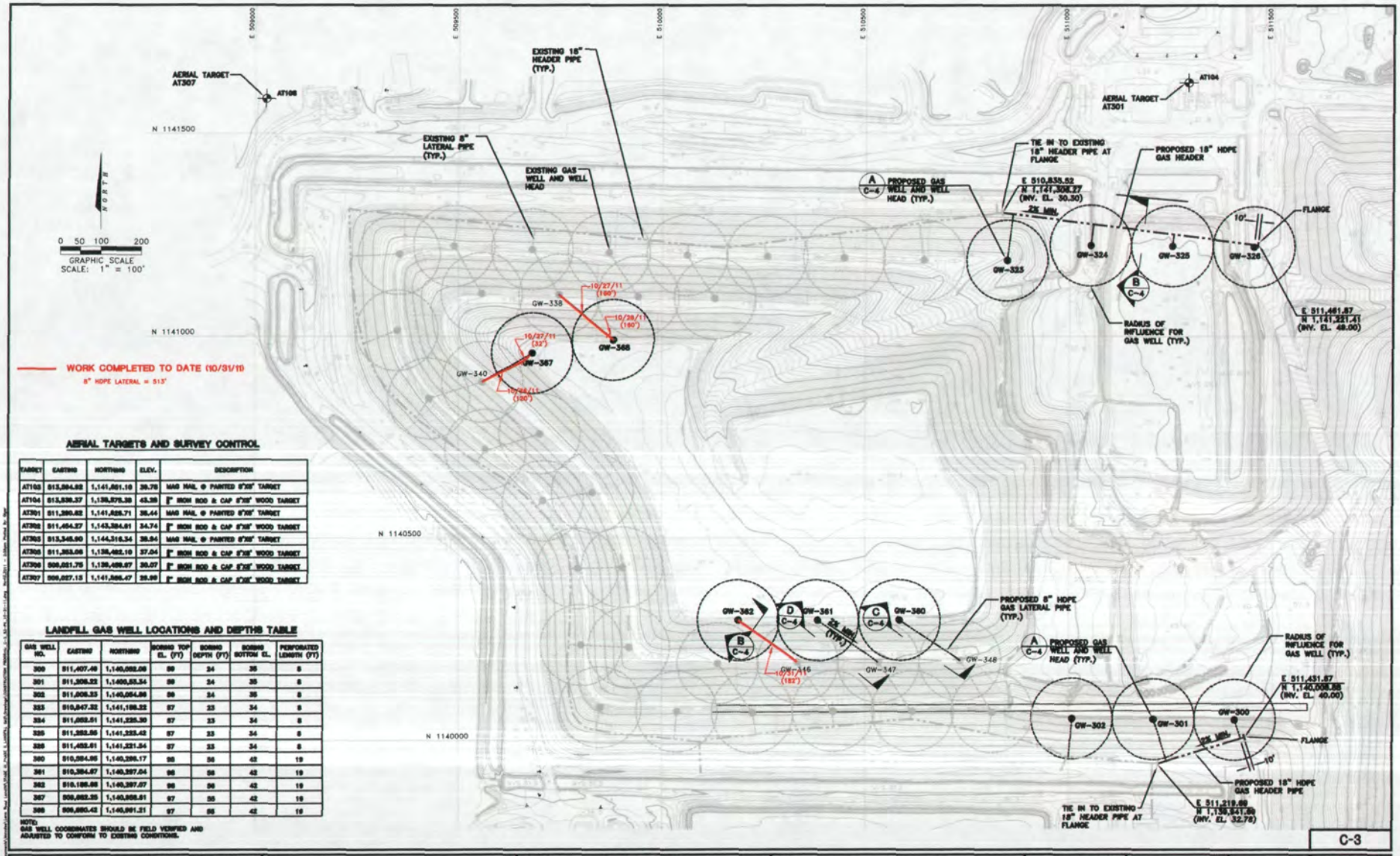
Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.62	1,141,651.10	39.78	MAG NAIL @ PAINTED 8"X8" TARGET
AT104	513,530.37	1,139,979.30	43.39	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT301	511,290.62	1,141,625.71	38.44	MAG NAIL @ PAINTED 8"X8" TARGET
AT302	511,464.27	1,143,384.61	34.74	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT303	513,545.90	1,144,316.34	38.94	MAG NAIL @ PAINTED 8"X8" TARGET
AT305	511,353.06	1,139,492.10	37.04	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT306	506,051.79	1,139,489.97	30.07	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT307	506,027.13	1,141,606.47	29.99	1" IRON ROD & CAP 8"X8" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,982.08	59	24	35	6
301	511,308.22	1,140,953.34	59	24	35	6
302	511,205.33	1,140,954.86	59	24	35	6
323	510,847.32	1,141,108.32	57	23	34	6
324	511,052.51	1,141,225.30	57	23	34	6
325	511,252.56	1,141,223.42	57	23	34	6
326	511,452.61	1,141,221.54	57	23	34	6
360	510,594.66	1,140,296.17	56	56	42	19
361	510,394.67	1,140,297.04	56	56	42	19
362	510,195.68	1,140,297.07	56	56	42	19
367	506,062.35	1,140,505.51	57	55	42	19
368	506,062.42	1,140,091.21	57	55	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

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1500 West Cypress Street Suite 200
Tampa, FL 33601
FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

Air testing Lateral and Raiser Connecting GW-346 to GW-362.

Installing 8" HDPE Lateral Pipe in Trench between GW-346 to GW-362.

8" HDPE Lateral Pipe Tie-In Connection between GW-346 to GW-362.

Backfilling Lateral Pipe in Trench between GW-346 to GW-362.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/1/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M **T** W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:50 a.m.

7:50 a.m. Excavating lateral pipe trench from existing GW-347 to GW-361.

7:50 a.m. Welding end flange on 8" HDPE later pipe between GW-348 to GW-360 to conduct air test.

Air tested 8" lateral pipe and raiser between GW-348 and GW-360. Air tested for one hour and passed.

Completed final grading lateral trench between GW-346 and GW-362.

4:59 p.m. Completed installation of 8" HDPE lateral pipe between GW-347 and GW-361.

Shut down 5:15 p.m.

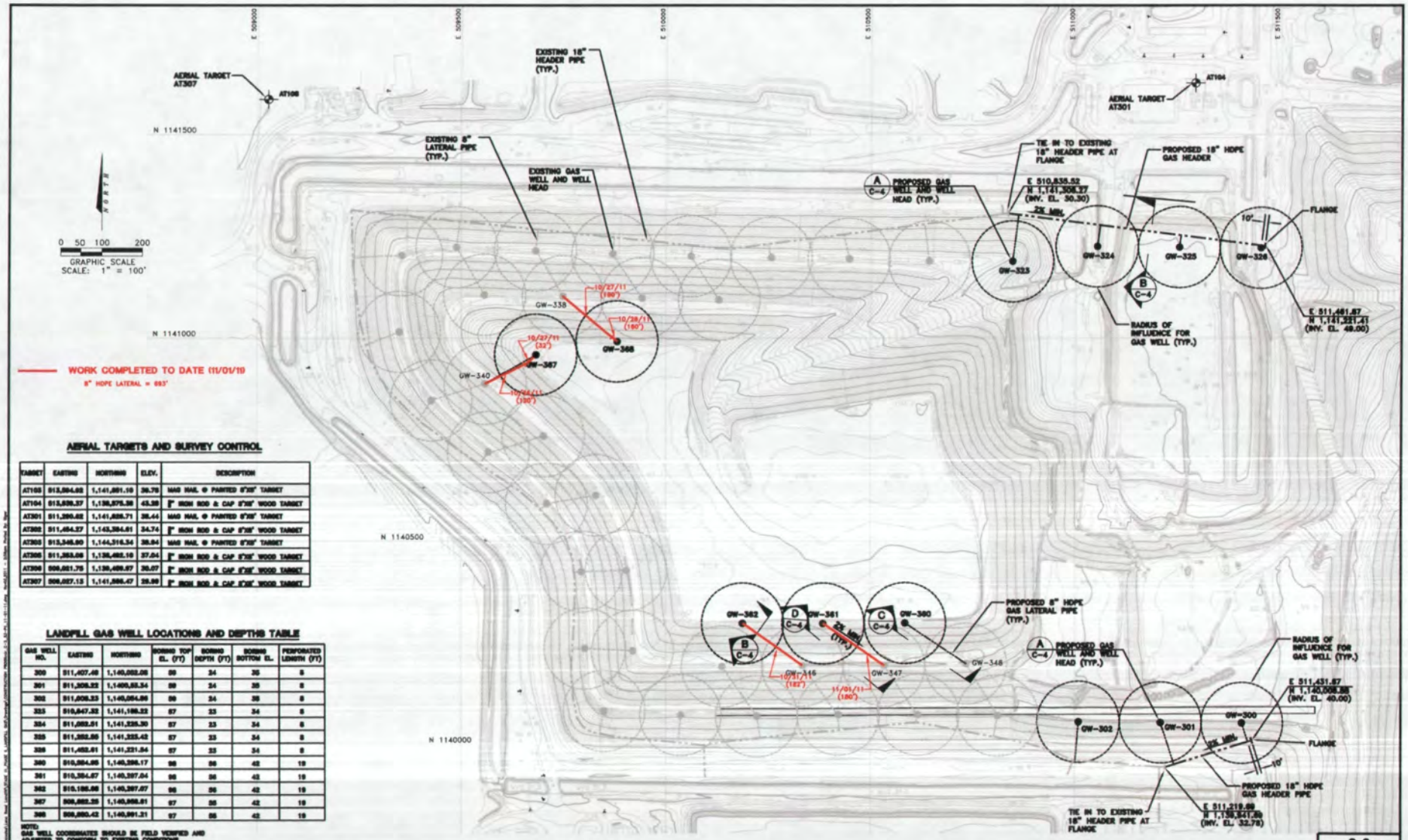
Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.55	1,141,201.10	30.79	NAIL & PAINTED 8"X8" TARGET
AT104	513,539.37	1,138,575.38	43.30	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT301	511,395.62	1,141,526.71	35.44	NAIL & PAINTED 8"X8" TARGET
AT302	511,454.37	1,143,384.61	34.74	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT303	513,345.90	1,144,316.34	38.84	NAIL & PAINTED 8"X8" TARGET
AT305	511,353.08	1,138,482.10	37.04	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT306	508,021.75	1,138,429.07	30.07	5" IRON ROD & CAP 8"X8" WOOD TARGET
AT307	508,057.13	1,141,586.47	28.80	5" IRON ROD & CAP 8"X8" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,002.06	60	34	26	8
301	511,305.22	1,140,502.34	60	34	26	8
302	511,206.23	1,140,004.86	60	34	26	8
323	510,847.32	1,141,198.23	57	23	34	8
324	511,062.51	1,141,235.30	57	23	34	8
325	511,252.50	1,141,225.42	57	23	34	8
326	511,452.61	1,141,221.54	57	23	34	8
360	510,504.65	1,140,396.17	58	56	42	19
361	510,304.67	1,140,397.04	58	56	42	19
362	510,105.68	1,140,397.07	58	56	42	19
367	508,662.35	1,140,598.61	57	56	42	19
368	508,660.42	1,140,991.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
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d/b/a PBSJ
2508 Bay Center Street Suite 200
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FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JUL. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
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Orlando, FL 32810-6101
Signature Date

JOB NO. 100017967
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

Installation of 8" HDPE Lateral Pipe between GW-347 and GW-361.

8" HDPE Lateral Pipe Tie-In Connection to Existing GW-347.

8" HDPE Lateral Pipe between GW-347 and GW-361.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/2/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T **W** TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:00 a.m.

8:00 a.m. Excavating existing 18" HDPE header pipe to expose stubout for lateral pipe connection to GW-302. No stubout found.

8:30 a.m. Started excavation of lateral pipe trench between GW-348 to GW-360.

9:30 a.m. Fine grading lateral pipe trech between GW-347 and GW-361.

1:30 p.m. Placing lateral pipe bedding between GW-348 and GW-360.

2:30 p.m. Completed 8" HDPE lateral pipe installation between GW-348 and GW-360.

3:30 p.m. Placing gravel cover over lateral pipe trench between GW-348 and GW-360.

4:00 p.m. Placing soil cover over later pipe trench between GW-348 and GW-360.

Shut down 5:00 p.m.

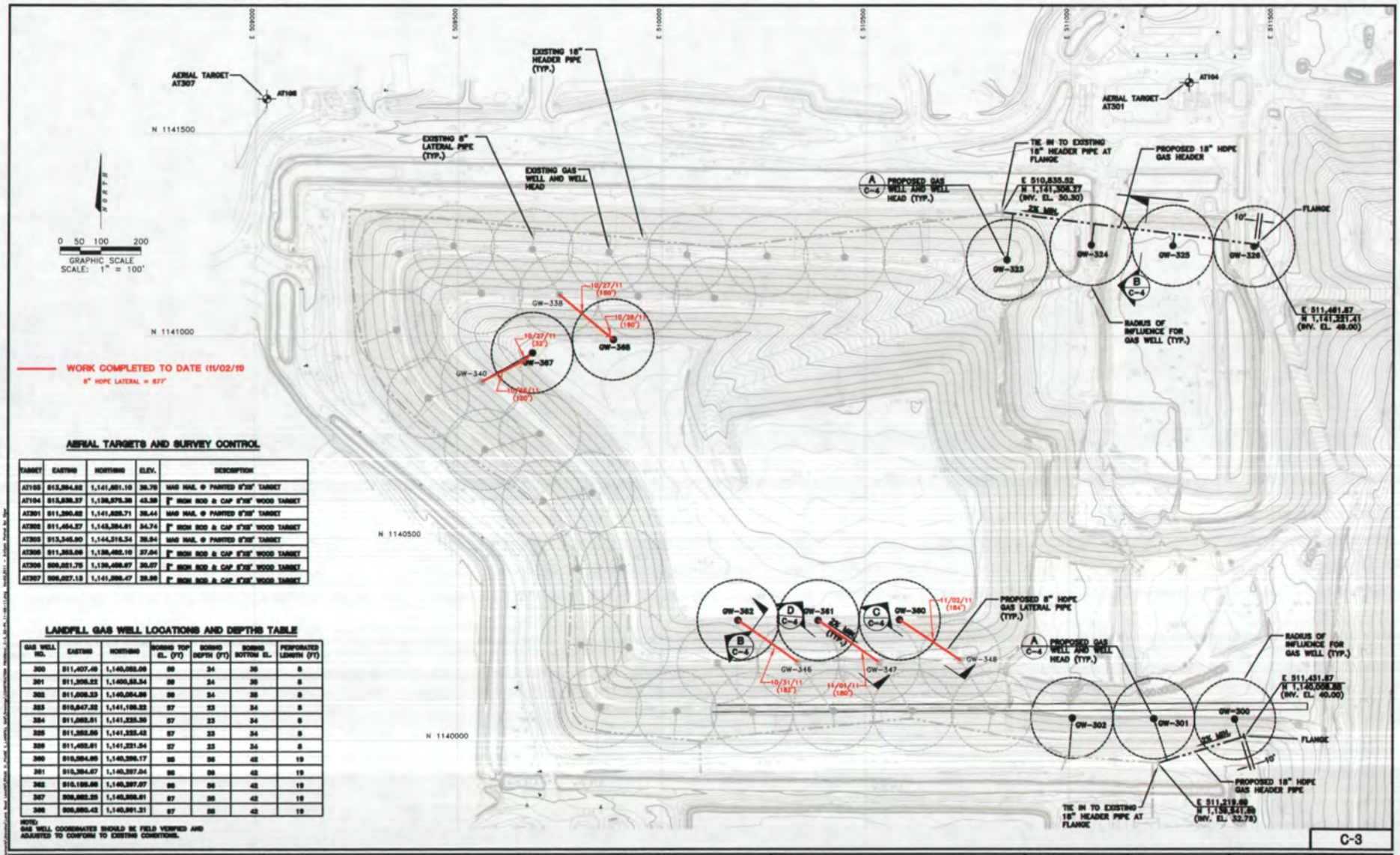
Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.52	1,141,651.10	39.79	NAIL HAIL ⊕ PAINTED 6"X6" TARGET
AT104	513,536.37	1,138,575.39	43.38	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,390.62	1,141,625.71	35.44	NAIL HAIL ⊕ PAINTED 6"X6" TARGET
AT302	511,454.37	1,143,384.61	34.74	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,345.90	1,144,316.34	36.54	NAIL HAIL ⊕ PAINTED 6"X6" TARGET
AT305	511,353.06	1,138,492.10	37.04	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	509,021.75	1,139,409.07	35.07	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	509,027.13	1,141,395.47	39.89	1" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,052.05	59	34	25	5
301	511,395.22	1,140,153.34	59	34	25	5
302	511,395.33	1,140,254.66	59	34	25	5
323	510,847.32	1,141,195.32	57	23	34	5
324	511,062.51	1,141,225.39	57	23	34	5
325	511,252.56	1,141,255.42	57	23	34	5
326	511,452.61	1,141,321.54	57	23	34	5
340	510,394.65	1,140,395.17	56	56	42	19
341	510,394.67	1,140,297.04	56	56	42	19
342	510,195.66	1,140,297.07	56	56	42	19
347	509,982.39	1,140,296.61	57	56	42	19
348	509,980.42	1,140,591.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
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Tampa FL 33609
FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JUL 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DKD
SHEET / #

Excavation of Lateral Pipe Trench between GW-348 and GW-360.

Placement of Gravel Bedding in Lateral Pipe Trench between GW-348 and GW-360.

8" HDPE Lateral Pipe Tie-In Connection GW-348.

Placement Soil Cover over Lateral Pipe Trench between GW-348 and GW-360.

ATKINS
North America

SHEET 1 OF 1

11/3/11

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/4/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W **TH** F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	dry moderate **humid**

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:50 a.m.

7:55 a.m. Comanco drilling 18" HDPE Header pipe for installing saddle that will connect to the 8" HDPE lateral from GW-300

8:15 a.m. Started raining. Rain stopped approximately at 8:50 a.m.

9:40 a.m. Comanco welded saddle to 18" HDPE Header pipe, then welded 8" HDPE lateral pipe from GW-300 to saddle.

10:30 a.m. Welded remaining 8" HDPE lateral pipe from Header pipe to GW-301.

12:36 p.m. Started air testing the 18" HDPE Header pipe with both laterals connecting GW-300 and GW-301, all at the same time. Air tested for an hour and test passed.

2:00 p.m. Backfilling lateral pipe trench connecting Header pipe to GW-300.

2:30 p.m. Tie-in 18" HDPE Header pipe to existing 18" Header pipe stub-out on south-east side of Stage III landfill

Comanco use wood post as marker for Header pipe location and end point.

5:30 p.m. Comanco installing cover over Header pipe trench and lateral pipe trench connecting GW-300. Lateral pipe trench connecting Header pipe and GW-301 is only 30% completed.

Shut down at 6:30 p.m.

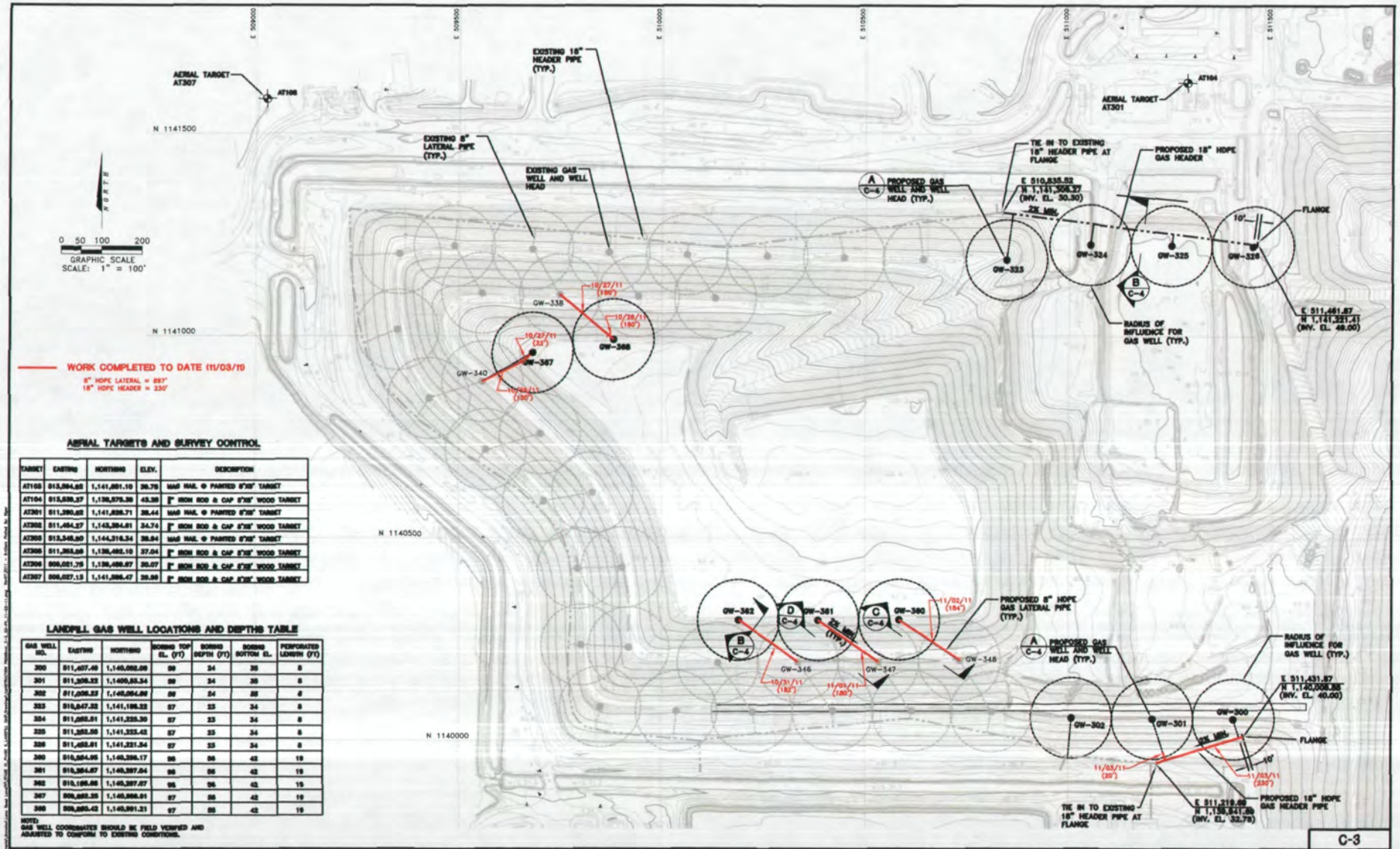
Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT108	513,594.65	1,141,651.10	39.79	NAIL HAIL @ PAINTED 6"X6" TARGET
AT104	513,530.37	1,139,579.39	43.39	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,390.62	1,141,626.71	38.44	NAIL HAIL @ PAINTED 6"X6" TARGET
AT302	511,464.37	1,143,384.61	34.74	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT305	513,548.90	1,144,316.34	38.94	NAIL HAIL @ PAINTED 6"X6" TARGET
AT306	511,363.06	1,138,492.10	37.04	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT304	509,021.75	1,139,488.67	30.07	1" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	509,027.13	1,141,386.47	39.80	1" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,002.06	60	34	26	8
301	511,306.23	1,140,55.34	60	34	26	8
302	511,206.23	1,140,054.06	60	34	26	8
323	510,647.32	1,141,198.33	57	23	34	8
324	511,052.51	1,141,225.30	57	23	34	8
325	511,252.50	1,141,223.42	57	23	34	8
326	511,452.51	1,141,221.34	57	23	34	8
360	510,954.05	1,140,396.17	56	56	42	19
361	510,954.67	1,140,397.04	56	56	42	19
362	510,155.68	1,140,397.07	56	56	42	19
367	509,652.35	1,140,898.01	57	56	42	19
368	509,650.42	1,140,901.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
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d/b/a PBSJ
2502 Rocky Point Street Suite 220
Tampa, FL 33607
FBPE Certificate of Authorization No.: 24

CLIENT: MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

PROJECT: LENA ROAD STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM

TASK: GAS COLLECTION SYSTEM PLAN

ORIGINAL JUL 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017987
DRAWN TGC
DESIGN BGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

Excavation of 18" HDPE Header Pipe South East of Stage III Landfill.

Placing Gravel Bedding on 18" HDPE Header Pipe trench South East of Stage III Landfill.

Installation of 18" HDPE Header Pipe South East of Stage III Landfill.

18" HDPE Header Pipe connection to 8" HDPE Lateral pipe from GW-301.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/4/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W **TH** F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	dry moderate **humid**

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:50 a.m.

7:55 a.m. Comanco drilling 18" HDPE Header pipe for installing saddle that will connect to the 8" HDPE lateral from GW-300

8:15 a.m. Started raining. Rain stopped approximately at 8:50 a.m.

9:40 a.m. Comanco welded saddle to 18" HDPE Header pipe, then welded 8" HDPE lateral pipe from GW-300 to saddle.

10:30 a.m. Welded remaining 8" HDPE lateral pipe from Header pipe to GW-301.

12:36 p.m. Started air testing the 18" HDPE Header pipe with both laterals connecting GW-300 and GW-301, all at the same time.
Air tested for an hour and test passed.

2:00 p.m. Backfilling lateral pipe trench connecting Header pipe to GW-300.

2:30 p.m. Tie-in 18" HDPE Header pipe to existing 18" Header pipe stub-out on south-east side of Stage III landfill

Comanco use wood post as marker for Header pipe location and end point.

5:30 p.m. Comanco installing cover over Header pipe trench and lateral pipe trench connecting GW-300. Lateral pipe trench connecting Header pipe and GW-301 is only 30% completed.

Shut down at 6:30 p.m.

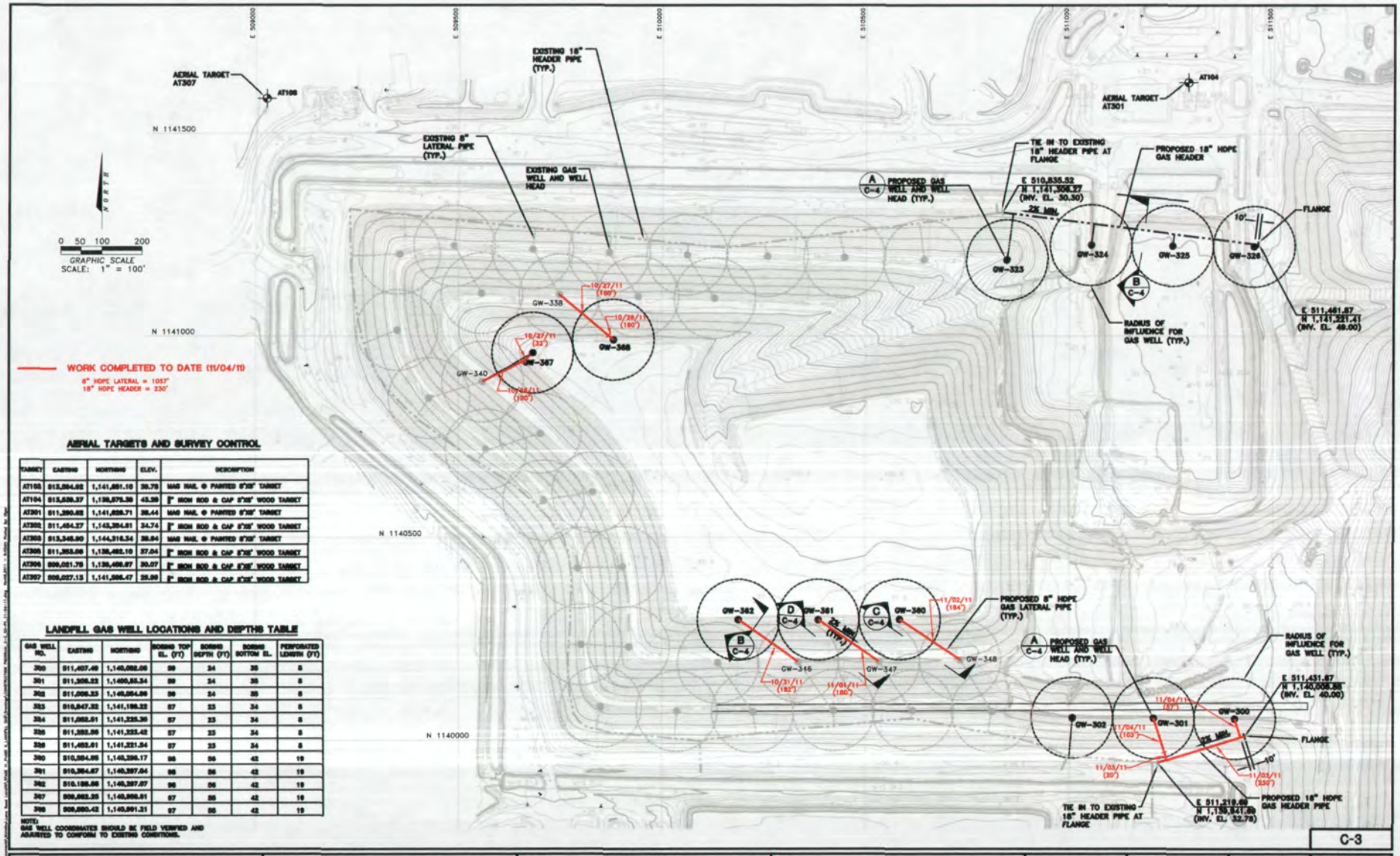
Comanco Personnel: 7-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT102	513,004.62	1,141,891.10	39.78	MAG NAIL ⊕ PAINTED 6"X6" TARGET
AT104	513,539.37	1,139,575.39	43.59	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,290.62	1,141,828.71	38.44	MAG NAIL ⊕ PAINTED 6"X6" TARGET
AT302	511,464.27	1,143,384.61	34.74	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,345.80	1,144,316.34	38.64	MAG NAIL ⊕ PAINTED 6"X6" TARGET
AT305	511,353.06	1,138,482.10	37.04	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	508,021.78	1,139,408.67	30.07	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	508,027.13	1,141,886.47	39.80	5" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.40	1,140,908.88	59	24	35	8
301	511,305.23	1,140,553.34	59	24	35	8
302	511,005.33	1,140,054.88	59	24	35	8
323	510,847.32	1,141,198.23	57	23	34	8
324	511,052.51	1,141,225.30	57	23	34	8
325	511,252.56	1,141,253.42	57	23	34	8
326	511,452.51	1,141,221.54	57	23	34	8
340	510,304.05	1,140,356.17	56	56	42	19
361	510,304.67	1,140,357.04	56	56	42	19
362	510,105.60	1,140,357.07	56	56	42	19
367	508,862.35	1,140,956.51	57	56	42	19
368	508,860.42	1,140,991.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
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N/K/A PBSJ
1000 Bay Center, Street Suite 202
Tampa, FL 33607
BPE Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS	LENA ROAD STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM	GAS COLLECTION SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN BGC
DESIGN BGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

18" HDPE Header Pipe connection to 8" HDPE Lateral pipe from GW-300.

Air Testing 18" HDPE Header Pipe and Laterals Connecting GW-300 and GW-301.

Backfilling the 18" HDPE Header Pipe Trench South East of Stage III Landfill.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/7/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S **M** T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	clear **overcast** rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:15 a.m.

8:45 a.m. Comanco resume excavation of lateral pipe trench connecting Header pipe and GW-301.

11:25 a.m. Air teste 8" lateral pipe and raiser connecting Header pipe and GW-302. Tested for one hour and passed.

12:35 p.m. Started placing gravel cover over lateral pipe connecting Header pipe and GW-301.

2:30 p.m. Started placing soil fill in lateral pipe trench connecting Header pipe and GW-301. Placed 2"x4" wood post markers at intersections of Header/lateral pipe from GW-300 and GW-301.

Shut Down at 3:30 p.m.

Troy Watral with Comanco on-site today.

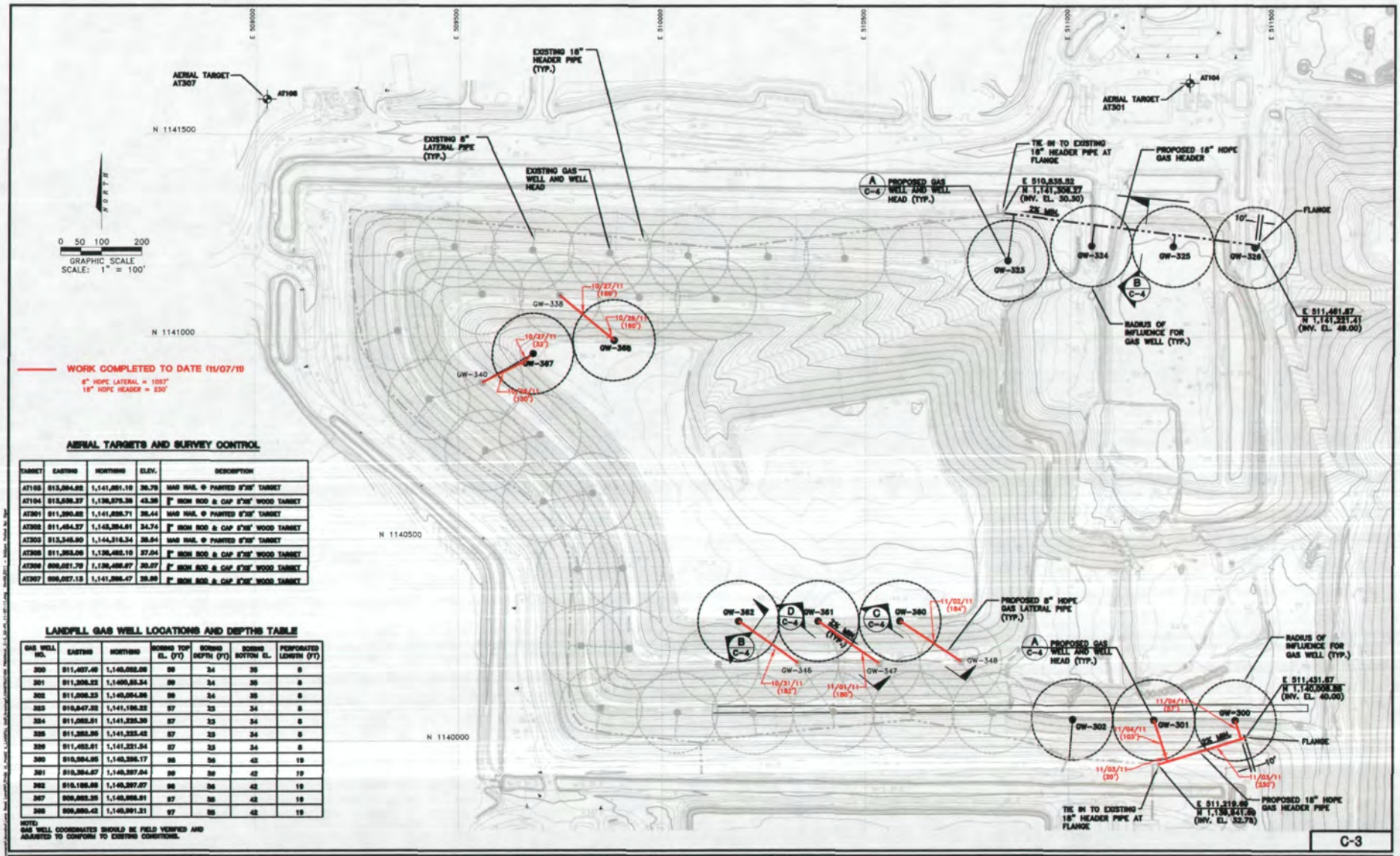
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.02	1,141,051.10	39.78	MAG NAIL @ PAINTED 6"X6" TARGET
AT104	513,530.37	1,139,579.38	43.38	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,290.82	1,141,026.71	38.44	MAG NAIL @ PAINTED 6"X6" TARGET
AT302	511,464.27	1,143,384.61	34.74	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,345.90	1,144,316.34	38.84	MAG NAIL @ PAINTED 6"X6" TARGET
AT305	511,353.09	1,139,482.10	37.04	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	509,021.79	1,139,488.07	30.07	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	509,027.13	1,141,986.47	39.80	½" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,052.06	59	24	35	6
301	511,306.22	1,140,53.34	59	24	35	6
302	511,006.33	1,140,054.86	59	24	35	6
323	510,647.32	1,141,186.22	57	23	34	6
324	511,052.51	1,141,225.30	57	23	34	6
325	511,352.86	1,141,225.42	57	23	34	6
326	511,452.61	1,141,221.34	57	23	34	6
360	510,504.05	1,140,395.17	56	26	42	19
361	510,304.67	1,140,397.04	56	26	42	19
362	510,105.06	1,140,397.07	56	26	42	19
367	509,802.35	1,140,986.81	57	26	42	19
368	509,600.42	1,140,991.21	57	26	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
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PIGOT, RODGERS, SCHAAF & JENNSAK, Inc. (d/b/a PBSJ)
2000 West Cypress Street Suite 200
Tampa, FL 33609
FBPE Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD	GAS COLLECTION
BOARD OF COUNTY COMMISSIONERS	STAGE III PHASE II LANDFILL	SYSTEM PLAN
	GAS COLLECTION SYSTEM	

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DKD
SHEET /#

Lateral Pipe Trench Excavation from South Header Pipe to GW-301.

Lateral Pipe Trench Gravel Bedding Placement from South Header Pipe to GW-301.

Air Testing 8" HDPE Lateral Pipe Connecting Header to GW-302.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/8/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M **T** W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:52 a.m.

7:52 a.m. Started excavation of lateral pipe trench connecting Header pipe and GW-302.

11:15 a.m. Started placing pipe gravel bedding on lateral pipe trench between Header pipe and GW-302.

12:50 p.m. Welded 8" HDPE lateral pipe from GW-302 to 18" HDPE Header pipe using a fused 8" HDPE saddle.

2:50 p.m. Completed lateral pipe trench excavation from Header pipe and GW-302.

4:00 p.m. Completed gravel placement over pipe.

4:10 p.m. Started placing soil fill in lateral pipe trench connecting Header pipe and GW-302.

Troy Watral on site today. Bill Newman not on site today.

Shut Down at 5:00 p.m.

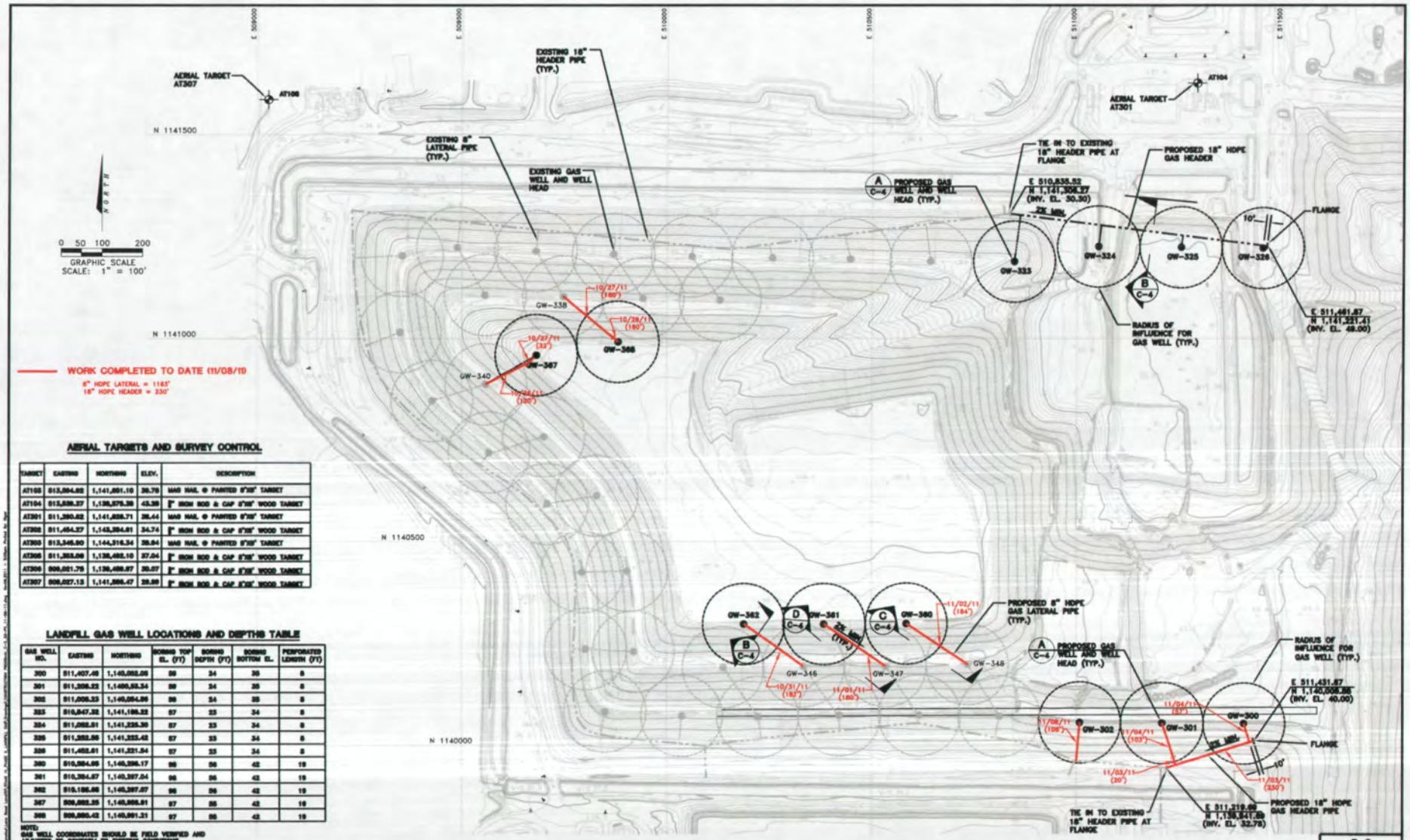
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.52	1,141,851.10	36.78	NAIL & PAINTED 8"X8" TARGET
AT104	513,539.27	1,139,575.36	43.39	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,290.62	1,141,655.71	36.44	NAIL & PAINTED 8"X8" TARGET
AT302	511,454.27	1,143,384.61	34.74	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,545.80	1,144,316.34	38.84	NAIL & PAINTED 8"X8" TARGET
AT305	511,355.09	1,138,495.10	37.04	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	508,021.79	1,139,498.67	30.07	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	508,027.13	1,141,886.47	39.80	5" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.40	1,140,002.08	59	34	35	8
301	511,306.23	1,140,153.34	59	34	35	8
302	511,005.33	1,140,054.96	59	34	35	8
323	510,847.32	1,141,196.33	57	23	34	8
324	511,052.01	1,141,225.30	57	23	34	8
325	511,352.96	1,141,233.42	57	23	34	8
326	511,452.01	1,141,221.04	57	23	34	8
340	510,504.65	1,140,396.17	56	56	42	19
341	510,354.87	1,140,397.04	56	56	42	19
342	510,156.60	1,140,397.07	56	56	42	19
347	508,952.35	1,140,395.81	57	56	42	19
348	508,850.42	1,140,891.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
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POST, BUCKLEY, SCHUH & JERNIGAN, INC.
D/B/A PBSJ
2601 Bay Center Street Suite 200
Tampa, FL 33609
FBPE Certificate of Authorization No.: 24

CLIENT: MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

PROJECT: LENA ROAD STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM

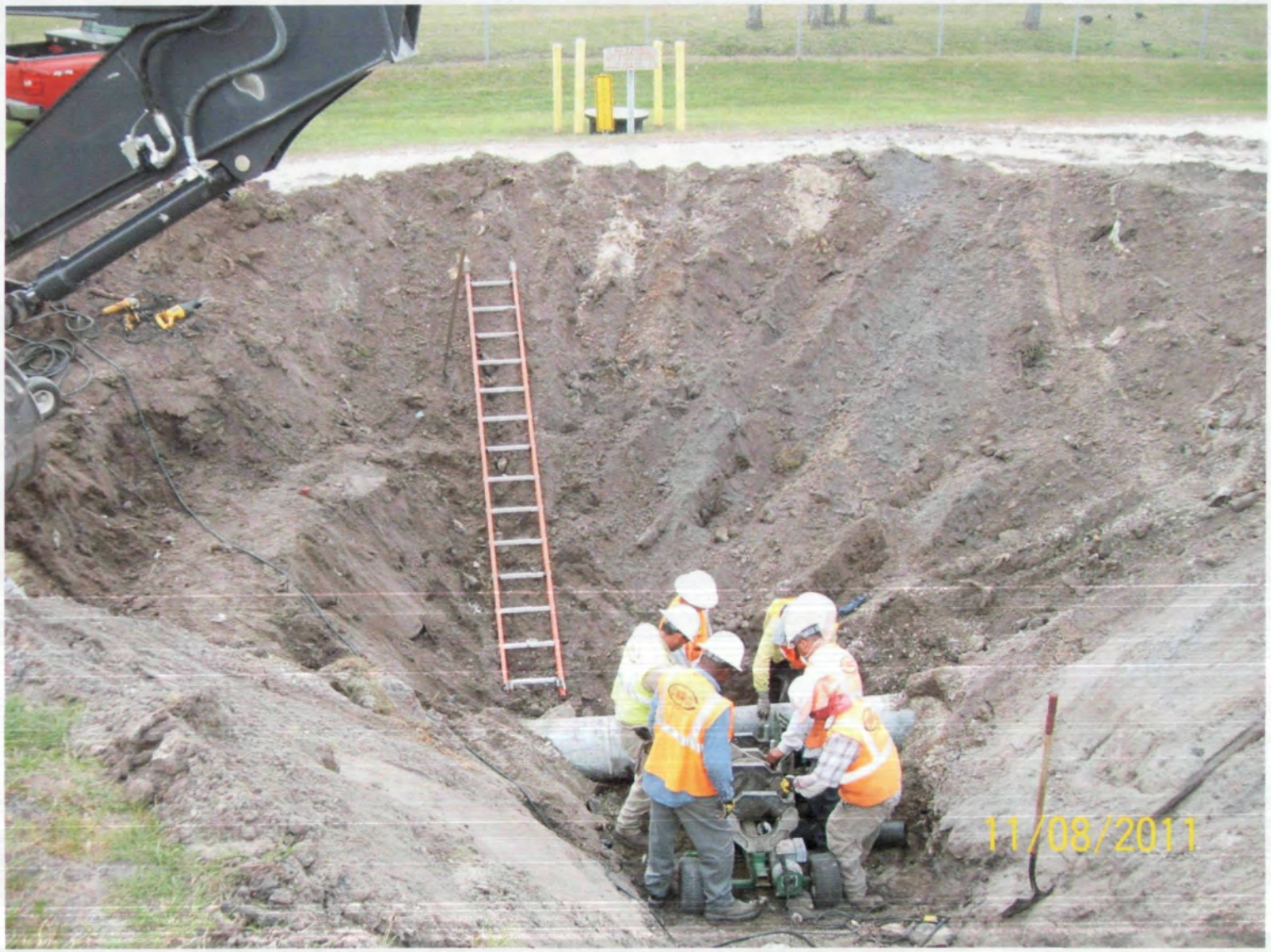
TASK: GAS COLLECTION SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

Lateral Pipe Trench Excavation from South Header Pipe to GW-302.



Welding Saddle to 18" HDPE Header Pipe that will Connect Lateral Pipe from South Header Pipe to GW-302.

8" HDPE Lateral Pipe installation from South Header Pipe to GW-302.

Lateral Pipe Trench Gravel placement from South Header Pipe to GW-302.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/9/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T **W** TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:38 a.m.

Comanco fine grading filled trenches. Also will dedicate the day to install 2"x4" wood post at installed laterals for survey as-built.

Scheduled density tests with Driggers today. Driggers on site @ 10:00 a.m. to do density tests.

Comanco welding raisers to lateral pipes that will be installed in the north east side of Stage III landfill.

Drillers will be on-site tomorrow.

Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

Fine Grading South Pipe Trenches.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III PHASE II GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/10/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W **TH** F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:30 a.m.

8:00 a.m. Drillers on-site

8:30 a.m. Meeting with Recovery drilling Services (Driller), Comanco, Manatee County and Atkins.

10:18 a.m. Started drilling GW-367 and completed by 12:18 p.m. Comanco started placing rock inmediately after all waste was removed.

12:24 a.m. Started drilling GW-368 and stopped at about 35' due to damage to the 8" HDPE lateral pipe.

2:25 p.m. Started drilling GW-362 and completed by 4:00 p.m.

5:45 p.m. Shut down.

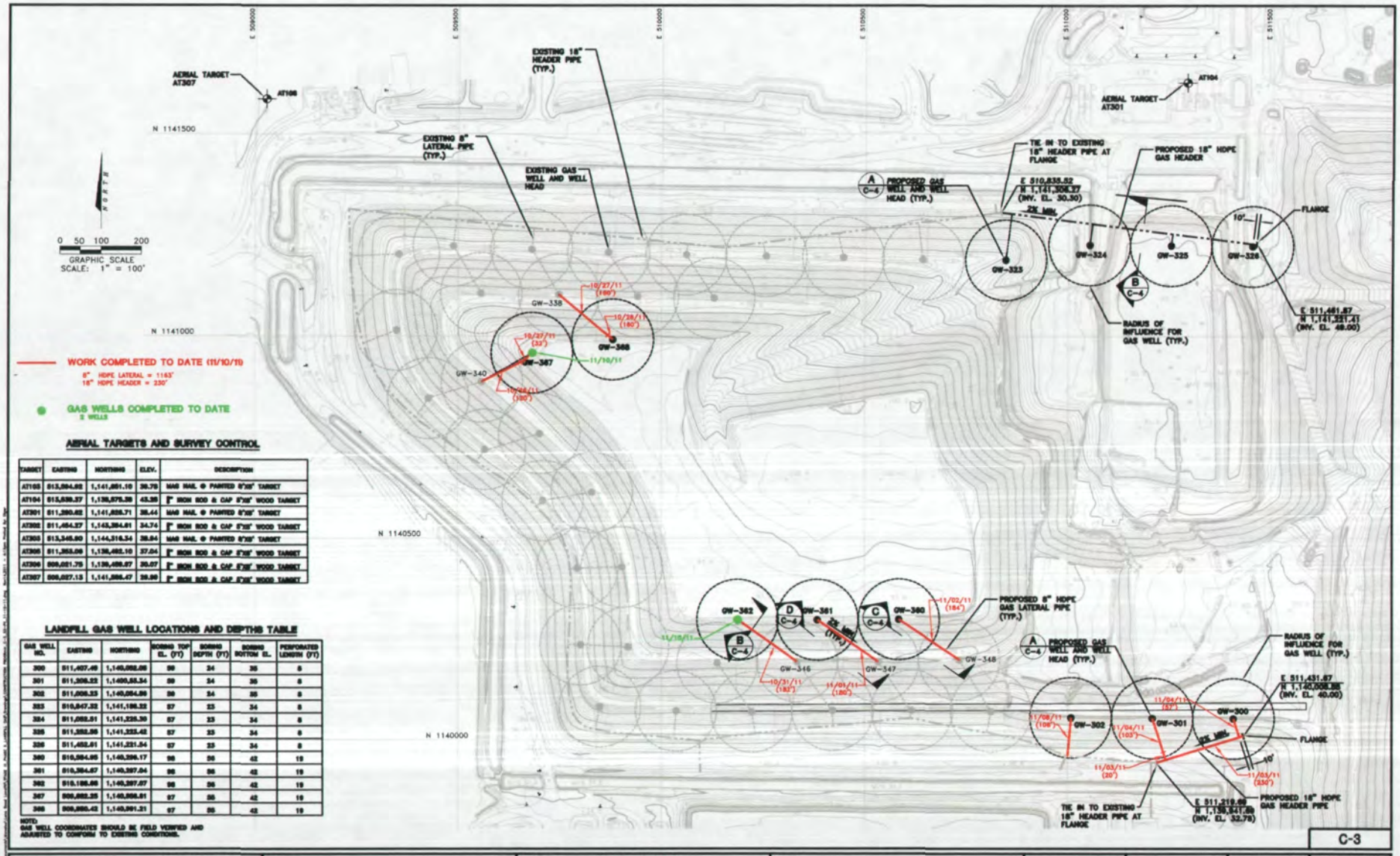
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,804.62	1,141,661.10	39.78	MAG NAIL @ PAINTED 6"X6" TARGET
AT104	515,539.37	1,138,575.39	43.38	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,290.62	1,141,625.71	35.44	MAG NAIL @ PAINTED 6"X6" TARGET
AT302	511,454.27	1,143,384.61	34.74	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,345.60	1,144,316.34	38.84	MAG NAIL @ PAINTED 6"X6" TARGET
AT305	511,353.06	1,138,482.10	37.04	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	509,021.75	1,139,488.07	30.07	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	508,027.13	1,141,986.47	38.80	5" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,992.06	59	24	35	8
301	511,308.23	1,140,583.34	59	24	35	8
302	511,005.33	1,140,084.80	59	24	35	8
323	510,047.32	1,141,186.22	57	23	34	8
324	511,052.51	1,141,225.30	57	23	34	8
325	511,252.80	1,141,225.42	57	23	34	8
326	511,452.01	1,141,221.54	57	23	34	8
360	510,594.60	1,140,396.17	58	26	42	19
361	510,394.67	1,140,397.04	58	26	42	19
362	510,186.86	1,140,397.07	58	26	42	19
347	508,882.35	1,140,986.81	57	26	42	19
348	508,680.42	1,140,991.21	57	26	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
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WWW.PBSJ.COM
POST, BUCKLEY, SCHUH & JERNIGAN, Inc.
DBA PBSJ
Corporate Center, Street Suite 200
Orlando, FL 32801
FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017967
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DCD
SHEET / #

Drilling GW-367.

Installing GW-367.

Installing GW-362.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III PHASE II GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/11/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W TH **F** S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:30 a.m.

7:30 a.m. Started drilling GW-361 and completed by 8:45 a.m. Comanco started placing rock immediately after all waste was removed.

8:56 a.m. Started drilling GW-360 and completed by 11:11 a.m.

10:10 a.m. Comanco installing wellheads on GW-367 & GW-362.

11:55 a.m. Started drilling GW-368 and completed by 2:15 p.m.

3:00 p.m. Started drilling GW-302 and completed by 3:55 p.m.

Comanco installed wellheads on GW-361, GW-360 and GW-368.

Shut Down @ 5:45 p.m.

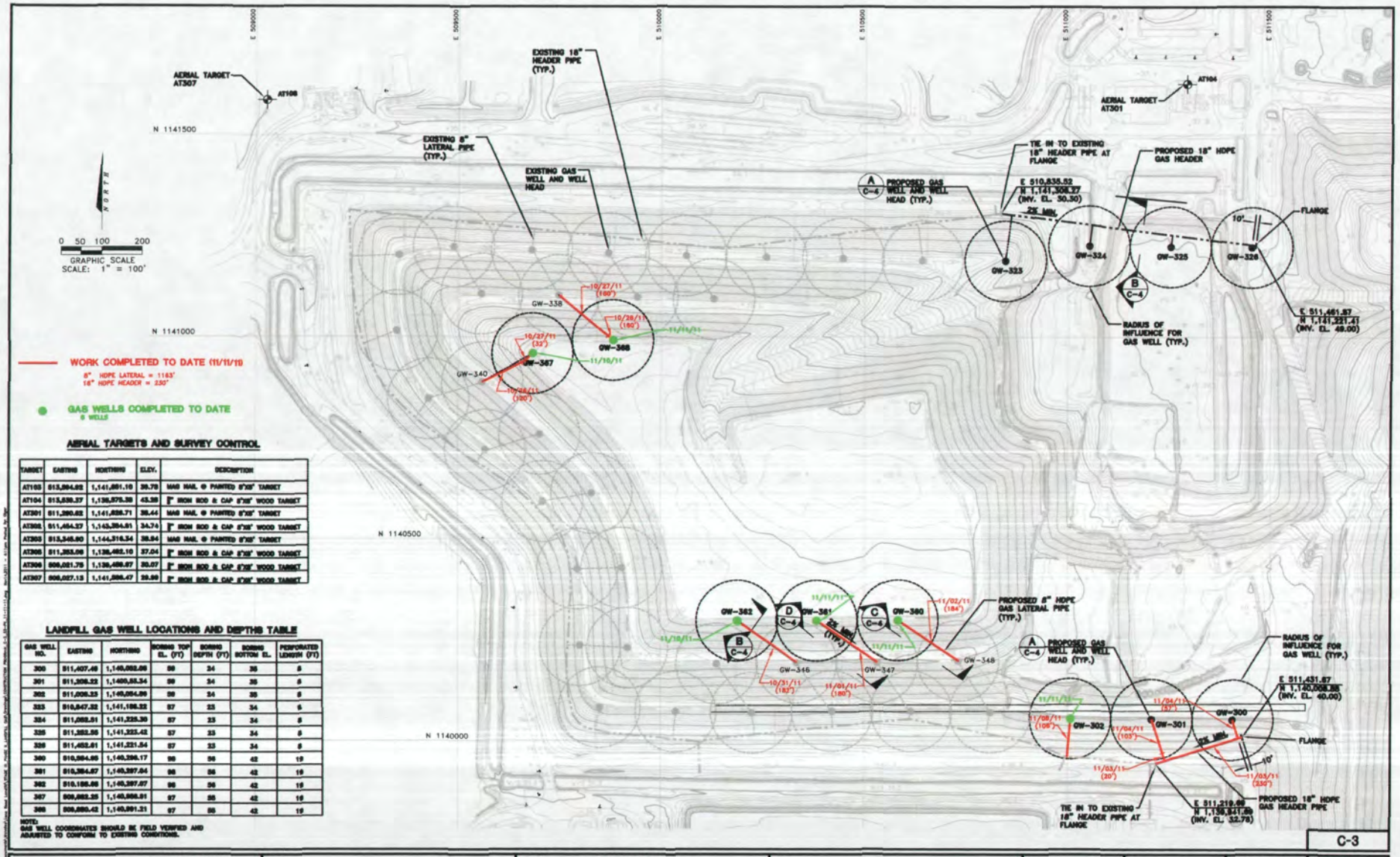
Comanco Personnel: 5-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,994.02	1,141,891.10	39.79	MAG NAIL @ PAINTED 8"X8" TARGET
AT104	513,539.37	1,138,975.30	43.39	½" IRON ROD & CAP 8"X8" WOOD TARGET
AT301	511,280.62	1,141,826.71	38.44	MAG NAIL @ PAINTED 8"X8" TARGET
AT302	511,464.37	1,143,354.81	34.74	½" IRON ROD & CAP 8"X8" WOOD TARGET
AT303	513,345.90	1,144,316.34	38.94	MAG NAIL @ PAINTED 8"X8" TARGET
AT305	511,353.09	1,138,462.10	37.04	½" IRON ROD & CAP 8"X8" WOOD TARGET
AT306	506,021.78	1,139,499.67	30.07	½" IRON ROD & CAP 8"X8" WOOD TARGET
AT307	506,027.13	1,141,886.47	39.80	½" IRON ROD & CAP 8"X8" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.40	1,140,052.09	59	24	35	5
301	511,306.22	1,140,55.34	59	24	35	5
302	511,005.33	1,140,054.96	59	24	35	5
323	510,847.32	1,141,106.32	57	23	34	5
324	511,058.51	1,141,225.39	57	23	34	5
325	511,252.56	1,141,323.42	57	23	34	5
326	511,452.61	1,141,321.54	57	23	34	5
360	510,964.65	1,140,396.17	56	56	42	19
361	510,364.57	1,140,397.04	56	56	42	19
362	510,165.66	1,140,397.07	56	56	42	19
367	506,662.35	1,140,666.01	57	56	42	19
368	506,660.42	1,140,891.31	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
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POST, BUCKLEY, SCHUH & JERNIGAN, Inc. d/b/a PBSJ
3348 Henderson Street Suite 200
Tampa, FL 33607
FBPE Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD	GAS COLLECTION
BOARD OF COUNTY COMMISSIONERS	STAGE III PHASE II LANDFILL	SYSTEM PLAN
	GAS COLLECTION SYSTEM	

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. WILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN ROC
DESIGN ROC/JLW
CHECKED JLW
Q.C. DED
SHEET /#

Drilling GW-361

Drilling GW-360.

Installing Wellhead on GW-360

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIO	DATE:	11/12/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W TH F **S**
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:30 a.m.

6:45: a.m Started drilling GW-301 and completed by 7:40

7:45 a.m. Started drilling GW-300 and completed by 8:30 a.m.

8:40 a.m. Started drilling GW-326 and completed by 9:38 a.m.

9:44 a.m. Started drilling GW-325 and completed by 10:12 a.m.

10:18 a.m. Started drilling GW-324 and completed by 11:00 a.m.

11:25 a.m. Started drilling GW-323 and completed by 11:55 a.m.

All wells drilled were completed and wellheads installed.

Shut down @ 3:45 p.m.

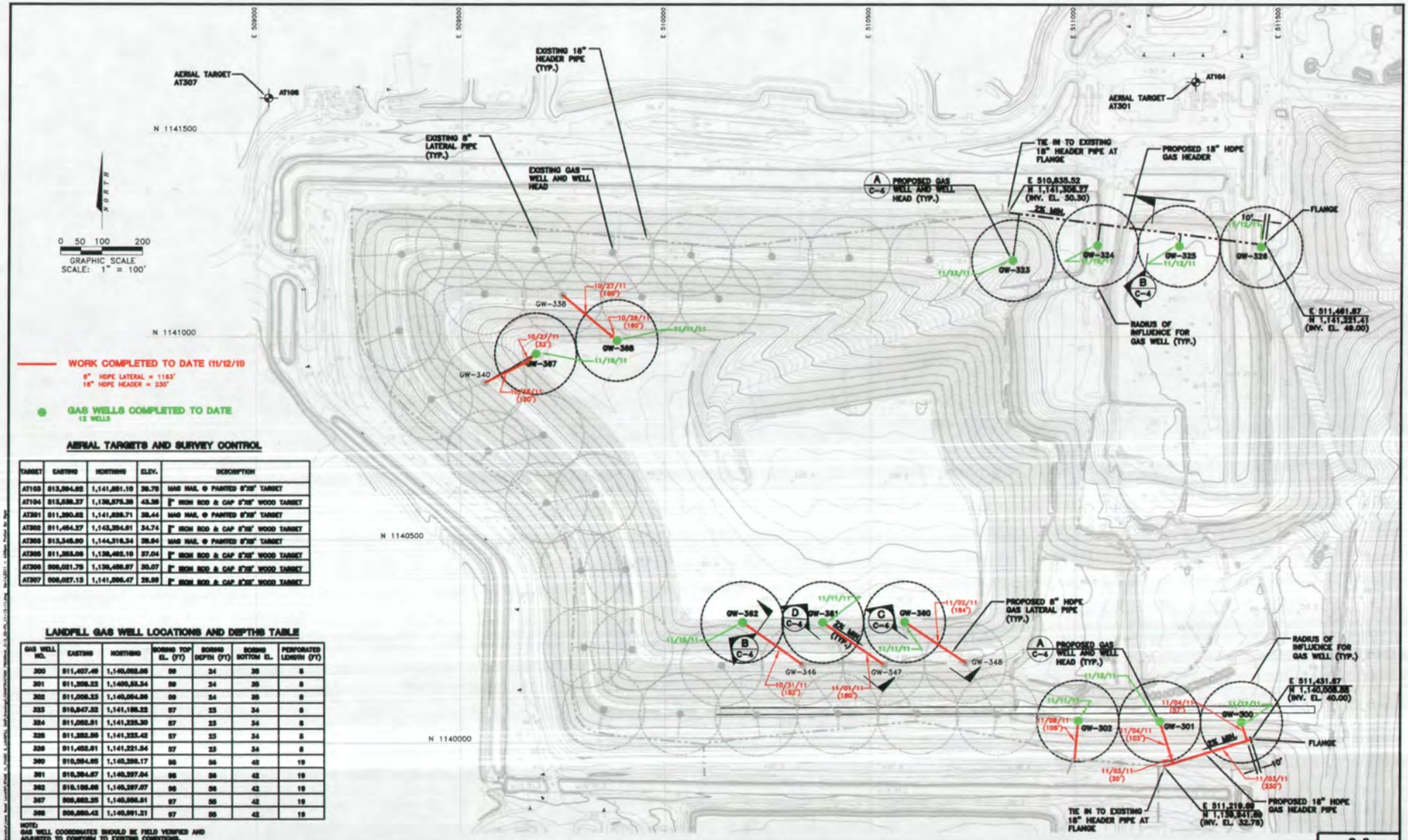
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.82	1,141,661.10	39.70	NAIL & PAINTED 6"X6" TARGET
AT104	513,539.37	1,138,575.38	43.39	5/8" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,380.62	1,141,628.71	38.44	NAIL & PAINTED 6"X6" TARGET
AT302	511,464.37	1,143,384.61	34.74	5/8" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,345.90	1,144,316.34	38.94	NAIL & PAINTED 6"X6" TARGET
AT305	511,383.06	1,138,482.10	37.04	5/8" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	506,021.76	1,139,488.67	30.07	5/8" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	506,027.13	1,141,386.47	39.98	5/8" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,992.06	59	24	35	5
301	511,306.22	1,140,993.34	59	24	35	5
302	511,206.33	1,140,994.56	59	24	35	5
323	510,847.32	1,141,198.22	57	23	34	5
324	511,052.51	1,141,225.30	57	23	34	5
325	511,252.55	1,141,225.42	57	23	34	5
326	511,452.51	1,141,221.54	57	23	34	5
360	510,394.55	1,140,395.17	56	56	42	19
361	510,394.67	1,140,397.04	56	56	42	19
362	510,195.68	1,140,397.07	56	56	42	19
367	509,992.35	1,140,996.51	57	56	42	19
368	509,990.42	1,140,991.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
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N/K/A PBSJ
Post Buckley Schuh & Jernigan, Inc.
Tampa, FL 33607
FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

Installed GW-300.

Installed Wellhead in GW-300.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/14/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S **M** T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 9:00 a.m.

Comanco fine grading finish grade on lateral and header trench on south side slope of Stage III.

Installing 2"x4" wood post markers along laterals for as-built survey.

2:00 p.m. Comanco exposed damaged lateral stubout at GW-368. Cancel repair due to missing part of welding machine

3:00 p.m. Welding 18" HDPE Header pipe to be installed on the north side slope of Stage III Landfill.

3:05 p.m. Removing top soil along the north Header pipe trench location.

5:15 p.m. Shut down.

Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

Removing Top soil and Creating an Access Road to Excavate Header Pipe Trench on North Side Slope.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/15/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M **T** W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:00 a.m.

7:00 a.m. Comanco begin excavation of north Header pipe trench starting from the east end.

12:00 p.m. Welded lateral pipe connecting Header pipe to GW-326.

250 Lf of 18" HDPE Header pipe installed today.
16 Lf of 8" HDPE Lateral pipe installed today.

Shut down at 5:30 p.m.

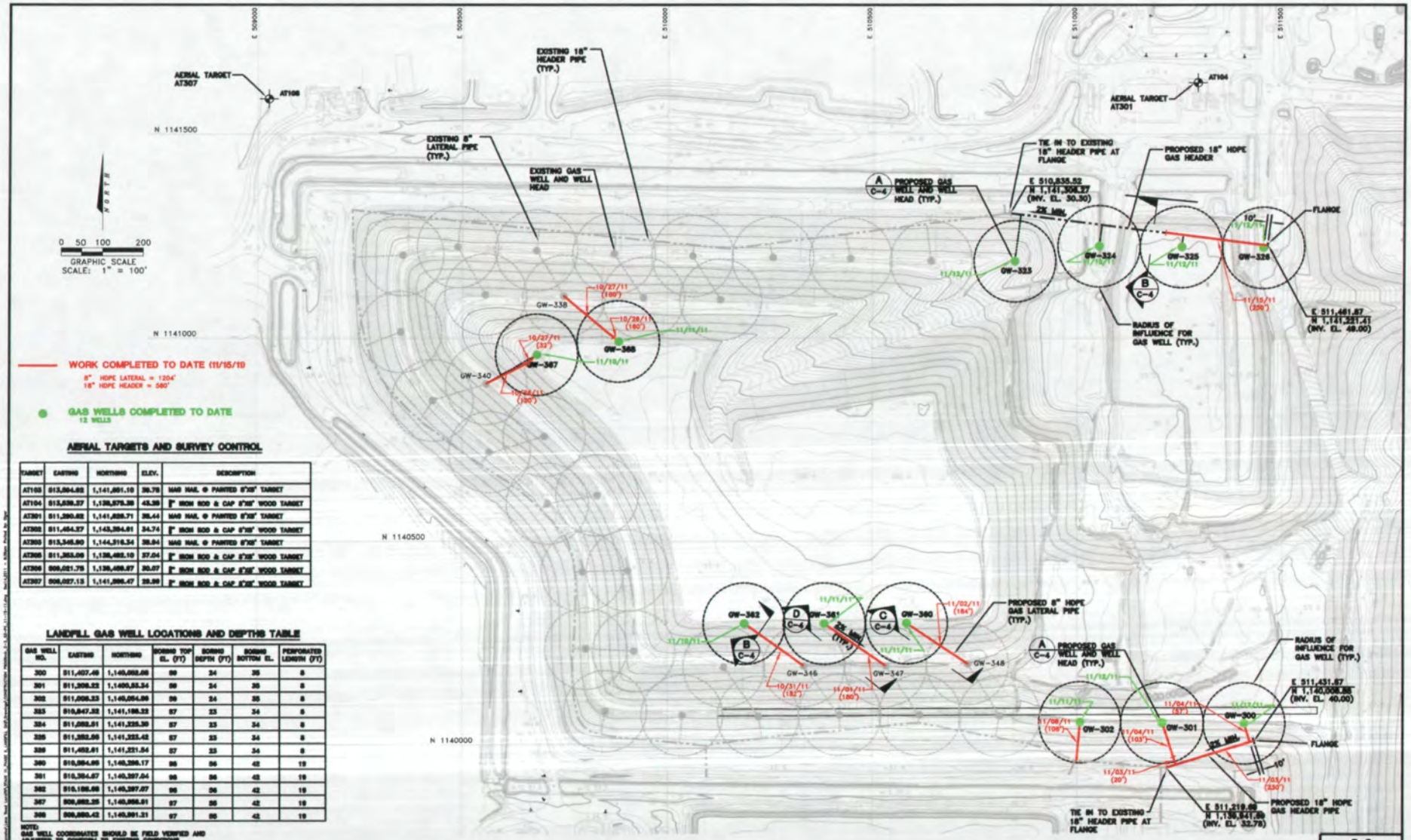
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT105	513,504.62	1,141,601.10	30.79	NAIL & PAINTED 2"X2" TARGET
AT104	513,539.37	1,138,575.38	43.30	1" IRON ROD & CAP 2"X2" WOOD TARGET
AT301	511,390.62	1,141,628.71	35.44	NAIL & PAINTED 2"X2" TARGET
AT302	511,464.37	1,143,364.61	34.74	1" IRON ROD & CAP 2"X2" WOOD TARGET
AT303	513,345.90	1,144,316.34	38.84	NAIL & PAINTED 2"X2" TARGET
AT305	511,303.06	1,138,482.10	37.04	1" IRON ROD & CAP 2"X2" WOOD TARGET
AT306	509,021.79	1,138,488.07	30.07	1" IRON ROD & CAP 2"X2" WOOD TARGET
AT307	508,027.13	1,141,986.47	38.80	1" IRON ROD & CAP 2"X2" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,988.06	60	34	35	8
301	511,306.22	1,140,955.34	60	34	35	8
302	511,206.23	1,140,954.86	60	34	35	8
323	510,947.32	1,141,198.33	57	23	34	8
324	511,062.51	1,141,225.30	57	23	34	8
325	511,352.50	1,141,223.42	57	23	34	8
326	511,462.61	1,141,221.54	57	23	34	8
360	510,964.65	1,140,396.17	56	56	42	19
361	510,964.67	1,140,397.04	56	56	42	19
362	510,166.68	1,140,397.07	56	56	42	19
367	508,662.35	1,140,966.61	57	56	42	19
368	508,660.42	1,140,961.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
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POST, BUCKLEY, SCHUH & JERNIGAN, Inc. d/b/a PBSJ
5104 Bay Center Street Suite 200
Tampa, FL 33609
FBPE Certificate of Authorization No.: 24

CLIENT: MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

PROJECT: LENA ROAD STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM

TASK: GAS COLLECTION SYSTEM PLAN

ORIGINAL JUL 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ 482 S. Keller Road Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

Excavation of 18" HDPE Header Pipe on North Side Slope.

Installation of 8" HDPE Lateral Pipe Connecting Header Pipe to GW-326.

Installation of 18" HDPE Header Pipe on North Side Slope.

Placing fill in 18" HDPE Header Pipe trench on North Side Slope.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/16/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T **W** TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:00 a.m.

7:00 a.m. Comanco resumed excavation of north Header.

8:35 a.m. Creating access road for lateral pipe connecting Header pipe and GW-325.

10:00 a.m. Installed 8" HDPE Lateral pipe connecting Header pipe and GW-325.

1:00 p.m. Started placing cover over Header pipe and Lateral pipe.

Installed approximately 230 lf of 18" HDPE Header pipe
Installed approximately 41 lf of 8" HDPE Lateral pipe

Shut Down at 5:30 p.m.

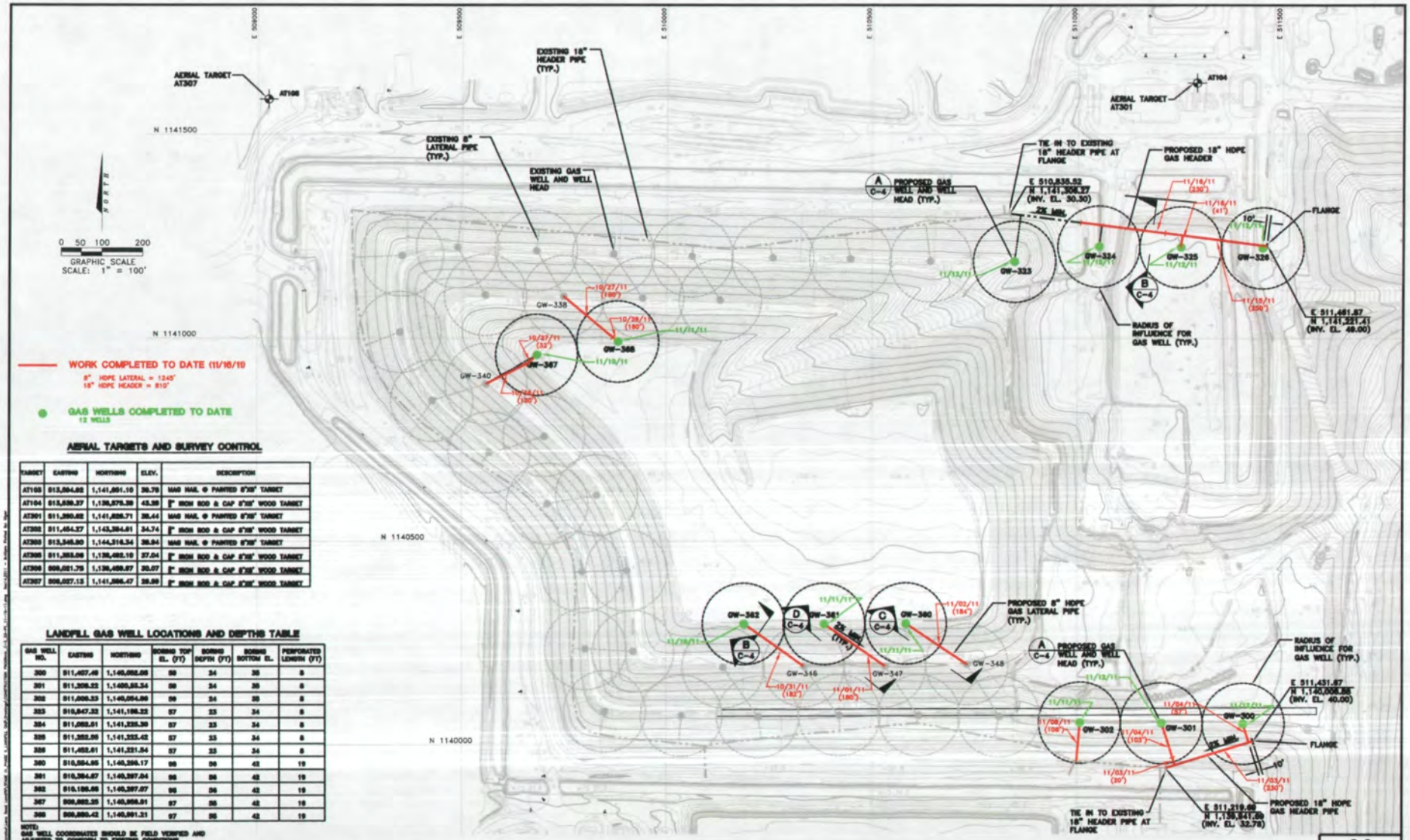
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.82	1,141,851.10	39.79	MAG NAIL ⊕ PAINTED 8"X8" TARGET
AT104	513,539.37	1,139,575.39	43.39	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,280.62	1,141,826.71	35.44	MAG NAIL ⊕ PAINTED 6"X6" TARGET
AT302	511,454.37	1,143,384.61	34.74	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,346.90	1,144,316.34	36.84	MAG NAIL ⊕ PAINTED 6"X6" TARGET
AT305	511,253.06	1,139,482.10	37.04	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	509,021.76	1,139,459.67	30.07	½" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	509,027.13	1,141,866.47	39.99	½" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,992.86	59	34	35	8
301	511,306.22	1,140,955.34	59	34	35	8
302	511,206.33	1,140,954.86	59	34	35	8
323	510,847.32	1,141,198.32	57	23	34	8
324	511,062.51	1,141,235.30	57	23	34	8
325	511,252.56	1,141,223.42	57	23	34	8
326	511,452.61	1,141,221.54	57	23	34	8
360	510,954.65	1,140,396.17	56	56	42	19
361	510,954.67	1,140,397.04	56	56	42	19
362	510,156.69	1,140,397.07	56	56	42	19
367	509,862.35	1,140,996.81	57	56	42	19
368	509,860.42	1,140,991.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
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D/B/A PBSJ
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Tampa, FL 33609
FBPE Certificate of Authorization No.: 24

CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JUL 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

Excavation of 8" HDPE Lateral Pipe on Connecting Header Pipe to GW-325.

Welding Saddle to 18" HDPE Header Pipe to Connect Lateral Pipe to GW-325.

Placing cover over 18" HDPE Header Pipe on North Side Slope.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/17/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W **TH** F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 8:00 a.m.

8:00 a.m. Excavating Later pipe trench connecting Header pipe to GW-324 in anticipation of rain.

9:30 a.m. Started placing cover over Lateral pipe trench connecting Header to GW-324.

11:50 a.m. Resumed excavation of 18" Header pipe trench.

4:30 p.m. completed excavation of Header pipe.

4:35 p.m. Placing cover over Header pipe trencb. Left approximately 150 ft without over to be able to tie in to existing stubout.

Shut Down at 5:00 p.m.

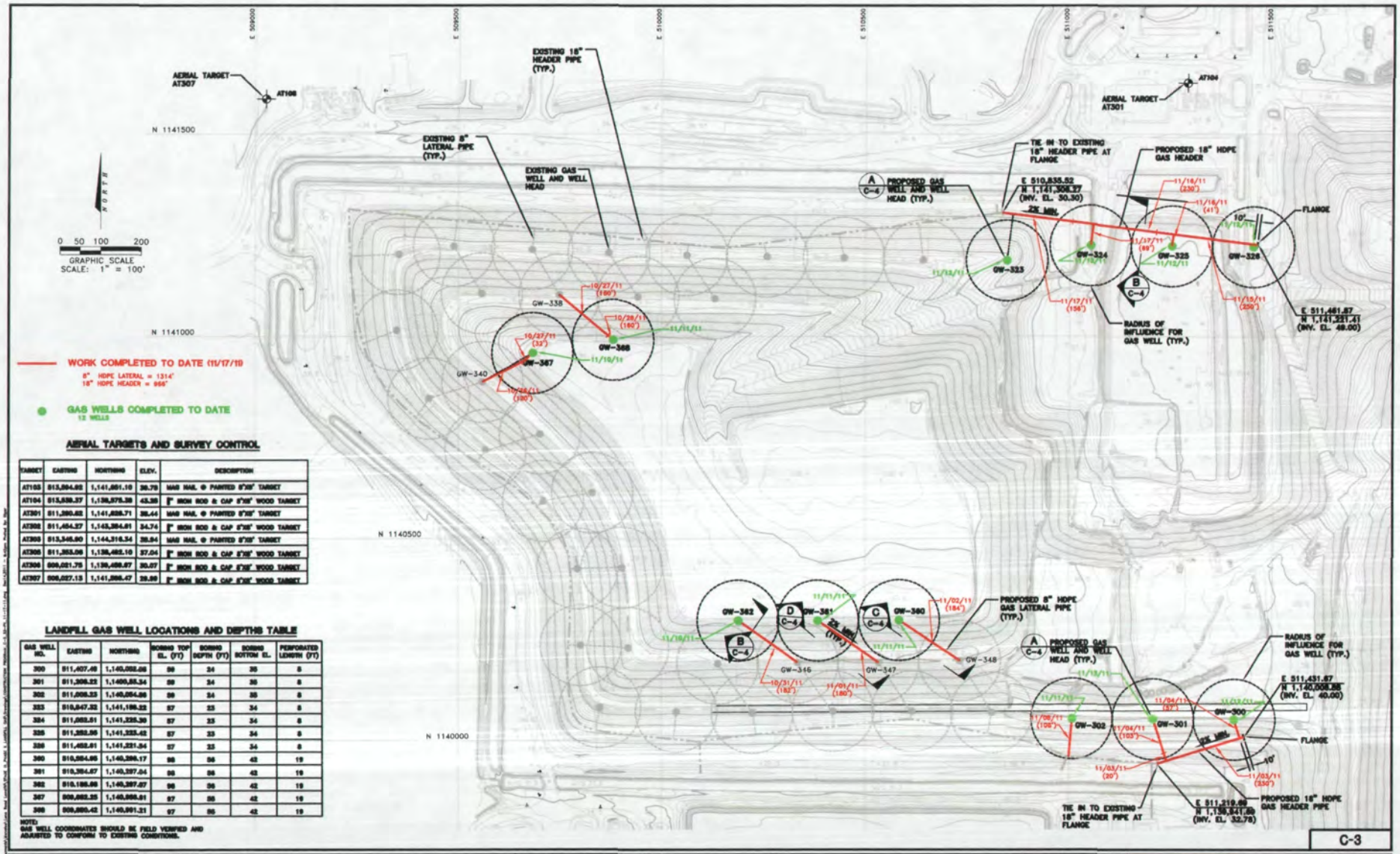
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,204.82	1,141,661.10	38.78	MAG NAIL @ PAINTED 8"X8" TARGET
AT104	513,539.37	1,139,579.39	43.38	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT301	511,280.82	1,141,628.71	38.44	MAG NAIL @ PAINTED 8"X8" TARGET
AT302	511,464.27	1,143,384.61	34.74	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT303	513,348.80	1,144,316.34	38.84	MAG NAIL @ PAINTED 8"X8" TARGET
AT305	511,353.06	1,139,482.10	37.04	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT306	509,021.75	1,139,488.67	30.07	5" IRON ROD & CAP 6"X6" WOOD TARGET
AT307	508,027.13	1,141,396.47	39.89	5" IRON ROD & CAP 6"X6" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,002.06	59	24	35	8
301	511,208.23	1,140,05.34	59	24	35	8
302	511,008.33	1,140,054.86	59	24	35	8
323	510,847.32	1,141,188.23	57	23	34	8
324	511,053.51	1,141,235.30	57	23	34	8
325	511,252.96	1,141,225.42	57	23	34	8
326	511,452.61	1,141,221.84	57	23	34	8
360	510,054.60	1,140,396.17	56	56	42	19
361	510,254.67	1,140,397.04	56	56	42	19
362	510,186.60	1,140,397.67	56	56	42	19
347	508,862.35	1,140,888.81	57	56	42	19
348	508,860.42	1,140,991.21	57	56	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

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CLIENT
MANATEE COUNTY
BOARD OF COUNTY COMMISSIONERS

PROJECT
LENA ROAD
STAGE III PHASE II LANDFILL
GAS COLLECTION SYSTEM

TASK
GAS COLLECTION
SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017067
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

Installing 8" HDPE Lateral Pipe to 18" HDPE Header Pipe Connecting Header Pipe to GW-324.

Placing Gravel Bedding in Lateral Pipe Trench Connecting Header Pipe to GW-324.

Installing Lateral Pipe Trench Connecting Header Pipe to GW-324.

Installing 18" HDPE Header Pipe in Trench.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/18/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:35 a.m.

7:35 a.m. Adjusting the length of the 18" HDPE Header pipe to tie-in to existing stubout at west end.

10:00 a.m. Started excavation of 8" Lateral pipe trench connecting Header pipe to GW-323.

10:45 a.m. Welding saddle to 18" HDPE Header pipe to connect lateral pipe from GW-323.

1:40 p.m. Air tested Header pipe and all Lateral pipes connected to the Header pipe. Air test was OK.

2:15 p.m. Placing bedding rock in Lateral pipe trench connecting Header pipe to GW-323.

3:15 p.m. Tie in 18" HDPE Header pipe to existing stub-out.

4:00 p.m. Backfilling Header pipe trench with gravel and soil fill.

Installed approximately 156 ft of 18" HDPE Header pipe.
Installed approximately 115' ft of 8" HDPE Lateral pipe.

Shut down at 5:30 p.m.

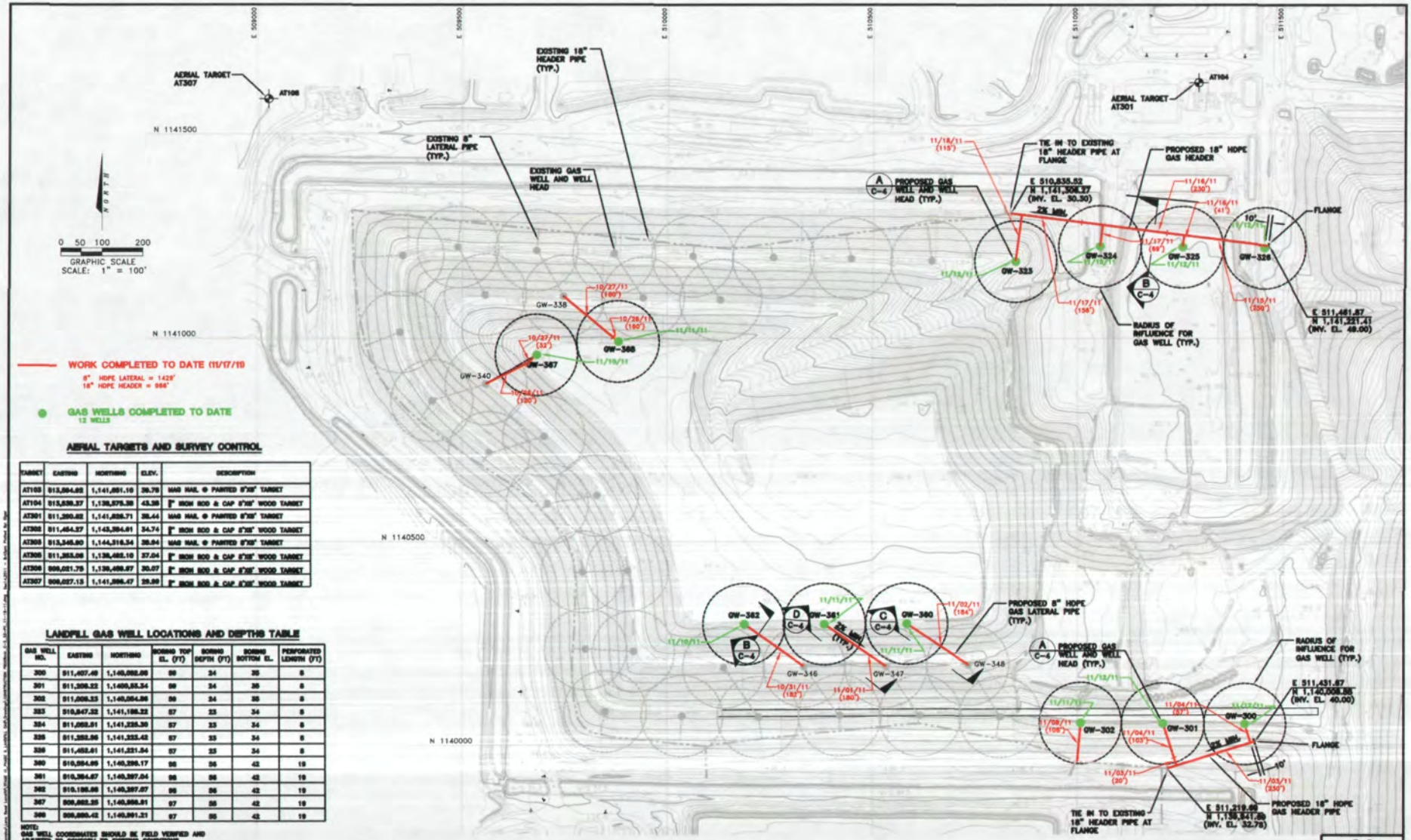
Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**



AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.62	1,141,651.10	36.78	NAIL & PAINTED 8"X8" TARGET
AT104	513,539.37	1,138,579.38	43.38	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT301	511,290.62	1,141,625.71	38.44	NAIL & PAINTED 8"X8" TARGET
AT302	511,454.27	1,143,384.61	34.74	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT303	513,545.80	1,144,316.34	38.04	NAIL & PAINTED 8"X8" TARGET
AT305	511,253.06	1,138,482.10	37.04	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT306	508,021.75	1,139,458.67	30.07	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT307	508,027.13	1,141,396.47	39.80	1" IRON ROD & CAP 8"X8" WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,002.00	59	24	35	6
301	511,309.22	1,140,053.34	59	24	35	6
302	511,209.33	1,140,054.86	59	24	35	6
323	510,847.32	1,141,108.22	57	23	34	6
324	511,052.51	1,141,225.30	57	23	34	6
325	511,252.96	1,141,223.42	57	23	34	6
326	511,452.61	1,141,221.54	57	23	34	6
360	510,954.05	1,140,396.17	56	26	42	19
361	510,354.67	1,140,397.04	56	26	42	19
362	510,155.09	1,140,397.07	56	26	42	19
347	508,862.35	1,140,396.81	57	26	42	19
348	508,662.42	1,140,391.21	57	26	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

C-3

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
TEL. (407) 647-7275
FAX. (407) 647-0624
WWW.PBSJ.COM
POST, BUCKLEY, SCHUH & JERNIGAN, Inc.
A/K/A PBSJ
1000 Ashley Drive, Street Suite 200
Tampa, FL 33607
FBPE Certificate of Authorization No.: 24

CLIENT: MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

PROJECT: LENA ROAD STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM

TASK: GAS COLLECTION SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET / #

Installing 18" HDPE Header Pipe West End, North Side Slope.

Welding Saddle to 18" HDPE Header Pipe Connecting Lateral from GW-323.

Air Testing Header Pipe and Lateral Pipes on North Side Slope of Stage III.

Placing Lateral Pipe in Trench Connecting Header Pipe to GW-323.

Connecting 18" HDPE Header Pipe to Existing Header Pipe on North Side Slope of Stage III.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/21/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S **M** T W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @ 7:35 a.m.

Comanco excavating tie-in end of lateral pipe connecting Header pipe and GW-368 to fix damaged section of the stub-out by drillers.

Geotech. On-site taking densities.

11:00 a.m. Surveyors on site shooting as-built.

Completed repair by cutting & replacing south end of Lateral from Header pipe to GW-368. Section was connected by using an electro fusion coupling

Shut down at 5:00 p.m.

Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

CHECKED BY: RGC **SIGNATURE:**

Fine Grading Header and Lateral Trench on North Side Slope of Stage III.

ATKINS
North America

SHEET 1 OF 1

PROJECT:	STAGE III_PHASE II_GAS COLLECTION SYSTEM EXPANSIC	DATE:	11/22/11
LOCATION:	BRADENTON, FLORIDA	DAY:	S M **T** W TH F S
OWNER:	MANATEE COUNTY, FLORIDA	WEATHER:	**clear** overcast rain
OWNER REP.:	ATKINS NORTH AMERICA	TEMP:	55-70 **70-85** 85-90 90-105
CQA MANAGER:	RAYMUNDO CASTRO	WIND:	still **moderate** high
PBSJ PROJ. NO.:	100021064	HUMIDITY:	**dry** moderate humid

DAILY FIELD REPORT

WORK DESCRIPTION & COMMENTS:

On-site @8:00 a.m.

Comanco on site waiting for Sod Contractor to show up.

Started installation of sod on the north side slope east end and proceeded west.

Started installing sod on the south side slope in the afternoon.

Surveyor on site re-checking elevation of existing 18" Header connection to existing stub-out to re-confirm elevations.

Completed sodding by 4:30 p.m.

Stage III Phase II Gas collection system construction substantially completed today.

Comanco Personnel: 6-technician and a Superintendent.

DELIVERY:

EQUIPMENT:

DOZERS:	1	LOADERS:	1	PUMPS:	
COMPACTORS:		WATER TRUCKS:		GENERATORS:	2
EXCAVATORS:	1	DUMP TRUCK:	2	FUEL TANKS:	
GRADERS:		GRADALLS:		PIPE WEDING MACHINE:	2
TRAILER:					

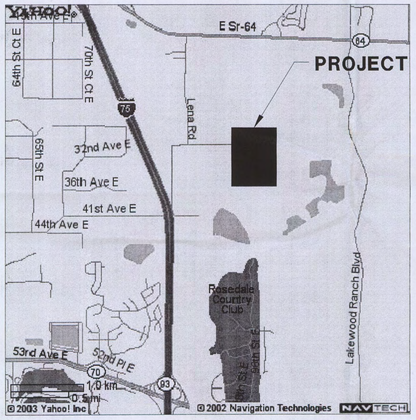
CHECKED BY: RGC **SIGNATURE:**

Installing Sod on South Side Slope of Stage III.

PERMIT RENEWAL DRAWINGS FOR

MANATEE COUNTY - LENA ROAD CLASS I LANDFILL STAGE III GAS COLLECTION SYSTEM EXPANSION

CONSTRUCTION CONTRACT: PHASE II LANDFILL GAS COLLECTION SYSTEM



LENA ROAD CLASS I LANDFILL
3333 LENA ROAD
BRADENTON, FLORIDA 34211

MANATEE COUNTY

MANATEE COUNTY
UTILITIES DEPARTMENT
SOLID WASTE DIVISION

3333 LENA ROAD
BRADENTON, FLORIDA 34211

JANUARY 2011

"RECORD DRAWINGS"
INCORPORATING THOSE CHANGES MADE DURING THE CONSTRUCTION PROCESS BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.
DEC. 5, 2011

ENGINEER'S PROJECT NO. 100017867

LIST OF DRAWINGS

C-1	COVER
C-2	GENERAL SITE PLAN
C-3	GAS COLLECTION SYSTEM PLAN
C-4	SECTIONS AND DETAILS
C-5	SURVEYOR AS-BUILT DRAWING

Dept. of Environmental Protection
FEB 08 2012
Southwest District

PBS&J
An Employee - Owned Company

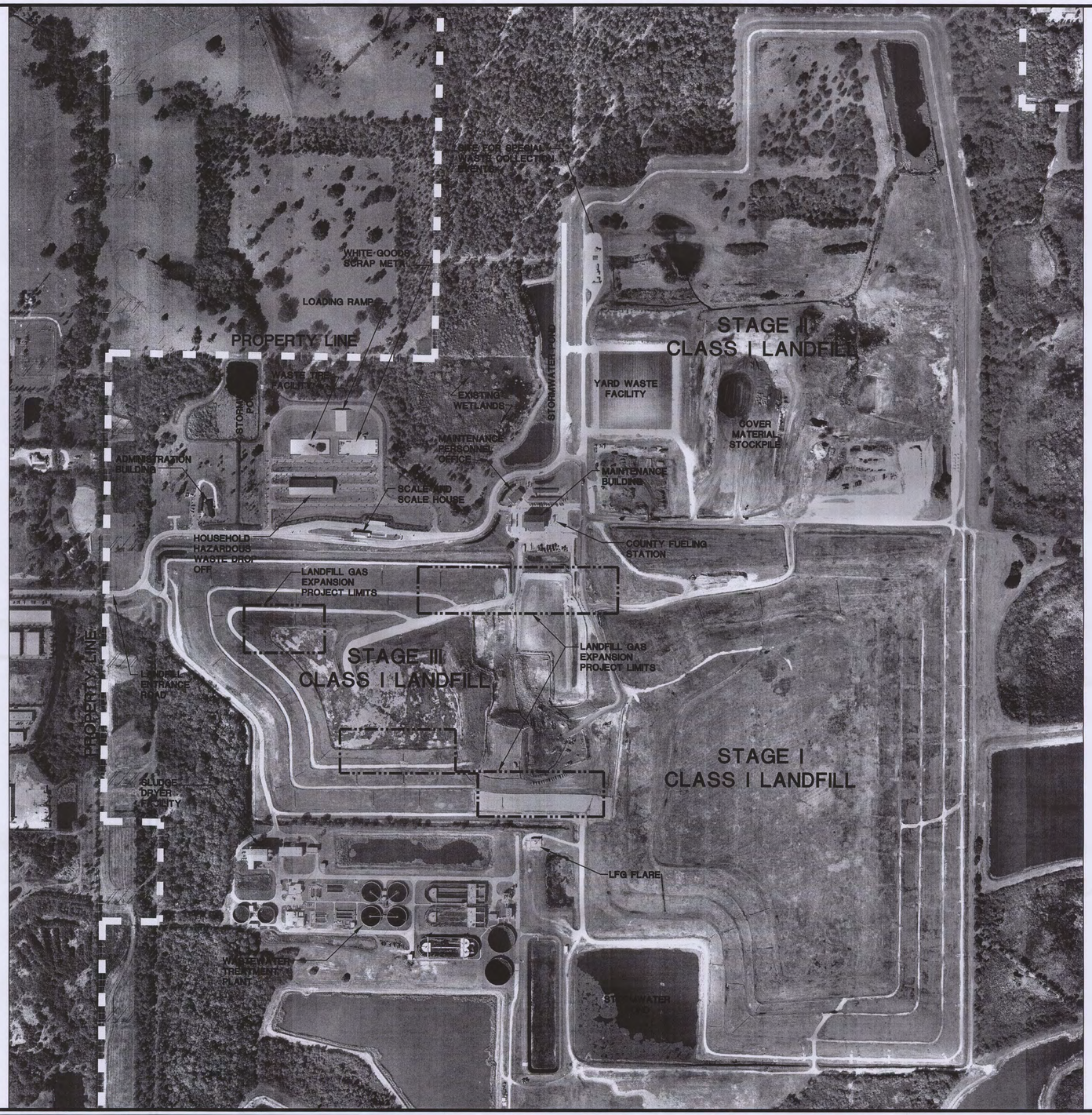
Consulting Engineers and Planners
482 South Keller Road
Orlando, Florida 32810
POST BUCKLEY, SCHUH & JERNIGAN, Inc.
d/b/a PBS&J
2001 N.W. 107th Ave., Miami, FL 33172-2507
FBPR Certificate of Authorization No.: 24

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Signature Date JAN 05 2012

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT TAMPA

MANATEE COUNTY - LENA ROAD LANDFILL - STAGE III PHASE II GAS COLLECTION SYST. EXP. RECORD DRAWINGS

U:\OldH_S\ENVCADD\WASTEMAN\Manatee\LenaRd\Phase II\Closure\Stage III_PII_Record Dwg\mlr_C-1_S3-PII_cover.dwg Dec 13, 2011 - 2:53pm



NORTH

0 150 300 600

GRAPHIC SCALE
SCALE: 1" = 300'

AERIAL PHOTOGRAPH PROVIDED BY:
I.F. ROOKS & ASSOCIATES, INC.
106 N.W. DRANE ST.
PLANT CITY, FL 33566
(813) 752-2113

DATE FLOWN: JANUARY 25, 2010

LEGEND:

LANDFILL GAS EXPANSION PROJECT LIMITS

PROPERTY LINE

"RECORD DRAWINGS"

INCORPORATING THOSE CHANGES MADE DURING THE CONSTRUCTION PROCESS BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

DEC. 5, 2011

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT TAMPA

C-2

PBS&J
482 South Keller Road
ORLANDO, FL 32810-6101
TEL. (407) 647-7275
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WWW.PBSJ.COM
POST, BUCKLEY, SCHUH & JERNIGAN, Inc.
d/b/a PBS&J
5300 West Cypress Street Suite 200
Tampa, FL 33607
FBPE Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD	GENERAL SITE PLAN
BOARD OF COUNTY COMMISSIONERS	STAGE III PHASE II LANDFILL	
	GAS COLLECTION SYSTEM	

ORIGINAL JAN. 2011
REVISIONS:
1. DEC. 5, 2011
2.
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Name: JOSEPH C. MILLER
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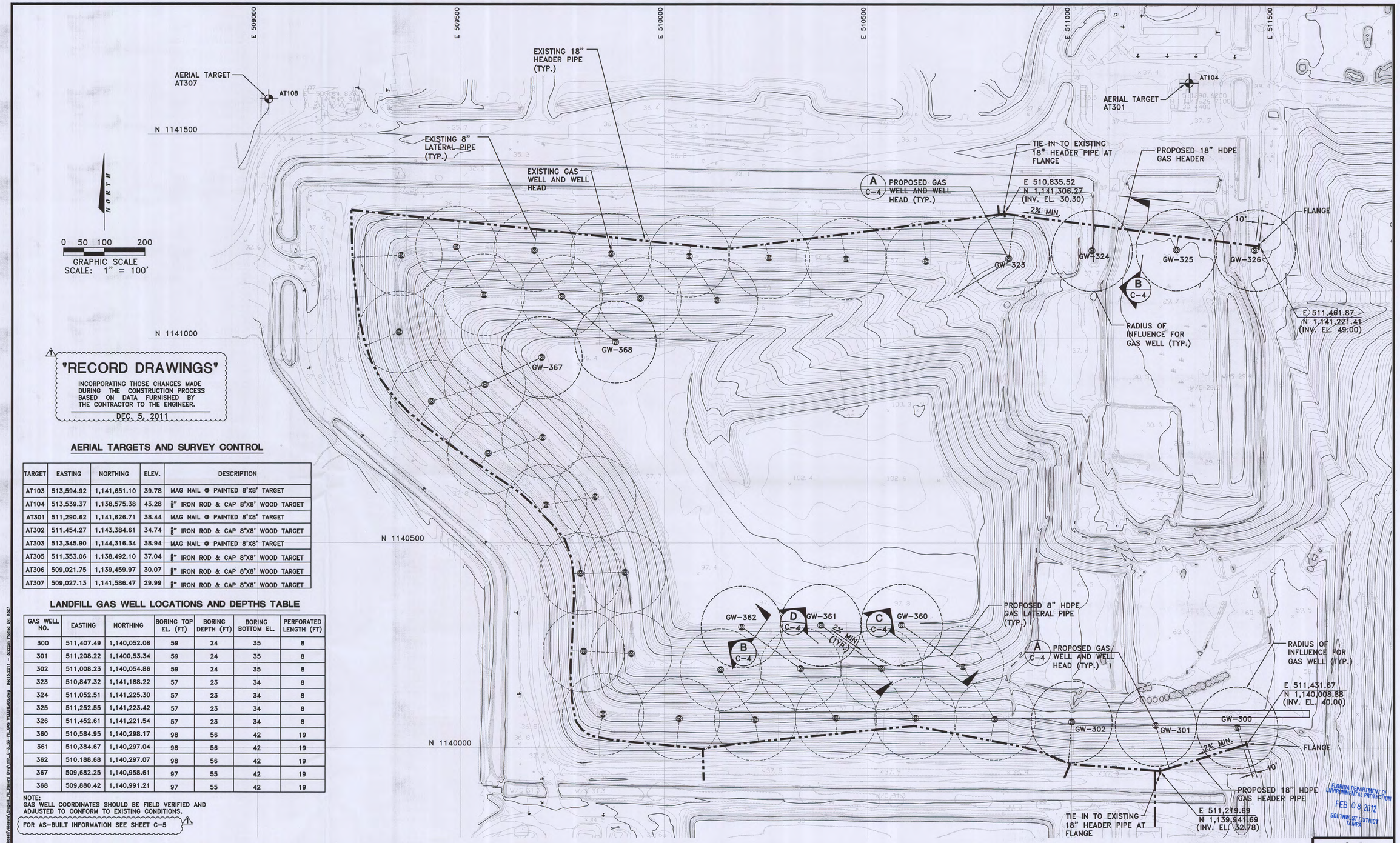
Orlando, FL 32810-6101
Signature Date
JAN 05 2012

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED

SHEET /#

U:\Old_S\DWG\DV\MASTIMAN\Landfill\Present\Cases\Stage3_Ph_Record Dwg\ulr_C-2_53-Pk_SITE PLAN.dwg Dec12,2011 - 5:22pm Plotted By: 8357



"RECORD DRAWINGS"

INCORPORATING THOSE CHANGES MADE DURING THE CONSTRUCTION PROCESS BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

DEC. 5, 2011

AERIAL TARGETS AND SURVEY CONTROL

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.92	1,141,651.10	39.78	MAG NAIL ⊕ PAINTED 8'X8' TARGET
AT104	513,539.37	1,138,575.38	43.28	5/8" IRON ROD & CAP 8'X8' WOOD TARGET
AT301	511,290.62	1,141,626.71	38.44	MAG NAIL ⊕ PAINTED 8'X8' TARGET
AT302	511,454.27	1,143,384.61	34.74	5/8" IRON ROD & CAP 8'X8' WOOD TARGET
AT303	513,345.90	1,144,316.34	38.94	MAG NAIL ⊕ PAINTED 8'X8' TARGET
AT305	511,353.06	1,138,492.10	37.04	5/8" IRON ROD & CAP 8'X8' WOOD TARGET
AT306	509,021.75	1,139,459.97	30.07	5/8" IRON ROD & CAP 8'X8' WOOD TARGET
AT307	509,027.13	1,141,586.47	29.99	5/8" IRON ROD & CAP 8'X8' WOOD TARGET

LANDFILL GAS WELL LOCATIONS AND DEPTHS TABLE

GAS WELL NO.	EASTING	NORTHING	BORING TOP EL. (FT)	BORING DEPTH (FT)	BORING BOTTOM EL.	PERFORATED LENGTH (FT)
300	511,407.49	1,140,052.08	59	24	35	8
301	511,208.22	1,1400,53.34	59	24	35	8
302	511,008.23	1,140,054.86	59	24	35	8
323	510,847.32	1,141,188.22	57	23	34	8
324	511,052.51	1,141,225.30	57	23	34	8
325	511,252.55	1,141,223.42	57	23	34	8
326	511,452.61	1,141,221.54	57	23	34	8
360	510,584.95	1,140,298.17	98	56	42	19
361	510,384.67	1,140,297.04	98	56	42	19
362	510.188.68	1,140,297.07	98	56	42	19
367	509,682.25	1,140,958.61	97	55	42	19
368	509,880.42	1,140,991.21	97	55	42	19

NOTE:
GAS WELL COORDINATES SHOULD BE FIELD VERIFIED AND ADJUSTED TO CONFORM TO EXISTING CONDITIONS.

FOR AS-BUILT INFORMATION SEE SHEET C-5

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT TAMPA

C-3

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
TEL. (407) 647-7275
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WWW.PBSJ.COM
POST, BUCKLEY, SCHUH & JERNIGAN, Inc.
d/b/a PBSJ
5300 West Cypress Street Suite 200
Tampa FL 33607
FBPR Certificate of Authorization No.: 24

CLIENT: MANATEE COUNTY BOARD OF COUNTY COMMISSIONERS

PROJECT: LENA ROAD STAGE III PHASE II LANDFILL GAS COLLECTION SYSTEM

TASK: GAS COLLECTION SYSTEM PLAN

ORIGINAL JAN. 2011
REVISIONS:
1. DEC. 5, 2011
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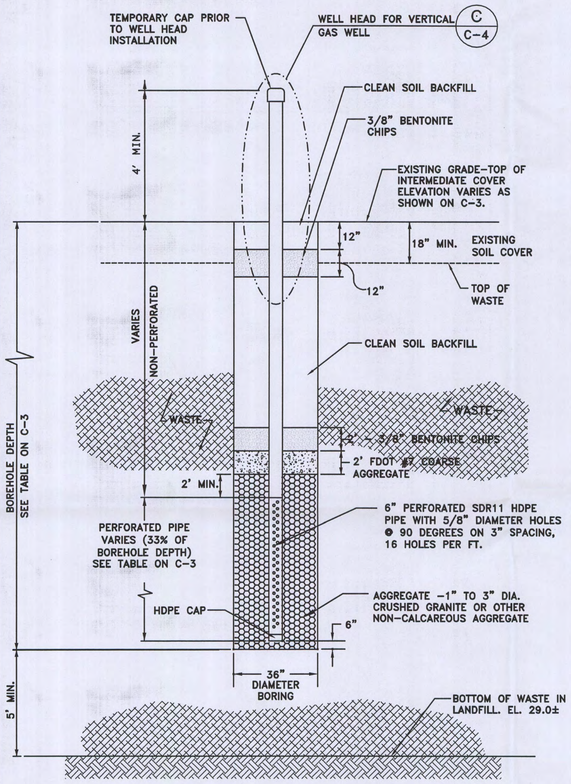
12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
No. 39177
Signature: STATE OF FLORIDA
Date: JAN 05 2012

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

\\PBSJ_SA\DIVDATA\MASTERMAP\Manatee\Lena\A_Phase3\Closure\Stage3_PH_Record Dwg\wtc-C-3_S3-PH_GAS WELLHEADS.dwg Dec15,2011 - 3:22pm Plotted By: 8327

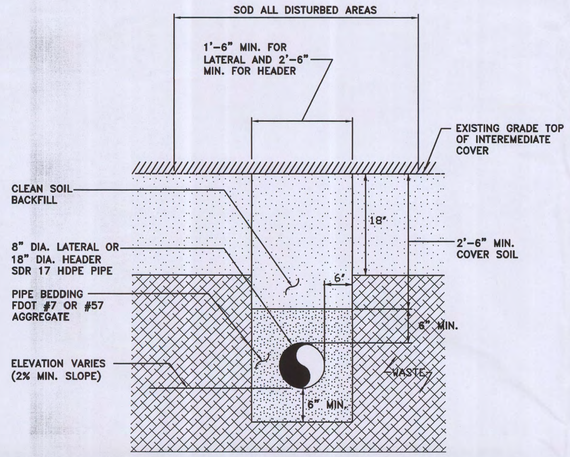


TYPICAL LANDFILL GAS EXTRACTION WELL (A / C-3)

NTS

NOTES:

1. PROPOSED WELLS SHALL BE LABELED AS SHOWN IN THE TABLE ON C-3 WITH A WATER-PROOF MATERIAL.
2. THE CONTRACTOR SHALL HAUL THE WASTE FROM THE DRILLING OF THE LANDILL GAS EXTRACTION WELLS TO THE STAGE III LANDFILL WORKING FACE FOR DISPOSAL

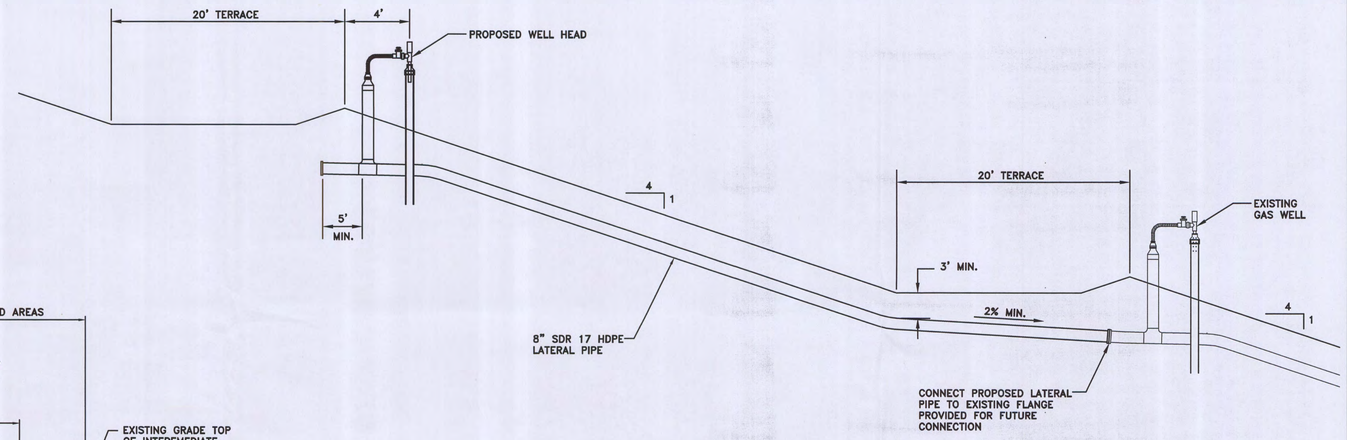


TYPICAL PIPE SECTION (B / C-3, B / C-4)

NTS

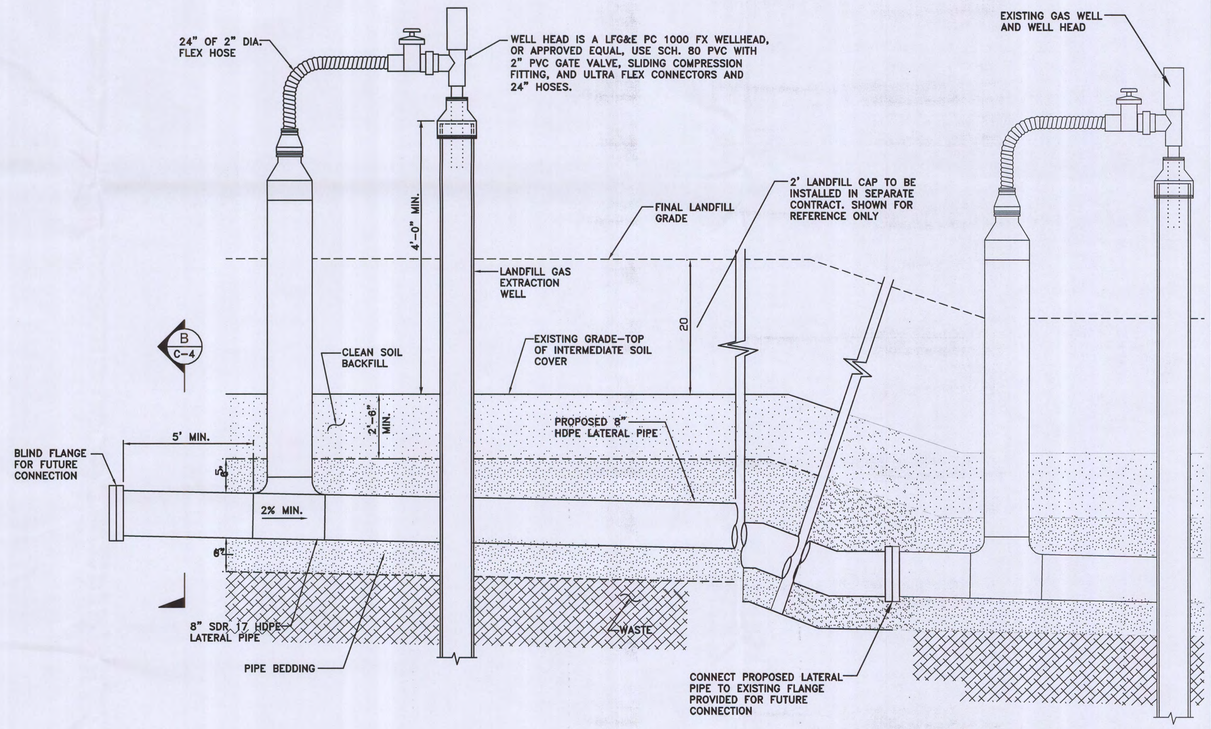
NOTE:

1. THE CONTRACTOR SHALL HAUL WASTE FROM THE EXCAVATION OF TRENCHES TO THE STAGE III LANDFILL WORKING FACE FOR DISPOSAL.



SECTION (D / C-3)

NTS



TYPICAL WELLHEAD FOR VERTICAL GAS WELL (C / C-3, C / C-4)

NTS

"RECORD DRAWINGS"

INCORPORATING THOSE CHANGES MADE DURING THE CONSTRUCTION PROCESS BASED ON DATA FURNISHED BY THE CONTRACTOR TO THE ENGINEER.

DEC. 5, 2011

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT TAMPA

C-4

PBSJ
482 South Keller Road
ORLANDO, FL 32810-6101
TEL. (407) 647-7275
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WWW.PBSJ.COM
POST, BUCKLEY, SCHUH & JERNIGAN, Inc. d/b/a PBSJ
5300 West Cypress Street Suite 200
Tampa, FL 33607
FBPR Certificate of Authorization No.: 24

CLIENT	PROJECT	TASK
MANATEE COUNTY	LENA ROAD	SECTIONS AND DETAILS
BOARD OF COUNTY COMMISSIONERS	STAGE III PHASE II LANDFILL	
	GAS COLLECTION SYSTEM	

ORIGINAL JAN. 2011
REVISIONS:
1. DEC. 5, 2011
2.
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9.
10.
11.
12.

Name: JOSEPH L. MILLER
Florida P.E. No.: 39177
Address: PBSJ
482 S. Keller Road
Orlando, FL 32810-6101
Signature
JAN 05 2012
Date

JOB NO. 100017867
DRAWN RGC
DESIGN RGC/JLM
CHECKED JLM
Q.C. DED
SHEET /#

NOTES:

1. LAST DAY OF FIELD WORK IS NOVEMBER 21, 2011 (DATE OF SURVEY).
2. THE INTENDED USE OF THIS AS-BUILT SURVEY IS AS A RECORD THE LOCATION AND ELEVATION OF THE NEWLY CONSTRUCTED LANDFILL GAS SYSTEM IMPROVEMENTS, RELATIVE TO THE PLANS TITLED LENA ROAD CLASS I LANDFILL STAGE III GAS COLLECTION SYSTEM EXPANSION CONSTRUCTION CONTRACT PHASE II LANDFILL GAS COLLECTION SYSTEM", DATED JANUARY 2011.
3. DIMENSIONS ARE IN FEET AND DECIMALS THEREOF, UNLESS OTHERWISE NOTED.
4. HORIZONTAL DATUM: STATE PLANE COORDINATES, FLORIDA WEST ZONE, NORTH AMERICAN DATUM (NAD 83-90).
5. VERTICAL DATUM: ELEVATIONS NOTED HEREON ARE BASED ON CONTROL POINTS PROVIDED AND REPORTED TO BE IN NATIONAL GEODETIC VERTICAL DATUM NGVD 1929.
6. A COMPARISON OF MEASURED VALUES WITH ON ON-SITE PUBLISHED CONTROL AND ON-SITE CONTROL POINTS PER PLAN ARE LISTED IN THE TABLE BELOW.
7. CONTROL-POINTS PROVIDED ARE PER PBS&J PLAN SET TITLED "PERMIT RENEWAL DRAWINGS FOR MANATEE COUNTY - LENA ROAD CLASS I LANDFILL STAGE III GAS COLLECTION SYSTEM EXPANSION CONSTRUCTION CONTRACT PHASE II LANDFILL GAS COLLECTION SYSTEM", DATED JANUARY 2011. THE HORIZONTAL DATUM IS REPORTED TO BE IN STATE PLANE COORDINATES, NORTH AMERICAN DATUM (NAD 83-90).
8. NO EASEMENT SEARCH OR ABSTRACTING WAS DONE BY THE SURVEYOR.
9. THIS PROPERTY IS SUBJECT TO ANY FACTS THAT MAY BE REVEALED WITH A FULL AND ACCURATE TITLE SEARCH, INCLUDING EASEMENTS, RESERVATIONS AND RESTRICTIONS OF RECORD.
10. NO OTHER PERSONS OR ENTITIES OTHER THAN THOSE LISTED AS EXCLUSIVE USERS MAY RELY ON THIS SURVEY.
11. A BOUNDARY SURVEY OF THE SUBJECT PROPERTY WAS NOT PERFORMED UNDER THE SCOPE OF THIS SURVEY. THIS IS NOT A BOUNDARY SURVEY.
12. PRE-EXISTING IMPROVEMENTS, CONTOURS AND SPOT ELEVATION SHOWN IN LIGHT FONT/LINTYPES HEREON ARE PER PBS&J PLAN SET TITLED "PERMIT RENEWAL DRAWINGS FOR MANATEE COUNTY - LENA ROAD CLASS I LANDFILL STAGE III GAS COLLECTION SYSTEM EXPANSION CONSTRUCTION CONTRACT PHASE II LANDFILL GAS COLLECTION SYSTEM", DATED JANUARY 2011.
13. IMPROVEMENTS (ABOVE-GROUND AND UNDER-GROUND) MAY EXIST IN VICINITY OF THE AREA SURVEYED HEREON. OTHER THAN THOSE NOTED HEREON, NO IMPROVEMENTS WERE LOCATED UNDER THE SCOPE OF THIS SURVEY.
14. THE TOP OF PIPE ELEVATIONS ARE LOCATED PER MARKER-PIPE AT EACH LOCATION, REPORTED TO BE 4-FEET LONG & PROVIDED BY THE CONTRACTOR. THE PHYSICAL TOP OF PIPE WAS NOT OBSERVABLE AT THE TIME OF SURVEY.
15. ELEVATIONS AT THE EXTRACTION WELLS ARE LOCATED AT THE EXISTING GROUND ADJACENT TO THE WELL.
16. THIS SURVEY IS PROVIDED ALONG WITH A CAD-FILE TITLED "A-035, AS-BUILT SURVEY OF THE NEWLY CONSTRUCTED LANDFILL GAS SYSTEM IMPROVEMENTS IN ASSOCIATION WITH THE STAGE II GAS SYSTEM EXPANSION, PHASE III AT LENA ROAD LANDFILL, MANATEE COUNTY, FLORIDA". THIS SURVEY IS NOT COMPLETE WITHOUT THE ASSOCIATED CAD-FILE.
17. THE TYPE OF PIPE FOR ALL PIPES NOTED ON THIS SURVEY IS HIGH DENSITY POLY-ETHYLENE (HDPE). THE LENGTHS OF PIPE SHOWN HEREON DO NOT INCLUDE THE SHORT SEGMENT OF PIPE UP-SLOPE OF THE WELLS.

COMPARISON OF MEASURED VALUES WITH ON ON-SITE PUBLISHED CONTROL AND ON-SITE CONTROL POINTS PER PLAN

TARGET	REPORTED EASTING	REPORTED NORTHING	REPORTED ELEV.	MEASURED EASTING	MEASURED NORTHING	MEASURED ELEV.	DESCRIPTION
AT201	511,250.62	1,141,826.71	38.44	511,291.69	1,141,826.50	38.39	MAG NAIL @ PAINTED 8"X8" TARGET
AT202	511,454.27	1,143,384.61	34.74	511,455.37	1,143,384.43	34.73	1" IRON ROD & CAP 8"X8" WOOD TARGET
N 012	511,476.80	1,142,447.31	N/A	511,476.54	1,142,447.24	N/A	NGS PID AD9117 IRON PIN & CAP STAMPED MANATEE COUNTY, LB 1502

SURVEY CONTROL CONTROL POINTS
PER PBS&J PLAN SET TITLED "PERMIT RENEWAL DRAWINGS FOR MANATEE COUNTY - LENA ROAD CLASS I LANDFILL STAGE III GAS COLLECTION SYSTEM EXPANSION CONSTRUCTION CONTRACT PHASE II LANDFILL GAS COLLECTION SYSTEM", DATED JANUARY 2011.

TARGET	EASTING	NORTHING	ELEV.	DESCRIPTION
AT103	513,594.92	1,141,651.10	39.76	MAG NAIL @ PAINTED 8"X8" TARGET
AT104	513,539.37	1,139,979.38	43.28	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT301	511,290.62	1,141,826.71	38.44	MAG NAIL @ PAINTED 8"X8" TARGET
AT302	511,454.27	1,143,384.61	34.74	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT303	513,345.90	1,144,316.34	38.94	MAG NAIL @ PAINTED 8"X8" TARGET
AT305	511,353.06	1,138,492.10	37.04	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT306	509,021.75	1,139,458.97	30.07	1" IRON ROD & CAP 8"X8" WOOD TARGET
AT307	509,027.13	1,141,386.47	29.99	1" IRON ROD & CAP 8"X8" WOOD TARGET

LEGEND:
GPS = GLOBAL POSITIONING SYSTEM
NGS = NATIONAL GEODETIC SURVEY
PID = POINT IDENTIFICATION NUMBER
IN = INCH
FT = FEET
100' = LENGTH OF PIPE

GRAPHIC SCALE
0 50 100 200
(IN FEET)
1 inch = 100 ft.

Gas Well Number	Northing Per Plan	Easting Per Plan	Boring Top Elevation Per Plan	Northing Per As-Built	Easting Per As-built	Existing Ground Elevation Per As-built
GW-300	1140052.1	511407.5	59.0	1140049.5	511408.6	57.9
GW-301	1140053.3	511208.3	59.0	1140054.7	511207.8	59.3
GW-302	1140054.9	511008.2	59.0	1140063.6	511000.3	60.7
GW-323	1141188.2	510847.3	57.0	1141196.1	510846.4	60.5
GW-324	1141225.3	511052.5	57.0	1141215.6	511050.7	60.3
GW-325	1141223.4	511252.6	57.0	1141217.4	511259.6	60.2
GW-326	1141221.5	511452.6	57.0	1141216.5	511452.4	60.2
GW-360	1140298.2	510584.9	98.0	1140299.8	510582.7	97.1
GW-361	1140297.0	510384.7	98.0	1140299.4	510384.6	97.0
GW-362	1140297.1	510188.7	98.0	1140294.9	510190.2	95.9
GW-367	1140958.6	509682.2	97.0	1140953.6	509698.4	97.5
GW-368	1140991.2	509880.4	97.0	1140991.3	509880.1	94.7

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FEB 08 2012
SOUTHWEST DISTRICT TAMPA

For the Exclusive Use Of:
COMANCO ENVIRONMENTAL CORPORATION

Bradley E. Stockholm, PSM
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MARCO SURVEYING & MAPPING
A LIMITED LIABILITY COMPANY
MARCO SURVEYING & MAPPING
960 NORTH COLLIER BOULEVARD
SUITE 203
MARCO ISLAND, FLORIDA 34145
(239) 389-0026
WWW.MARCOSURVEYS.COM

AS-BUILT SURVEY

OF THE NEWLY CONSTRUCTED LANDFILL GAS SYSTEM IMPROVEMENTS IN ASSOICATION WITH THE STAGE III GAS COLLECTION SYSTEM EXPANSION, PHASE II AT LENA ROAD LANDFILL MANATEE COUNTY, FLORIDA

CLIENT:	COMANCO ENVIRONMENTAL CORPORATION					
HORIZONTAL SCALE:	1"= 100'	VERTICAL SCALE:	NA		DATE:	10/2011
CHIEF:	BOOK/PAGE	DRAFTED BY:	PROJECT NO.	WO NUMBER	DRAWING NO.	
KC		LNW		11-350	4-035	

ATTENTION

DUE TO THE SIZE OF THE DOCUMENT, THE FOLLOWING PHOTOS HAVE BEEN ALTERED.

TO VIEW THE PHOTOS IN THEIR ORIGINAL FORM PLEASE CONTACT:

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State of Florida
Department of Environmental Protection
Solid Waste Program
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926
Phone: (813) 632-7600

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WARNING
THIS MANHOLE CONTAINS
TOXIC & EXPLOSIVE GASES
DO NOT ENTER
WITHOUT PROPER
VENTILATION
LEACHATE
MH#
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GW-367 FL-958
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